

Induced Near-Death Experiences in Healthy Volunteers:

Phenomenology and Aftereffects

Submitted for the Degree of Doctor of Philosophy at the University of Northampton

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Ana Sofia Machado Alves Ferreira

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UNIVERSITY OF NORTHAMPTON

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Submitted for the Degree of Doctor in Philosophy

Ana Sofia Machado Alves Ferreira

I dedicate this research to my brother Miguel

ABSTRACT

The main goal for this research aimed at finding out if it was possible to induce a near-death-experience (NDE) with hypnosis and produce some of its typical aftereffects. Using a quasi-experimental mix-method with non-clinical participants in two rounds of data collection, Study I and II, conducted with convenience and purposive samples, respectively, it was possible to conclude that hypnosis was effective at inducing a similar experience, measured by the presence of typical core elements and some typical aftereffects, that were more intense in two spiritually mature participants.

Regarding the adequacy of hypnosis, after using a specifically designed script, the quantitative results, from both studies, pointed to the possibility of inducing an episode, phenomenologically equivalent to a spontaneous NDE with a positive emotional quality, according to the NDE Scale (Greyson, 1983). The qualitative results from a thematic analysis (Braun and Clarke, 2006) performed upon Study I's participants open-ended answers, confirmed the subjective relevance of NDE's core elements, which manifested through the positive affective quality of the experience, and the importance of having an '*out-of-the-body experience'*, as a stepping-stone for transcendental elements and uncommon inner experiences to manifest.

Regarding the presence of aftereffects, the results were quantitatively modest but qualitatively relevant, revealing subtle impacts that went unnoticed by psychometric instruments, aiming to measure psychological distress (BSI 18 by Derogatis, 2001); death attitudes (DAP-R by Wong, Reker and Gesser, 1994) and spiritual well-being (SHALOM, by Gomez and Fisher, 2003). The advantage of using a mix-method approach was revealed, as the thematic analysis showed that an induced NDE could positively affect spiritual aspects, reduce the fear of death and dying, and increase its acceptance. The qualitative analysis also revealed that hypnosis is a safe therapeutic technique when used to induce near-death-like-experiences.

However, the experience was not overall life-changing, except for two spiritually savvy women, for whom a transformative outcome unfolded. The thematic analysis of semi-structured interviews within a case study analysis, pointed to a positive link between the ability of hypnotically induced NDEs to facilitate experiences exhibiting Pahnke's (1969) nine universal core features of *mystical experiences,* and a predisposing personality trait, labelled as *spiritual maturity* (Genia, 1991; 1997). From their two cases, it was possible to conclude that a combination of variables, including their high level of spiritual maturity and a previous history of traumatic events, produced a stronger mystical-like experience, that might have translated into what Cozzolino (2006) called *mortality induced growth* which sometimes happens to people who undergo NDEs and serious trauma survivors (Tedeschi, Park, and Calhoun, 1998).

As a conclusion, it can be suggested that an exposure to mortality cues, via an induced near-death scenario, in people with a very high level of *spiritual maturity* called *transcendental faith*, might facilitate the entrance into a psychological space, labelled as *near-death consciousness*, where NDE-like events can unfold, with their typical cascade of mystical features and subsequent aftereffects. Hence, revealing the potential therapeutic effects of induced NDEs in specific individuals. A vast field of possibilities exists regarding the use of transpersonal hypnosis for psychotherapy, deserving to be explored with rigorous scientific enquiry. The exercise that was made using thematic analysis offered useful clues on how the therapeutic potential of non-ordinary states of consciousness in general, and induced NDEs specifically, can be explored using a mix-method approach, where qualitative analysis, with its potential to grasp the complexity of subjective experiences, can complement straightforward, objective data. As Greyson affirmed (2007c:10), *protestant theologian Judith Cressy has compared typical NDE phenomenology and aftereffects to the mystical experiences of St.Theresa of Avila and St.John of the Cross and concludes that they both had ecstatic out-of-body travels, visions of God, clairvoyance, loss of the fear of death, and healing transformations*. Starting from this study's promising conclusions, we hope than one day, some of these effects might be attributed to the transformative potential of induced NDEs.

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ABBREVIATIONS

APA – American Psychological Association

APZ - Abnormal Mental States Questionnaire (Dittrich et al., 1985; Dittrich, 1998)

AS – Alma Soma School

ASC – Altered States of Consciousness

BSI-18 – Brief Symptom Inventory (Derogatis, 2001)

CA – Cardiac Arrest

DAP-R – Death Attitude Profile (Wong, Reker and Gesser, 1994)

GDL – Gardens of Light Fraternity

GDPR - General Data Protection

NDC - Near-Death Consciousness

NDE – Near-death Experience

NDEr – Near-death Experiencer

NDLE – Near-death Like-Experience

NDE Scale – Near-Death Experience Scale (Greyson, 1983)

NOSC – Non-Ordinary State of Consciousness

NOME- Non-ordinary Mental Expression

OBE – Out-of-Body Experience

PTG - Posttraumatic growth

SEI-Spiritual Experience Index (Genia, 1991)

SEI-R - Spiritual Experience Index Revised a's (Genia, 1997)

SHALOM - Spiritual Health and Life-Orientation Measure (Fisher, 2010)

SPR - Society for Psychical Research

TA – Thematic Analysis

TMT – Terror Management Theory

UoN - University of Northampton

STATEMENT OF ORIGINAL AUTHORSHIP

This thesis is wholly my own work unless otherwise cited or acknowledged.

I also certify that all information sources and literature that were used are indicated in the bibliography.

Ana Sofia Machado Alves Ferreira

08/12/2022

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CHAPTER I

Introduction and a Few Reflections on the NDE Theme and on how this Study was conceived: Why, Where, When and How

The belief that death is inevitable will kill you if nothing else does. But the truth is that your spirit is already eternal, you only have to move your mind and body into harmony with your eternal spirit. The philosophy of physical immortality gives your body a chance. Deathist mentality guarantees its destruction. Death is a grave mistake.

Leonard Orr

in 'Breaking the Death Habit: The Science of Everlasting Life'

1.1. Life and Death Reflections and NDEs standing between both

Probably every person has felt, at least once, a slight discomfort from knowing that death stands as the only inevitable event in every human life. If each person is born and dies in distinct circumstances, the obliviousness about what happens before and after, remains democratically the same for everyone. The great mystery standing at the end of life, comes with the certainty of loss, of one's material existence and of others connected through loving bonds. Causing, in many, a state of distress, even for those who believe that another reality lies beyond what is said to be a very thin veil. The irreversibility of death is often the cause of a state of such perplexity, if not utter disturbance, that has been deemed the primordial source from which all religious beliefs sprung (Malinovsky, 1948). For every religion, the supreme and final crisis of life - death - is of utmost importance, as a sure gateway to a transcendental world. A great part of religious

inspiration has derived from this enigma, as Shushan (2009) recognized, when analysing five unrelated religious traditions, where a consensus regarding afterlife narratives was found. As Eliade (1978:26) indicated, *it seems plausible to state that a certain number of myths were familiar to the Paleolithic populations, first of all the cosmogonic myths and the myths of origin (origin of man, of game, of death, etc.).*

By offering an opportunity to make sense of the painful game of life and death, religion, through dogmas, practices and beliefs functioned as an emotional buffer, capable of counteracting the potentially disruptive effects of death's inevitability (Soenke, Landau and Greenberg, 2013). The need to deal with the transience of life substantiated the need to believe in a non-ephemeral reality, supported by consistent narratives capable of establishing a line of reassuring continuity. Different as they seem, religious storylines are culturally fit to fulfil intellectual, emotional, and spiritual needs, by offering the promise of eternity. By guarantying eternal life, religious systems justify their own existence and permanence, as vehicles for perpetuating beliefs of unquestionable importance as psychological phenomena (Jong, Bluemke, and Halberstadt, 2013). But the truth is that neither faith nor belief in religious dogmas are within the reach of those who remain impervious to such stories. And, even among those who obtain comfort from religious practices, their protective function regarding death fear is far from absolute, as the mystery remains unresolved. In all religions, as Smith (1991:391) concluded, *beyond the unity of things and their inestimable worth is the wisdom traditions' third report. Reality is steeped in ineluctable mystery; we are born in mystery, we live in mystery, and we die in mystery. Here again we must rescue our world from time's debasement* (…). Self-awareness about the end of life's journey, differentiates humans from other living beings, and as Feifel (1990) declared, the recognition of personal mortality is a major entryway to self-knowledge. How a person stands in life, is also defined by how death and dying is encountered. But part of the mystery of death seems to have started to be somehow deciphered, beyond mere belief in religious narratives, by growing numbers of people claiming to have been

through the experience of dying and coming back to life. They argue that, upon being temporarily dead, they journeyed to another realm of existence, before returning to life telling similar stories, untainted by fear or terror, but filled with peace, joy, love, and the certainty of eternal existence. Such people are those who believe they have been through near-death experiences, or NDEs, a phenomenon that has been increasingly reported, thanks to the advancement of medical resuscitation techniques which seem to be contributing to lessen death's uncertainty: u*pon being revived, such patients often report experiencing life-changing alternate states of consciousness, which they tend to interpret in spiritual terms* (Moody, 2017:11). Van Lommel (2017: 39) defined NDEs as *the reported memory of a range of impressions during a special state of consciousness, including a number of unique elements such as an out-of-body experience, pleasant feelings, seeing a tunnel, a light, deceased relatives, or a life review, and a conscious return into the body.*

The growing interest and attention such accounts have received, does not mean that they are new. Similar reports have been found throughout history, even though they have been relegated to the realm of mythical tales, religious doctrines, mystical teachings, or literary narratives (Zalesky, 1988). In fact, Shushan (2009) encountered universal similarities between afterlife encounters, in terms of phenomenology and meaning, in opposition to the large diversity of creation myths. But now, far from being an historical curiosity, due to the rising number of cases of people brought back to life, the NDE enthusiasm became sharply visible, with an outstanding amount of information piling up: a Google search will provide for circa 1 170 000 000 results.[1] Thus, providing a considerable number of data and also inaugurating a prolific field of scientific studies, covering aspects like phenomenology, aftereffects, mind-brain interactions, and diverse explanatory theories, ranging from mere corollaries of a toxic psychosis (Rodin, 1980), to evidence of the continuity of consciousness after physical death (Facco, Agrillo and Greyson, 2015; Parnia, 2016; Van Lommel, 2010). Indeed, the miraculous quality of the survivor's

[1] By September, 2022.

narratives raises complex questions regarding end-of-life processes (Siegel, 1980), the nature of consciousness (Chalmers,1995; Greyson, 2011), and even death survival hypothesis (Dell'Ollio, 2010; Kelly, 2001; Stevenson and Greyson, 1979; Van Lommel, 2010).

This enthusiasm is understandable as people, on top of mind-blowing tales, also bring reports of radical life changes, where the loss of death fear and spiritual awakenings, close to those attributed to mystics, stand out. Instead of leading to crises, life seems to bloom with the experience of near-dying, and extraordinary psychological growth becomes possible, brought about by a revelatory type of understanding, that life and death are two sides of the same coin. Science, in an unwilling way, seems to be facilitating growing interactions between apparently irreconcilable areas of knowledge, where transcendental aspects are liable to become a legitimate object of study.

Since NDEs present many yet unexplained aspects, from a scientific standpoint it was tempting to add something new to the already massive collection of research data, coming from the astonishing fact that they lead to radical shifts in the experiencer's worldview, helping them to overcome serious life-crisis and losing any death fear along the way, amidst other gains. But also, they seem to be providing compelling answers to perennial existential questions that religious dogma has failed to address in a universalistic way. Unlike religious doctrines, across which a fundamental unifying essence seems to be sometimes lost, NDEs are universal phenomena, as they unravel in the same way, whether they happen in China or Hawaii, whether to a man or a woman, an elder or a child, regardless of what they believe or do not believe in. And they have proven to be largely beneficial in their range of aftereffects, which is something that should capture a psychologist's attention. My attention was indeed caught by NDEs and by the many possible avenues of research they offer, as I will describe over the next section.

1.2. This is Me

That said, I will leave a few words about my journey as a psychologist, intertwined with an inevitable detour into my personal path towards self-development, which has taken a considerable part of my inner and outer space and time for quite a long time. In a nutshell and concerning what is contextually appropriate to say, what happened was that after being trained in classical clinical approaches to therapy and steadily applying them to my personal development, I eventually reached a point where I concluded that I was not going deeper than dipping a reluctant toe in my inner waters. Nothing was particularly wrong, I mostly led a socially sanctioned life, but the truth was that this persistent, annoying feeling, that I was not living my life, did not seem to fade...

After spending hours of talk therapy as part of my training, and as a psychologist who was not yet skilful in dealing with the powerful forces driving the unconscious depths, I did not acknowledge by then, that the conscious, rational, mind cannot sort out what it has, by itself, created. I was getting weary of spiralling around the same themes without finding convincing outlets to what was upsetting me by then. But the truth is that I was not asking the right questions, that encompassed topics that were not included in my classical training. Adding to that, when I was with patients, even if I knew I was helping them, I was also left with this feeling that I could do more. From a certain point on, triggered by some disturbing physical symptoms no one could make sense of, I decided to dedicate my time and accept life 's invitation to go on my own Campbellian heroin's journey that, as all inner quests takes immense time and resources. If you aim to receive what truly is yours, starting from who you essentially are, you must give away all you have that is not yours. Nothing can be spared, all is asked, all is taken, but Campbell (2008), of course, said it much better… Eventually, I got used to the idea that I might be a difficult case, or even a slow life-learner, since many life challenges followed.

However, in each of them, I always had access to the tools I needed to take the next step and move on to a different stage of individuation, in Jungian terms (Diamond, 2018). Such tools, arrived from many different places, conventional and unconventional, East, and West, Above and Below, Life and Death, and all these teachings, unwillingly, helped me in gaining a transpersonal outlook on things. I now believe that without it going though life's challenges is harder, unless one has a good set of unshakable beliefs or a very good talent to dissociate, which was not my case. Without a transpersonal bird's eye perspective on things, in whatever way one chooses to do it, it becomes more difficult to ask the right questions. And without asking them, it becomes harder to receive any answers. So, from this higher perspective and by starting to ask what seemed to be the right questions for me, and by incorporating the answers I was getting in my personal tool kit, I started feeling that I was beginning to fully live. I was also putting myself at other people's service using non-ordinary states of awareness, including hypnosis, so that whatever knowledge I gained personally, I could also use as a psychologist, within a transpersonal approach to therapy that, eventually, replaced all others. And this is where I feel comfortable now, as a human and a therapist, in the place where immanence and transcendence meet.

After I was trained in clinical hypnosis, around 2013, with the 3rd supervisor, Professor Mário Simões, chair of Psychiatry at the Faculty of Medicine in Lisbon, I was lucky enough to be invited to collaborate with him at LIMMIT – Laboratory of Mind-Mater Interaction with Therapeutic Intention, a research hub with the goal of exploring clinical applications of traits and states of awareness (www.limmit.org). After this invitation, unexpected opportunities to delve deeper into themes located outside mainstream research subjects appeared. This same approach, that eventually spread towards other areas, saved me when the most difficult of challenges happened, the sudden and tragic loss of my younger brother Miguel in April, 2020. A period of grief of overwhelming proportions flooded unrestrained. With massive effort, I held on to what I learned from the tools I collected along this journey, and gradually managed to regain my willingness to

keep moving forward, somehow guided by a sense of purpose that kept whispering from beyond a great loss. From this personal tragedy, I knew, that experiences such as NDEs can make all the difference. I had gone through a few already, not spontaneous, but induced with hypnosis and other nor-ordinary states of awareness that allowed me to keep going and write these pages. But this would be another chapter.

At this point, and as I feel I am on this stage of life where I am learning to feel more and more comfortable with all the unseen possibilities brought by this transpersonal approach to living, I feel I am in a better position to help others who are joining this adventure of becoming who they are. So, I hope that this project might be helpful to anyone who is picking on a few different breadcrumbs upon their path, to feed those moments when we are given the opportunity to rise to the zenith of our singular humanity. This work is also a gift for my younger brother Miguel, who decided to exit this dimension ahead of me, he never forgave me for being older and knowing somethings in advance… With him, I am learning the most important lesson of all.

1.3. Why this research project began

The current dissertation has its origin in a project sponsored by BIAL Foundation in Portugal (www.bial.com/pt/fundacao-bial), an institution with the mission of encouraging research projects in less explored areas of knowledge, but amenable to scientific analysis. The main goal of the project, hosted by LIMMIT Lab, was to gain more knowledge about the nature and effects of NDEs, coming from a mutual curiosity the candidate and its Director, Professor Mário Simões had on all matters related to life and death. NDEs are known to occur in individuals who go through the first stages of physical death but can also happen spontaneously, or as a non-typical manifestation of non-ordinary states of consciousness, like hypnosis. Several decades of

research, up to now, concluded that the circumstances in which NDEs happen have only a minor influence on their manifestation and features. Merging all the elements together, and since NDEs and hypnosis seemed to share similarities as vehicles to promote experiences beyond ordinary awareness, the possibility of artificially inducing a similar experience could be theoretically considered.

Around 2015, we were talking a lot about the therapeutic possibilities of NOSCs, and in this context, we started thinking about the therapeutic potential of induced NDEs. Professor's Mário experience had already taught him that NDEs could be induced artificially, with hypnosis, as he had tested this possibility a few times. First, it happened out of necessity, as a personal request from friends who were terminally ill. While they were still fully aware, they personally asked him, as a clinical hypnotherapist, to guide them in a journey to the other side. His departing friends, amidst their physical suffering and fear, were able to experience states of bliss and joy, from which they felt reluctant to leave. More impressively, they had very peaceful transitions, since any existing death fear vanished by the time they peacefully died. Later, he had the opportunity to repeat the procedure in a hypnosis workshop, with a group of volunteers. However, it was not possible to do follow-ups, to know if and how the experience affected them, beyond the day of the event and the immediate positive feed-back they provided. At this point, we started thinking on how studying such experiences might contribute to help, in the future, those who were terminally ill or with life-threatening diagnosis. And from this, we started thinking that, instead of doing isolate experiments, we should build a research project and assess the adequacy of induced NDEs to mimic spontaneous events and produce some of their aftereffects, including the loss of death fear and anxiety. So, united by common interests, a protocol was conceived using hypnosis as a vehicle of induction of the phenomenological components of a spontaneous NDE, as they are commonly described in literature (Moody, 1975).

This was 2016, and during Summer, we had the serendipitous opportunity to conduct a workshop in Romania, under the theme '*The Therapeutic Effects of Near-Death Experiences'*, integrated in the conference '*Transpersonal Psychology, a science for our time*', organized by the European Transpersonal Association (ETPA). The workshop was very successful, with people reporting conversations with dead relatives that helped them to resolve pending grief, among other impacting issues. We took advantage of this event to conduct an exploratory study (Machado, Farinha and Simões, 2022), to assess the possibility of inducing the phenomenological components of a NDE through hypnosis (*see* Section 3.4.1.). And the conclusions, that will be described in the literature review, indicated that, by using a specific script, the observed response was seemingly indistinguishable, in content and intensity, to a spontaneous episode. However, without more variables, it was not possible to conclude that, beyond phenomenology, an induced experience was equivalent to a spontaneous one.

This was the moment when we decided to apply for a BIAL Foundation grant as the protocol seemed to be therapeutically promising. Fortunately, the judges at BIAL seemed to share our vision and we obtained funding for a larger project of which this research study is part of, called *Near-Death-Experiences in Healthy Volunteers: phenomenology, psychophysiology, and aftereffects.* The project aimed to assess the potential of a hypnotically induced NDE to mimic the phenomenological components and some typical aftereffects of a real episode, as well as its impact on saliva biomarkers. This specific physiological research vector was associated with the fact that hypnosis, and similar interventions, involving relaxation and guided imagery, have an impact on the homeostasis of HPA axis (Kendrick et al., 2015¸ Spiegel, 2013). Since research has shown that in the aftermath of an NDE, people radically change their outlook upon life, others, and themselves, we expected to see some of these effects translated into saliva molecular biomarkers in case the experience was successful. Thus, demonstrating the therapeutic value of transpersonal hypnotherapy on well-being, through physiological indicators. We initially planned on including

this biophysiological element within this PhD, but this soon revealed itself to be unreasonable, given the extension of theoretical informational and experimental data that would have to be included in a thesis of a pre-agreed length. It also carried the risk of leaving out important information regarding strictly psychological material. For that reason, the physiological impact of a hypnotically induced NDE was not included in this thesis.

1.4. When and how this research project started in Portugal and moved on to the UK

After obtaining the BIAL funding, and since LIMMIT Lab, the proponent institution, is located inside a University Hospital in Lisboa, we tried to obtain an ethical approval locally and, at the same time, submit a PhD application. For one year and a half documents and technical opinions were submitted, following several requests regarding the safety of hypnosis. However, at some point, we had to make a strategic decision, since strict BIAL deadlines needed to be fulfilled. And even if the project was planned to be conducted in Portugal, with a budget in accordance, we decided to look for a host institution abroad, with reputation in researching both psychological and parapsychological themes. We already had the approval of a knowledgeable panel of international judges from BIAL, who assessed the safety of the project, so we had every reason to think that any expert in this type of research would agree that it was scientifically viable. So, when we started thinking about who to contact, Professor Chris Roe's name, at the University of Northampton (UoN), immediately crossed our minds. Undoubtedly, a person not only with enough scientific credits as a researcher in parapsychological themes, but also familiar with the BIAL Foundation philosophy, in terms of their grant attribution policies and ethical standards. This was a decision that, in hindsight, revealed itself to be the best possible.

So, finally, after submitting the project and an application for ethical approval (ap*plication ID: ETH1718-0005*), at its meeting on 18 June 2018, the Research Degrees Committee approved the registration for the PhD. And, in 7th of September 2018, the project *Induced near-death experiences in healthy volunteers: Phenomenology, psychophysiology, and aftereffects* was finally approved. The official beginning finally happened in December 2018, and after several setbacks including difficulties with recruitment, and dealing with the expenses of moving the project to a different country, it was finished and submitted by the end of 2022.

1.5. Why this research can add something important to science and transpersonal therapy

One of the reasons we thought this research study could be meaningful, would be in terms of the benefits it might bring to people facing complex existential crisis, life-threatening illnesses, or when approaching death. As we had seen with Mario's departing friends, we hoped that induced NDEs could help to facilitate acceptance, since most people who go through an episode, describe having been in a realm beyond life, regarding which reality they do not show any doubts. For this reason, the healing potential of spontaneous episodes has been recognised, as subjects establish a direct and unbreakable connection with a transcendental, eternal element that gives them hope even in dire circumstances. The importance of having such a glimpse into the possibility of an afterlife, does not need to be explained in more detail when considering end-of-life situations. From this novel heightened perspective, death fear is reduced, and spiritual awareness and sensitivity is born and /or deepened (Greyson, 2006; 2014; 2014a; Holden, Kinsey and Moore, 2014). A different worldview is, therefore, created when participants know, from direct contact, they are not facing a true end, but that some other type of life awaits on the other side, where long-lost relatives are eager to welcome those departing. Or arriving…

Another reason to conduct this research had to do with the importance of bringing scientific attention to transpersonal approaches to psychotherapy. Transpersonal psychology enhances the integrative role of spirituality in therapy (Boggio-Gilot, 2000; Daniels, 2013). But spirituality has been, until recently, relegated by science to a silent ostracism. Some of this exclusion, apart from an unfortunately fashionable materialistic prejudice, has to do with the fact that science and spirituality use different languages, and depart from polarized assumptions: one from factual proof, the other from belief. However, several researchers support the role spirituality has, as an irrevocable attribute of the individual (Piedmont et al., 2009) and, along with religion, as an important factor associated to favourable mental and physical health outcomes (Koenig, 2012). As transpersonal psychology defends the use of non-ordinary states of consciousness (NOSCs) to catalyse expansiveness and self-actualization processes (Hartelius, Rothe and Roy, 2013), hypnosis is often used (Leskowitz, 2000), as a tool carrying the ability to expand the view one has towards life and, eventually, death. Hypnosis can be used to facilitate a transpersonal perspective upon a situation, even when dealing with end-of-life circumstances. Recently, the excellent work of Facco et al. (2018) has summarized the wide-ranging use of hypnosis in palliative care, and the importance of less common therapeutic strategies to improve resilience in dying patients. This was indeed our primary goal, to follow such pioneering steps, in an area where solutions are blatantly lacking. If transpersonal approaches to therapy have been relegated to a theme of less concern for most researchers, most therapeutic strategies or tools that value, promote, or defend its healing potential, have been often ignored. But relief from psychological distress, anxiety, fear, and depression, many times demand different solutions that implicate penetrating into transpersonal areas of intervention, in which health professionals sometimes hesitate to dwell, for fear of being regarded as frauds, at best, or facing difficulties with professional associations, at worst.

But the fact is that, despite resistances of all sorts, NDEs have caught the scientific eye, and in the last decades, dozens of research papers have been published, as it is undeniable that this phenomenon sits at the confluence of many areas of knowledge. At the same time, NDEs have also received attention from the general 'spiritually savvy' public, as piles of paperback books testify. All of them are grounded on hundreds of similar and coherent narratives, many of them coming from formerly sceptic people. Having been through the initial stages of the death process, from which they returned, made them change their attitude towards transpersonal aspects of life. By standing as unshakable witnesses for the existence of another life, all claim that there is nothing to fear from death, after truly experiencing immortality, beyond the perishable nature of their physical body.

So, all considered, and if our wish was to honour the field of transpersonal psychology and to help people in clinically difficult situations, the right scientific angle of approach had to be found. An obvious point of departure would be the transversal, and largely beneficial, aftereffects most participants report after an NDE, that challenge conventional therapeutic orientations and perpetuate themselves over time. To this extent, we considered that a legitimate approach would be towards the investigation of the NDE phenomenology, but also the type, nature, extension, and possible benefits of aftereffects. The scientific arena was, and still is, lacking studies versing on the possible therapeutic applications of non-life-threatening, induced NDEs. Given their transversal nature, and in the impossibility of approaching many effects in one study, our attention fell upon psychological and spiritual well-being and the loss of death-fear. Indeed, it would not be wrong to say that NDEs are also 'spiritual' experiences, when considering the transcendental elements that seem to be at the origin of its cascade of aftereffects. As with all less explored scientific avenues, the delimitation of a precise angle of exploration, the formulation of pertinent questions and the choice of a practicable methodology, presented a few challenges. But

in the end, a conciliation of several perspectives was achieved, and the summarized outline of this thesis is presented below.

1.6. Outline of the thesis

This thesis comprises nine chapters, including this introductory chapter, two literature review chapters and the description of two empirical studies, using a mix-method approach, from which the final discussion stemmed. The next two chapters, Second and Third, offer an overview of the most relevant literature on NDEs, hypnosis and spirituality. The reader should be enlightened about the theoretical foundations of this thesis, leading from the research topic's choice, and goal setting, to the overall progress and changes the study underwent along the way. I tried to intertwine the core subject of the thesis, NDEs, explored in its phenomenology and aftereffects, with the topic of hypnosis, as an innovative approach in terms of research. As the methodological tool of choice, it was not so important to dissert extensively about the technique, but to highlight hypnosis as a clinical tool to facilitate NOSCs, approach existential crisis and enhance the transcendental aspects of existence. In this case, hypnosis was chosen as an induction vehicle, and spirituality as a novel research topic, to emphasize the importance of such aspects of the NDE experience. In this regard, special attention was given to spiritual aftereffects, including spiritual transformation, and the loss of death fear, which are among the most reported effects of a spontaneous NDE.

In the Fourth Chapter, the rational for the research method is described, starting with the characterization of a self-selected convenience sample, composed by two experimental groups of non-clinical volunteers, in what was called Study I. The methodology is thoroughly described, along with the study design, starting with the choice of a convergent mixed method quasi-

experimental approach, using quantitative and qualitative tools, to investigate the effectiveness of a specific hypnosis protocol to induce a near-death-like experience (NDLE) through:

a. The presence and depth of the phenomenological components of a NDE, according to the NDE Scale (Greyson, 1983).

b. The presence of aftereffects, through changes in levels of:

i. Mental Health, according to the Brief Symptom Inventory-18 (Derogatis, 2001);

ii. Death Related Attitudes, according to the DAP-R Death Attitude Profile Revised (Wong, Reker and Gesser, 1994)M

iii. Spiritual Well-Being, according to SHALOM- Spiritual Health and Life-Orientation Measure (Fisher, 2010).

c. The presence of subjective elements and aftereffects, related to personality, life-story, expectations, and intentions for the experience, in the same way as spontaneous NDEs.

d. The presence of any type of uneasiness associated with a direct confrontation with the subject of death and dying.

In terms of quantitative tools, the NDE Scale (Greyson, 1983), the BSI 18 (Derogatis, 2001), the DAP-R (Wong, Reker and Gesser, 1994) and SHALOM (Fisher, 2010), were considered as adequate psychometric options. In terms of qualitative tools, open-ended questionnaires were chosen for their capacity to capture unanticipated information. The hypnosis protocol, potential risks, and ways to overcome them, are also described in detail.

In the Fifth Chapter, the quantitative results from the first stage of the project are described and discussed, based on statistical frequency analysis, resulting from two combined samples of 19 participants. The goal here was to find out if hypnosis was an adequate way of inducing an

episode, phenomenologically equivalent to a spontaneous event in a sample of healthy volunteers, according to the NDE Scale (Greyson, 1983) criteria. The results, regarding the similitude between induced and spontaneous events are presented, and the adequacy of hypnosis to mimic an episode, phenomenologically equivalent to a spontaneous one, is established. Regarding aftereffects, the results are also presented, showing that no clear pattern of change, in the quantitative indicators, was attributed to the experimental protocol.

In Chapter Six, the qualitative output from the first stage of the project is described, from the analysis of two open-ended questionnaires, applied to the same sample of 19 participants. This analysis aims at answering two research questions: the first concerning the possibility of an induced episode reflecting subjectively meaningful elements, beyond NDE core elements; and the other, at finding out if any discomfort was associated with the experience. To explore the contents, thematic analysis (TA) was used, following Braun and Clarke's (2006) 6-phase procedure and, from the coding categories, three main themes and five subthemes are analysed. The way how these themes added new information and supported the hypothesis that induced NDEs could positively affect spirituality measures, reduce death fear, and increase its acceptance, are presented. The conclusion, for Study I, is that hypnosis can be used to induce an episode, phenomenologically equivalent to a spontaneous event with promising, however subtle, aftereffects. For two participants the experience was especially intense, in terms of its depth and overlap of mystical features, justifying a case study analysis.

Therefore, Chapter Seven is included, as an attempt to explore the connection between the intensity of the experience and its mystical nature, in the form of two case studies. For their investigation, semi-structured interviews were used to explore both background and transformative aftereffects in two exceptional volunteers and answer two new research questions: if a hypnotically induced NDE could facilitate a mystical experience, and if a spiritual mature personality, as it seemed to be their case, could facilitate it. Again, the best methodological

approach dictated the use of Thematic Analysis (Braun and Clarke, 2006). The conclusion points to a positive link between the ability of hypnotically induced NDEs to facilitate mystical experiences, in the same way as true episodes (Pahnke, 1969; Pennachio, 1986; 1988). Also, the spiritual maturity of the participants seemed to have an influence, generating a favourable attitude towards transcendental experiences (Genia, 1990; 1991; 1997). This aspect deserved further exploration, in the sense that there might be a specific group of people who could benefit more from induced NDEs.

This led to the possibility of adding another step to the study, by collecting further data from a sample of self-designated spiritually mature participants from a purposive sample of individuals recruited from so-called spiritual groups, which is the theme of Chapter Eight. From an empirical standpoint and the experience gained from Study I, such participants seemed to offer a higher probability of reporting more meaningful experiences (Braffman and Kirsh,1999; Genia, 1990; 1991). Therefore, Study II counted on a non-randomized purposive sample of 30 volunteers, within a quasi-experimental context using only quantitative methods of analysis. This group was then reduced to 26, after excluding four who did not have an experience that could be equated to a NDE. Except for SHALOM (Fisher, 2010), all instruments from Study I were used, including the APZ Questionnaire (Dittrich, 1998) to identify the presence of NOSCs. The results of the frequency analysis confirmed the adequacy of hypnosis to induce a NDLE in spiritually mature individuals, with the same phenomenological elements, as in Study I (Greyson, 1983). However, it was not possible to conclude that hypnosis facilitated more intense experiences and aftereffects. The results pointed to the fact that the experience did not increase psychopathology indicators when the participant's baseline values were low and did nor influence death attitude indicators in a sample of people who already had a healthy relationship with death. The APZ (Dittrich, 1998) showed that a deviation from ordinary consciousness was facilitated by the intervention, through the observation of what have been regarded as common denominators of

'altered' experiences. This chapter left, as in Chapter 5, an important question to be answered, regarding the aptitude of hypnosis to facilitate a experience beyond the elements suggested by the script. This is a question to be addressed in length in the last chapter.

Finally, in Chapter Nine all pieces are put together, by interpreting the findings under the light of theoretical aspects discussed throughout the literature review. The main aims and outcomes of Study I and Study II, as well as the case studies, were discussed within a larger theoretical context, and some implications for what was revealed about induced NDEs were put into perspective, emphasising the fact that hypnosis is an adequate consciousness altering vehicle to induce a comparable episode. The fact that the aftereffects were overall modest, should not overshadow the fact that they were impressive in two spiritually mature participants, to whom the 'realness' of the experience was indisputable. The fact that suggesting core elements is not the same as triggering the same experience was also emphasized, which should hypothetically happen when someone goes beyond a psychological threshold labelled as *Near-Death Consciousness*, where a critical shift from everyday perception is achieved (quantity) and a certain content might be facilitated (quality). Having a trait equated with spiritual maturity might not be enough to cross beyond that threshold, and probably a collection of other variables is needed, to produce impressive aftereffects. These two exceptional participants went through traumatic experiences, before the protocol application that, combined with the mystical tone of the induced NDE, created a complex scenario where a psychological transformation could happen. As it has been reported by NDErs and serious trauma survivors (Cozzolino, 2006; Tedeschi, Park, and Calhoun, 1998). In sum, it seems that with certain people, with certain characteristics, including a high level of spiritual maturity and a previous existential crisis, a hypnotically induced NDE carries the potential for transformation, as 'true' NDEs do. Concluding this chapter, the research's limitations were discussed, as well as suggestions for future studies. A few personal reflections regarding what was learned along the way and who might benefit from this experience were also

shared in the end, in an attempt to make a full circle with this Introduction. I do hope this research finds some resonance in someone's journey through the mysteries of life and death, as it did in mine.

1.7. Chapter Summary

This introductory chapter aimed at giving an overview of the genesis, development, and main goals of this project. For that, it included some considerations on the life and death subject and its importance across history; some biographic information on who I am and how I got interested in non-mainstream topics of research. Also, the why, how, where and when of this project, and what we wanted to achieve with it, was laid forth. The first reason had to do with the possibility of, in the future, bringing some of the benefits of a spontaneous NDE to people facing complex existential crisis and end-of-life situations, through a hypnotically induced episode. The second reason had to do with the importance of bringing scientific attention to transpersonal psychology, and to the integrative role of spirituality, as an important attribute of the individual, growingly associated with favourable mental and physical health outcomes, even in the face of imminent death. The outline of the thesis was also laid forth, comprising nine chapters, including two literature review chapters and the description of two empirical studies, Study I and Study II, conducted with convenience and purposive samples of non-clinical volunteers, using a convergent mixed method quasi-experimental approach, to investigate the effectiveness of a hypnosis protocol to induce a NDLE.

As a result of this study, the adequacy of hypnosis to mimic an episode, phenomenologically equivalent to a spontaneous one, was established, as anticipated. However, regarding aftereffects, there was no clear pattern of change, except for two exceptional volunteers, who had life-

transforming experiences and whose case studies were approached in some depth. These volunteers, two spiritually mature women who had close to mystical experiences, helped us in understanding the potential applications of the method, to fulfil the project's intention and to open a field of possibilities regarding the future use of induced NDEs with people facing challenging situations, within a transpersonal hypnosis framework.

CHAPTER II

Near-death Experiences and Spirituality: Perspectives around Two Interconnected Themes

The dying experience is almost identical to the experience at birth. It is a birth into a different existence which can be proven quite simply. For thousands of years you were made to 'believe' in things concerning the beyond. But for me, it is no longer a matter of belief, but rather a matter of knowing. And I am prepared to tell you how you can obtain this knowledge, provided you really want to know. If you are not interested in knowing about it, it doesn't make any difference because once you have died you will know it anyway. And I will sit there and be full of joy, especially for those who say: 'Poor little Dr. Ross!'

Elizabeth Kubler-Ross

Excerpt from the 'Living and Dying' ('Leben und Sterben') Conference
(Switzerland, 1991)

2.1 Overview

In the Introduction, the intention behind this project was presented: to assess the potential of a hypnotically induced near-death experience (NDE) to mimic the phenomenological components and aftereffects of a spontaneous episode. As it was emphasized, NDEs, as atypical psychological experiences with transcendental features, are not only common among those facing though life-threatening situations, but are also known to occur spontaneously, without any death threat, or through the induction of non-ordinary states of consciousness (NOSCs), including hypnosis. Therefore, the possibility of artificially inducing a risk-free near-death-like experience (NDLE), using a safe therapeutic technique, is theoretically justifiable. With this chapter, the intention is to

present a theoretical map regarding the core features of NDEs, and to describe how they give rise to positive aftereffects, many of them carrying spiritual connotations, that could eventually be reproduced through hypnotically induced experiences.

There have been accounts of what we would now term NDEs extending back to the beginnings of recorded history (*e.g.* Plato's description of the soldier, Er), and because of their transcendental nature, NDEs sit at the confluence of several areas of knowledge, from esoterism to cutting edge science (Zalesky, 2006). Given the scope of this research, this review is restricted to material that has passed the test of scientific scrutiny, with particular emphasis on conceptualization, phenomenology, and the impact NDEs have on experiencers (NDErs). The fact that there is a collection of features that are indicative of spontaneous NDEs, will help us in characterising if an induced event carries any degree of similarity with a 'true' one. The aftereffects aspect will also be addressed in some depth, as NDEs are often said to appear as mystical ecstasies, with a vast array of positive consequences. This aspect will assume relevance in the experimental part of the study, as one of its goals is to find out if some of these aftereffects are amenable to reproduction, including the loss of death fear and increases in spiritual and psychological well-being.

To present the most relevant theoretical aspects, the thematic Ariadne thread connecting all others is the NDE, with hypnosis being presented as an induction tool, and spirituality as a possible lens through which both themes can be looked at. Eventually, spirituality, gained further prominence as the study progressed, and the importance of mystical experiences became more relevant. Therefore, this review was divided in two segments, so that hypnosis and its clinical applications and relevance, within a transpersonal framework, became the theme of chapter three. Therefore, only in its conclusion the final intertwining of all three areas was possible, so that a logical leap towards the purpose of this research study could be taken: the induction of a NDLE using hypnosis. But for now, the Ariadne thread will start disentangling itself.

2.2. What are Near-Death Experiences

A recent definition describes NDEs as *an intense psychological experience of debated nature, characterized by an atypical state of consciousness occurring during an episode of apparent unconsciousness and usually in life-threatening condition*s (Palmieri et al., 2014). However, by the time this chapter's introductory words were spoken, Elizabeth Kubler-Ross (1991) had already collected more than 20.000 unusual cases of people who claimed returning to life after being declared clinically dead, or very close to dying. And, a few years earlier, Raymond Moody (1975) published the bestselling book 'Life After Life' where he coined the term and the much-used acronym NDE, after gathering circa 150 reports of the same enigmatic phenomenon, which intensity and sense of truth was felt as deeply transforming, even if it happened in a moment when people were considered clinically dead for a short amount of time.

A few years before the christening of these experiences, Ian Stevenson (1974), better known for his collection of cases suggesting the possibility of the survival of human personality after physical death, had already analysed *nearly 50 cases of persistent consciousness during close brushes with death* (Greyson, 2008:55). One of those cases belonged to George Ritchie, a psychiatrist who, at some point, began giving lectures about his NDE to students, one of them being Raymond Moody, by then a philosophy graduate, who recognized the similarity with Plato's story of the soldier Er in 'The Republic' (*idem*). At this point, from 1965 onwards, he interviewed individuals, unknown to each other, after they survived life-threatening medical crisis, at a time where no cultural archetypes of NDEs existed, and the probability of an episode reflecting societal expectations was low. Nevertheless, they gave similar accounts that matched Greek philosophers Heraclitus, Democritus, and Plato narratives of people who died and came back to life, alongside other scattered reports, demonstrating that NDEs have been known for thousands of years (Moody, 2017). From these modern compilations, a consensus emerged among researchers that

experiential reports *tend to conform to a discernible common pattern* (Moody, 2017:13), so that the term 'NDE' was endorsed and is now widespread.

Now, a few decades of research support the conclusion that a significant proportion of people who are dying, or believe they are approaching death in some way, report intense psychological episodes, containing certain transcendental features they typically interpret in spiritual terms (Roe, 2016), *form stereotyped and indelible memories, and are not fabrications* (Parnia et al., 2001:130). However, there is no consensus on what being in a transitional stage of nearly dying is, a situation *akin to our confusion over how to define death itself* (Greyson, 1999:*7*). In fact, not only it is still unclear on when to locate the exact moment of biological death, let alone deciding on what an elusive physiological stage such as 'near death' is, from where it is still possible to return to life.

As Parnia (2016:68) put it, *the term NDE lacks any relationship with established hemodynamic and physiological markers of the severity of illness or physiological proximity to death*. The guidelines for clinical death diagnosis (Oram and Murphy, 2011) point to the fact that death *consists of the loss of capacity for consciousness and the loss of the ability to breathe*, after irreversible brainstem or cardiorespiratory death. But research in NDEs has brought about that, *contrary to perception, death by cardiorespiratory criteria can no longer be considered a specific moment but rather a potentially reversible process that occurs after any severe illness or accident causes the heart, lungs, and brain to stop functioning* (Parnia, 2014:75). As Agrillo (2011) notes, the term "near" would not mean something like "almost" dead, instead *it should be read more as a temporary experience of the early stages of death* (*idem*:1). Indeed, many NDErs affirm that the expression 'near-death' is not correct, in that they understand that they have been dead, and not nearly dead. To complicate matters it seems this experience, of what seem to be the early and reversible stages of death, can even occur without the subject being critically ill or somewhere close to physical death (Charland-Vervilee, 2014; Facco and Agrillo, 2012; Gabbard and Twemlow, 1981; 1991). But this is just a small example of all the uncertain aspects of what seems to be an ambiguous phenomenon, except for those who went through it, and despite finding it virtually impossible to describe, are certain it happened.

Most definitions enhance the fact that the experience's core lies in its subjective nature, meaning that it is always the perceptive end-product of a personal narrative built upon what seem to be the primary stages of death, as in Moody's (1977/1985:126) pioneering definition: *any conscious perceptual experience which takes place during a near death encounter.* Or in Greyson's (1993:390) notion of *profound subjective events frequently reported by individuals who have come close to death*.

> *I felt no emotional attachment to my seemingly lifeless body as it lay there on the hospital bed. It didn't feel as though it were mine. It looked far too small and insignificant to have housed what I was experiencing. I felt free, liberated, and magnificent. Every pain, ache, sadness, and sorrow was gone! I felt completely unencumbered. I couldn't recall feeling this way before—not ever.*
>
> Anita Moorjani *in* 'Dying to be Me'

But even though undoubtedly subjective, the experience is conceptually distinguishable from other accounts of non-ordinary experiences, by an unifying *collection of recurring features* (Parnia and Fenwick, 2002), forming a hypothetical model of a complete experience (Moody, 1975/2001): ineffability; vivid memory; feelings of peace and quiet in the absence of pain; the presence of unusual auditory sensations, usually a noise accompanying the 'exit' of the dead body; the passage through a tunnel or similar, depending on references and personal contexts; the experience of an out-of-body experience (OBE)[2]; an encounter with known and unknown and/or deceased persons, spiritual beings, religious images and, sometimes, a godlike being of conscious light; a panoramic retrospective of moments of life when the individual is confronted, albeit benevolently, with the consequences of his actions; the notion of the existence of a border

[2] An OBE, according to Bünning and Blanke (2005 *in* Blanke and Dieguez, 2009:303), can be defined *by the presence of the following three phenomenological features: the feeling of being outside of one's physical body (disembodiment); the perceived location of the self at a distanced and elevated visuo-spatial perspective (perspective); and the experience of seeing one's own body (autoscopy) from this elevated perspective*.

beyond where death is irreversible; the final coming back to the body that is decided by one's self, or by a spiritual being who orders a return. In 1977, Moody (1977/1985) introduced four new core elements, already considering recurrent aftereffects: frustration upon relating the experience to others, deepened appreciation of life, elimination of death fear, and corroboration of out-of-body visions.[3,4] This is Moody's (1975:11) account of a typical episode:

> *A man is dying and, as he reaches the point of great physical distress, he hears himself pronounced dead by his doctor. He begins to hear an uncomfortable noise, a loud ringing or buzzing, and at the same time he feels himself moving very rapidly through a long dark tunnel. After this, he suddenly finds himself outside of his own physical body, but still in the immediate physical environment, and he sees his own body from a distance, as tough he is a spectator. He watches the resuscitation attempt from this unusual vantage point and is in a state of emotional upheaval.*
>
> *After a while, he collects himself and becomes more accustomed to his odd conditions. He notices that he still has a 'body', but one of a very different nature and with very different powers from the body he left behind. Soon, other things begin to happen. Others come to meet and to help him. He glimpses the spirits of relatives and friends who have already died, and a loving warm spirit of a kind he has never encountered before -a being of light- appears before him. The being asks him a question, non-verbally, to make him evaluate his life and helps him along by showing him a panoramic, instantaneous playback of the major events of his life. At some point he finds himself approaching some sort of barrier or border, apparently representing the limit between earthly life and the next life. Yet, he finds that he must go back to the earth, that the time for his death has not yet come. At this point, he resists, for*

[3] Ring (1980) identified five consecutive stages of an NDE, aggregated around a common experience: a) peace and well-being; b) separation from the physical body (OBE); c) entering a region of darkness referred as tunnel-like; d) seeing a brilliant light and sometimes entering a process of life-review and, finally e) entering a spiritual realm where spiritual entities and dead relatives can be encountered, and a decision to return is made.

[4] Noyes (1972) categorized the process of dying in three successive phases from accounts of persons suddenly exposed to imminent death: a) a 'resistance' phase; b) a brief and intense 'life review phase' and c) a 'transcendence phase (Noyes, 1972; Noyes and Kletti, 1976).

by now he is taken up with his experiences in the afterlife and does not want to return. He is overwhelmed by intense feelings of joy, love, and peace. Despite his attitude, though, he somehow reunites with his physical body and live.

Later, he tries to tell others, but he has troubles doing so. In the first place he can find no human words adequate to describe this unearthly episode. He also finds that others scoff, so he stops telling other people. Still, the experience affects his life profoundly, especially his views about death and its relationship to life.

Raymond Moody *in* 'Life after Life'

The temporal sequence of elements varies across narratives, as another recent study suggested (Martial et al., 2017), thus reaffirming the uniqueness of each experience. NDErs experience mental, emotional, and transcendental perceptions, while they are detached from their body, which brings typical feelings of mystical experiences (Greyson, 2006; 2014; Noyes et al., 2009; Pennachio, 1986). For example, leaving the body is cited as the second most encountered feature, at about 80% (Charland-Verville et al., 2014), and OBEs are seemingly responsible for the feeling of ego-dissolution, that is expected to happen when such an episode of disconnection occurs (Martial et al., 2021).

Alleged OBE perceptions during an NDE, like watching from above the dying body being resuscitated, have been called *veridical perceptions*. They are deemed to be physically impossible and inexplicable by conventional means (Ring and Lawrence, 1993), but they may help in differentiating NDEs from hallucinations. According to Holden (2017), NDErs sometimes report hyper-lucid perceptions from a location above their physical body, during a time when there was no measurable brain activity, that are subsequently corroborated as accurate. Their measurement has been attempted in prospective hospital studies of NDEs during cardiac arrest (CA) under controlled conditions, but without success so far (Parnia et al, 2014). The case of Pam Reynolds, a singer who became more famous after her NDE during a provoked

hypothermic CA, is a good example of such perceptions (Sabom, 1998), that were happening while her skull was cut open and a cardiopulmonary bypass machine was pumping her blood after general anaesthesia:

> *The next thing I recall was the sound: it was a natural D. As I listened to the sound, I felt it was pulling me out of the top of my head. The further out of my body I got, the clear the tone became. I had the impression it was like a road, a frequency that you go on… I remember seeing several things in the operating room when I was looking down. It was the most aware that I think that I have ever been in my entire life… I was metaphorically sitting on Dr. Spetzelr's shoulder. It was not like normal vision. It was brighter and more focused and clearer than normal vision… There was so much in the operating room I didn't recognize, and so many people.*
>
> *In* Michael Sabom *in* Light and Death

The existence of a common framework caused authors like Ring (1980) to defend an *invariance hypothesis,* attempting to integrate all episodes into a unitary concept. Others, like Sabom (1998), detected clusters of meaning, classifying NDEs into three categories of subjective experiences: *autoscopic*, involving the visualization of the body as in an experience outside the body; *transcendental*, with an apparent passage of consciousness into a different dimension and a *mixed* type, comprising both. Greyson (1985, 1990; 1993, 2003), casting some doubt on the existence of a unitary experience, concluded that variations in psychological content would justify clustering NDEs into four groups, according to their main content: *cognitive*, *affective*, *transcendental,* or *paranormal*. Different types of NDEs would result from different mechanisms and produce different aftereffects (Greyson,1990:152). Also, a bias for certain elements might depend on the possibility of anticipating the triggering event: a predominantly cognitive experience usually follows unexpected episodes, while in an anticipated event, non-cognitive elements prevail,

especially affective ones (Greyson, 1983, 1985, 1990). This conclusion points to the fact that underlying expectations might influence the outcome.

As a concluding remark, and in the absence of a universal, scientifically accurate definition of what a NDE might be, let's say that any clear-cut notion encompassing its transcendental aspects, will probably bump into the fact that what we think we know about mind-brain relationship needs to be revised. As Radin (2017) puts it*, it is virtually certain that the scientific worldview of the next century will include entirely new ways of thinking about space, time, and—given the challenge of NDEs—consciousness*. This will certainly be a debate for the next decades.

2.3. NDEs in Numbers and the NDE Scale (Greyson, 1983)

According to older reports, the incidence of NDEs was said to be around 4% in the general population (Gallup, 1982 [5]; *in* Parnia and Fenwick, 2002). However, such incidence estimates probably lay below the real number of occurrences. When looking at random samples of resuscitated patients the average frequency ranges from around 10% (Greyson, 2003; Parnia et al., 2001; Van Lommel et al., 2001) up to 23% (Schwaninger et al, 2002). Greyson's (2017:20) analysis of nine prospective studies in four countries, concluded that *the incidence of NDEs among critically-ill patients as yielded an average estimate of 17%.* And if we consider that NDEs can happen to healthy individuals, away from clinical emergency, there might be room to conclude that there might be higher numbers than expected. And because this is not an uncommon phenomenon, an assessment scale has been created.

The NDE Scale developed by Greyson (1983) was created to address the researcher's needs regarding characteristic mechanisms and effects of NDEs and is considered the standard measure

[5] Gallup G. Adventures in Immortality: A look Beyond the Threshold of Death. New York: Mc Graw-Hill, 1982.

for the identification of an episode (*see* Appendix 5). Even though there are other measures to assess NDEs, like the WCEI- Weighted Core Experience Index (Ring, 1980), none offers the same attributes. The WCEI (Ring, 1980) was built to measure the phenomenological variety and depth of NDEs, but without statistical testing for its internal coherence or reliability. The LCI-Life Changes Inventory (Greyson and Ring, 2004), later revised and standardized as the LCI-R, also shows limitations, since it was developed to measure value changes following an NDE. More recently Martial et al. (2021) have developed and validated a 20-item NDE Content Scale (NDE-C) that quantifies NDEs in a more complete way, showing very good internal consistency (Cronbach $\alpha = 0.85$) and concurrent validity (correlations above 0.76) to facilitate future research. In recent research papers (Ohkado and Greyson, 2018; Pederzoli et al., 2018), the effects of death experiences performed during hypnotic life regressions have already been adequately observed using the now classical NDE Scale. Also, its capacity to measure the phenomenological similitude of a hypnotically experience to a spontaneous event has been shown in an exploratory study, first authored by the candidate (Machado, Farinha and Simões, 2022). All considered, in this study the NDE Scale (Greyson, 1983) was judged the best instrument to assess the phenomenology of a hypnotically induced NDE.

In this scale, the initial pool of manifestations reported by NDErs, was clustered into 16 final items which were empirically grouped into cognitive, affective, paranormal, and transcendental 4-item components (Greyson, 1983; 1985; 1990). The cognitive component includes features related to changes in thought process like *time distortion, thought acceleration, life review and sense of sudden understanding; the affective component comprises features related to changes in emotional state, like feelings of peace, joy and cosmic unity and an experience of a brilliant light; the paranormal component includes features related to what appear to be psychic phenomena, like enhanced vision or hearing, apparent extrasensory perception, precognitive vision and an out-of-body experience; and the transcendental component comprises transcendental or mystical elements like encounters with an apparently unearthly realm, a mystical being and visible spirits and a*

barrier or point of no return that, had the subjects crossed it, would have precluded theirs return to life (Greyson, 1985:967-968). For each of the 16 items, presented as questions, three response options describing the presence and depth of the experience are offered, with weighted scores between 0 and 2, i.e.:

Did you have a feeling of joy?

2 = Incredible joy
1= Happiness
O = Neither

The total score, ranging from 0 to 32 provides measures of each of the four components, according to previously established criteria following criteria: cognitive NDEs were defined as those experiences that score 5 or higher in the cognitive component, regardless of the score on any other component; transcendental NDEs were defined as those experiences that score 5 or higher in the transcendental component, but less than 5 on the cognitive component; affective NDEs were defined as those experiences that score 5 or higher in the affective component, but less than 5 on the cognitive or transcendental component; and paranormal NDEs were defined as those experiences that score 5 or higher in the paranormal component, but less than 5 on any other component (Greyson,1990). Each item in the scale differentiates NDEs qualitatively and quantitatively from other responses to the threat of death, as shown by a Rasch rating scale analysis, establishing that the scale yields a unidimensional measure with interval-scaling properties (Lange, Greyson and Houran, 2004).

Even though the cut-off point for the determination of a NDE may vary with the purpose of making such a determination (Greyson, 1983), for research purposes, a score of 7 (1 SD below the mean) or higher has been found to be an appropriate criterion for establishing the presence of a NDE. The entire scale reported a Cronbach's coefficient alpha of .88 for the total score and revealed good psychometric properties with split-half reliability with a Pearson reliability

coefficient of (r=.84), 6-month test-retest reliability (r=.92) and highly correlated with the modified WCEI (r=.90) with prior measures of near-death experiences (Greyson, 1983).

2.4. NDEs can happen to anyone

Not only there is a unifying pattern in NDEs, but it does not suffer intersubjective variation, conferring transcultural and transgenerational characteristics to the experience. Early authors (Moody, 1975; Ring 1980) agreed that neither sociodemographic nor cultural factors, determine the probability or the quality of the experience. In fact, most findings are uniform when comparing data, not only between subjects from different age groups and genders, but also from different countries, cultures, occupations, socio-economic status, education, religious background, or spiritual worldview (Greyson and Khanna, 2014). Even though very subtle tendencies do show up, the common structure remains similar, although women report deeper experiences than men (Van Lommel et al., 2001) and NDErs are younger than other patients, even if they do *not differ in sociodemographic variables, social support, quality of life, acceptance of their illness, cognitive function, capacity for physical activities, degree of cardiac dysfunction, objective proximity to death, or coronary prognosis* (Greyson, 2003:269)*,*

Accounts involving very young children and an NDE at birth (Serdaherly and Walker, 1990) have been reported, showing few variations according to each developmental stage, mainly regarding the type of elements that are present. From a combined retrospective case-control study within a sample of 11 children who had life-threatening events (Morse et al, 1986), the results showed their experiences were similar to those described by adults, further suggesting that *there is a core NDE that is inexorably intertwined with the process of dying (*Morse, 1994:69). In Morse's et al. study (1986), pediatric patients described typical elements of leaving the body, having a tunnel experience, and returning to the body, but lacked others, namely depersonalization, life review,

time alteration, worldly detachment, transcendent feelings, and meeting dead relatives, since they had never met none. Serdaherly (1990), from a small sample of cases observed that core elements might be expanded to include feeling pain-free, entering the light at the tunnel's end, and time alteration, finally concluding that the life review component might be a function of chronological age.

This apparent uniformity is slightly challenged when looking at cross cultural studies: if it seems that a common framework remains, both content and interpretation suffer variations, according to cultural background and, most probably, language. If some authors have sustained that NDEs are not a cultural artifact (Blackmore, 1993a; Osis and Haraldson, 1977/2012), others have affirmed that if some elements may be similar in nature, others seem to be culture-bound and *may derive from the effects of a person's beliefs on what actually does happen after death* (Pasricha and Stevenson,1986:156). A survey conducted with German NDErs found patterns differing from American subjects, thus questioning the assumption of a unified experience, untouched by culture and interpretation (Knoblauch, Schmied and Schnettler, 2001). Along this same reasoning, Sartori (2014), concluded that if NDEs are a worldwide phenomenon, not only *some components are interpreted according to culture (…)*, but they also might *be interpreted symbolically through each individual's cultural filter (idem*: 83).

This connection to the experiencer's culture is also sustained by Corazza and Kurruppuarachichi (2011:62) whom, from worldwide reports, concluded that even if NDEs are a universal phenomenon, *cultural factors and the belief systems appear to be influencing the presentation,* that might reflect personal differences and idiosyncrasies Such variations in presentation reflect basic aspects of the subject's psychological make-up and life story, making NDEs inherently personal, and deeply meaningful phenomena.

2.5. Circumstances surrounding the occurrence of NDEs

NDEs are commonly reported in individuals who were either resuscitated after being declared clinically dead, or in people who suffered accidents, injuries or serious illnesses and came very close to physical death (Greyson, 2006; Moody, 1975). Typical reports of critical conditions often emerge *from circumstances such as CA in myocardial infarction (clinical death), shock in postpartum loss of blood or in perioperative complications, septic or anaphylactic shock, electrocution, coma resulting from traumatic brain damage, intracerebral hemorrhage or cerebral infarction, attempted suicide, near-drowning or asphyxia, and apnea* (Van Lommel, 2001: 2039), or in people who, during the early stages of death were able to report their experience (*deathbed visions*)[6] to third parties (Osis and Haraldsson, 1977/2012).

In addition to situations where death occurred, or was somehow probable or expected, other reports accounted for spontaneous NDEs happening without people being in anyway close to dying. Such descriptions included cases in which they were either fully aware, and no genuine cause was found for the experience, like a non-life-threatening injury or other physical and/or mental illness conducive, in some unexplainable way, to the episode (Facco and Agrillo, 2012; Gabbard, Twemlow and Jones, 1981; Gabbard and Twemlow, 1991; Van Lommel et al., 2001). In fact, even when no immediately life-threatening event is present, the individual might have a strong subjective impression that death will occur, sooner, as in the case of an accident, or later, as in the case of a medical diagnosis. This perception of unavoidability might develop into a full NDE, a so-called *fear death experience* (Stevenson, Cook and McClean-Rice, 1990; Van Lommel, 2001), that may also occur in suicide attempters (Greyson, 1991; Rosen, 1975).

6 A *death bed vision* is an experience that usually occurs in people in terminal states where they, through visions, are able to see and even interacting, with deceased loved ones and/or spiritual beings who appear to them before death, in what seems an attempt to provide them with a 'good death'. These experiences were the target of a broad study comprising 877 cases where, from the consistency of these phenomena, two contradictory hypotheses were compared, that of the destruction and that of survival after death (Osis and Haraldsson, 1977/2012).

However, it has also been reported that NDEs may be purposefully triggered by non-ordinary states of consciousness (NOSC) or, as they have more commonly been called, modified or *altered states of consciousness*. By *consciousness* we will be referring to what Pekala (1991:1 *in* 2015) called *one's awareness of one's subjective experience*, including both the process of being aware and the various contents of awareness. A state of consciousness, according to Kokoszka (2007), *is a delineated state of mind, i.e., by both its content and its form—way of experiencing.* And, as the same author affirmed, *altered state of consciousness is a state in which an "extraordinary" content is experienced or in which the manner of experiencing is "unusual" or a state in which both situations take place at the same time. The definition of "extraordinary" however, should be precise. It may be subjective (e.g., from the point of view of the experiencing subject) or it may follow from a theoretical approach describing or presuming what is an ordinary state of consciousness* (*idem*: 85).

Even though the expression 'altered' is more commonly used, the term NOSC will be, henceforth, preferably adopted to identify recognizable shifts or differences from a characteristic waking consciousness baseline mode of mental functioning, in terms of subjective or psychological experience (Ludwig, 1966; Tart, 1975), as it might happen in daydreaming. Other authors prefer the term *modified. state of consciousness*, commonly understood as different from the waking state and impossible to maintain for an extended amount of time (Simões, 2002). Any reference to the common term 'altered' or even 'modified' will be avoided when referring to NOSCs, except when citing an author, since it might unfairly bind non-ordinary states to underlying dysfunctional or pathological processes (Facco and Agrilo, 2012).

In this context, of what might be called NOSCs, it has been reported that NDEs can be triggered through hypnosis (Babb, 1989; Facco, 2012; Ohkado and Greyson, 2018; Pederzoli, de Stefano and Tressoldi, 2018), holotropic breathwork (Grof, 1992), psychotropic substances (Bates and Stanley, 1985; Liester, 2013; Timmerman et al., 2018), immersion in sensory isolation tanks (Gaona-Cartolano, 2012), meditation (Beauregard, Courtemanche and Paquette, 2009; Van

Gordon et al, 2018), and shamanic trance (Green, 1998; 2001). In such situations, even though no real-life threat is present, the likeness of the episode to a spontaneous NDE has not been disputed because of its unifying collection of recurring universal features. As in Ring's invariance hypothesis, the same effect, a NDE, might be the final manifestation of a plethora of causes.
To conclude this section, attention should be drawn towards the fact that there is a unifying model of a typical NDE, that it can happen to anyone, and in non-life-threatening circumstances, without any life-or-death crisis. This set of conditions is extremely relevant to consider the hypothesis that the induction of a NDLE, phenomenologically similar to a true event, to healthy volunteers in safe, non-clinical settings could be theoretically achieved. A controlled setting might be the ideal context to observe the conditions in which NDEs are triggered and how they develop from that point onwards.

2.6. Categories of Explanatory Theories

Because of their extraordinary nature and the raising of medical, psychological, philosophical, and religious questions, NDEs are settled at an intersection of areas of knowledge. Several isolated explanatory theories have been proposed, but despite the advances made regarding what happens during the dying process, most of them remain enclosed within a microscopic frame of analysis. In fact, in most research studies, only isolate parts of this complex phenomena have been explored, while an integrative outlook remains yet to be achieved. So far, very little is known about the true nature of NDEs, and a minimal scientific consensus remains lacking, as we might be dealing with unknown variables demanding a diverse methodological approach.
Possible interpretations are grouped into three distinct categories**:** biological (comprising physiological and pharmacological hypothesis), psychological, and transcendental or mystical theories. The latter should cover possible hypotheses regarding the survival of consciousness

after bodily death. Agrillo (2011) proposes a different classification, based on the understanding that any explanation accepting a survival hypothesis, does not necessarily reject the role other processes might play. He divides explanatory theories into *in-brain and out-of-brain* interpretations, insofar as he does not consider that what differentiates them is the survival of something beyond biological death, but the impossibility of an explanation being totally contained within the brain. The prospect of a unitary explanation, or explanations, for NDEs covering, not one but several aspects, has the advantage of excluding none at the outset.

2.6.1. Biological and Transcendental Explanatory Theories in General

The present work is ontologically neutral, therefore, the detailed exploration of biological and transcendental theories is beyond its scope. Thus, a thorough analysis will not be performed, beyond brief references. Regarding compromising and compromised physiological states associated with the dying, they all seem highly incompatible with what seems to be a very conscious experience. And, even if a yet misunderstood physiological pathway exists, such processes alone cannot offer any reasonable explanation for cases where NDEs happen without an actual proximity to death.

The need for transcendental explanations comes from the fact that the typical NDE account suggests an expansion of what is considered the normal day-to-day consciousness in a situation of physiological impossibility. Causing some to affirm that *the theory and background of transcendence should be included as a part of an explanatory framework* (Van Lommel et al., 2001:2044).[7] Their further need comes from the fact that most NDErs are convinced they died and, even so, describe

[7] The scientific contradiction comes from the fact that lucid, vivid, and realistic psychological experiences, with life-changing impact, seem to occur during a period when, from a biological point of view, the survival of consciousness is deemed impossible. *See*, in this respect, prospective studies conducted with CA survivors' reports, who provided the closest model so far to what dying brain is: Greyson, 2003; Parnia, 2007; Parnia et al., 2001, 2016; Parnia and Fenwick, 2002; Schwaninger et al., 2002; Van Lommel at al., 2001.

transcendental elements that could have not been normally perceived and do not fit into other explanations (Kelly, Greyson, Stevenson, 2000; Moody, 1977; Sabom, 1982; Sartori, 2014; Stevenson and Greyson, 1996; Van Lommel, 2001). One of these phenomena are veridical perceptions, which skilled critics have failed to explain (Augustine, 2007; Blackmore, 1993; Gómez-Jeria and Saavedra-Aguilar, 1994).[8] According to recent studies results' comparing coma and NDEs memories (Thonnard et al, 2013), and neural markers of memories of both real and imagined events (Palmieri et al, 2014), it does not seem feasible to dismiss NDEs as hallucinations. Thonnard et al. (2013) study suggested that NDE memories are connected with events perceived in reality (even if not lived), that differ from imagined memories; and the results from the Palmieri et al. (2014:1) study, concluded that these memories *are stored as episodic memories of events experienced in a peculiar state of consciousness*. It also seems very difficult to explain away as fantasies *'Peak in Darien'* experiences, referring to visions of deceased people whose demise the subject did not have previous knowledge of Greyson, 2010b).

But, even considering unexplainable events, as Kelly (2001) pertinently pointed out, the NDE phenomenon *per se,* is not yet supportive of the possibility of survival after death, for two sets of reasons: first, because NDErs did not actually die and, second, they occur in a wide variety of physiological conditions. These *latter experiences would seem to undermine the argument that NDEs are a precursor to death and a harbinger of what follows death* (*idem*:231). Still, there are good reasons to remain open, as the same author declared, and novel theories should be welcome as they try to overcome difficulties others have ignored. As emphasized by Facco, Agrillo and Greyson (2015: 87), *the problem is epistemological in nature, but is not the result of the reductionism itself, which remains a powerful tool.*

[8] Results from prospective studies corroborated testimonies from medical teams on out-of-body perceptions, including descriptions of people, sounds and activities, while patients were unconscious, in an intensive therapy unit (Sartory, Badham and Fenwick, 2006); in deep coma, or in the process of being reanimated (Van Lommel et al., 2001); during a time when no cerebral function was expected (Parnia et al, 2001), and with blind subjects who claimed visually based knowledge (Ring and Cooper 1997).

Despite what was said above, a few references will be indicated, so that the curious reader can be more easily guided towards some work that has been developed in this regard. Theories advocating biological causes for NDEs roots and processes, attempt to establish a relationship of cause and effect between their occurrence and a measurable physiological manifestation. Normally such indicators reflect endogenous neurochemical changes, majorly occurring during the dying process and/or in circumstances where the brain is compromised.

This is the case with altered blood gases in hypercarbia (Klemenc-Ketis, Kersnik and Grmec, 2010); with anoxia cerebral hypoxia (Blackmore, 1993b); 1996;1998); with the massive release of endorphins caused by stress and activation of the limbic system (Carr,1982); with a sudden glutamate release accompanied by NMDA receptor blockage (Bontá, 2004); as a result of the activation of the brain's basic arousal systems beginning in the midbrain (Mobbs and Watt, 2011); through the massive release of protective neurochemicals mimicking the effect of drugs such as ketamine and phencyclidine, functioning as a brain defense mechanism (Jansen, 1990); or arising from physiological differences in experiencers, as it happens with the REM sleep intrusion hypothesis (Nelson, Mattingly, Lee and Schmitt, 2006;2007), and with episodes of temporal lobe epilepsy (Britton and Bootzin, 2004). Also, other explanations connecting NDEs to medical procedures or medications administered on the course of CA or anesthesia fail to provide answers. In fact, it was demonstrated that heavily medicated subjects fail to retain clear memories when recalling an episode (Ring, 1980; Sabom, 1982; Greyson, 2007).

This variety of organic explanations, that will not be explored in detail, all arise from situations where something causes a measurable variation in a certain physiological parameter. However, none of them offers a satisfactory explanation. A very strong reason has to do with the fact that the physiological states associated with the dying process, whether anatomical, chemical, or electrical, *would inhibit NDEs or at least interfere with their recall* (Greyson, 2015:780). So, they all seem highly incompatible with the type of very conscious experience. Roe (2016) correctly pointed out several of the shortcomings of those theories: *e.g.,* in the case of anaesthetics their common

effects are not characteristic of an NDE, neither in type nor duration; also, the confusional states that is typical of anoxia, lie very far from the typical clear thought processes that an NDE brings. The same can be said about hallucinations, that according to Roe (2016:77), typically include *confused thinking, disorientation and fear along with rather bizarre and idiosyncratic visions. This is in stark contrast to the common pattern of events found in NDEs that includes especially lucid thinking and calmness or even euphoria.*

Another strong reason to not rely solely of organic explanations, is because none of these explanations was *demonstrated to occur in a near-death state* (Greyson, 2015:781) all the time, and in every case and situation, especially in those cases where there is no death-threat. This is the case of Blackmore's theory (1993a; 1993b) that attributes the tunnel and bright light experience to neuronal disinhibition in the visual cortex due to oxygen depletion, which does not explain situations without life-threatening events. The same applies to temporal lobe disturbances that might be frequently associated with people who have OBEs, but not NDEs (Blanke and Dieguez, 2009), of which they are just one aspect. However, the most striking objection to the adequacy of the aforesaid biological theories arises from the blatant peculiarity of these experiences, in the sense that they mostly occur when there is proof of clinical death: most documented cases and corresponding evidence has been collected from prospective independent studies based upon accounts obtained from CA survivors (Greyson, 2003; Parnia et al., 2001; Van Lommel at al., 2001; Parnia et al, 2016; Schwaninger et al., 2002), providing the closest model so far to what is a dying brain (Parnia et al., 2001). The obvious paradox arises from the fact that, the narratives of typical NDE phenomena suggest an apparent expansion of what is considered the normal day-to-day consciousness in a situation of physiological impossibility. This scientific contradiction, at least up to now, is due to the fact that the studies of cerebral physiology during CA have indicated that *blood flow and cerebral function are severely impaired and therefore consciousness would be expected to be lost* (Parnia, 2007:935). In cases of prolonged cardiac arrest, EEG activity may not return for many hours after cardiac output has been returned

(Parnia & Fenwick, 2002). So, despite the possible unmeasured deep brain activity that might go unnoticed with an EEG*, the issue here is not whether there is brain activity of any kind whatsoever, but whether there is brain activity of the specific form agreed on by contemporary neuroscientists as the necessary condition of conscious experience* (Greyson, 2010:39). But this type of activity is actually abolished in the case of CA, where cerebral blood flow is impaired or totally absent and brain function stops for a few seconds, at least until there is a successful resuscitation.

The consequence is that a clear challenge to reductionist psychophysiological theories is laid out when lucid, vivid, and realistic mental and emotional experiences with life-changing impact seem to occur during a period when, from a biological point of view, the survival of consciousness is deemed impossible. The available empirical evidence supports this coexistence between seemingly contradictory scientific prepositions terms, at least within a more orthodox paradigm, suggesting that during the death process, or at least during its early stages, consciousness may still operate while other bodily functions cease (Tassel-Matamua, 2013). From this realization, the next logical assumption would be that a reductionist postulate demanding for a relationship of causal necessity between the brain and the mind (in the sense that the former necessarily produces the latter, as well as the entire range of subsequent mental phenomena), does not seem fully fit to accommodate the need for a novel understanding of the nature of consciousness emerging from the CA studies. Therefore, by accepting that there might be some degree of veracity in several of the proposed explanations, the results so far obtained, far from refuting any of the interpretations offer, in different ways, some support to each of them but not full support to just one. A full explanation will have to wait for further advancements in other areas of knowledge that can provide more satisfactory answers to perennial questions about the nature of consciousness, and the still mysterious interface between mind and body, the so-called "hard problem" (Chalmers, 1995).

This is indeed what NDEs seem to be, a drastic combination of features agitating body and mind down to their deepest core, so that a high order of seemingly innate knowledge, seemingly hidden

beneath layers of materiality and filters of perception, manifests itself. Extrapolating from a nationwide poll of the general population (Gallup and Proctor 1982 in Greyson, 1993), where 30%-40% of individuals reported having been close to death, we can estimate that 5% of the American population had NDEs. This fact alone should justify the need to go beyond cultural prejudice and accept that NDEs are, up to now, the best empirical evidence there is about the process of dying, confirmed by studies showing that whatever is being subjectively perceived actually happens at the threshold of death. And this is as real as any human experience, as both immediate and long-term effects undoubtedly show. This said, psychological theories will be now approached in detail, as they might offer value later, in the discussion of the results of what essentially is, a psychological process of inducing a NOSC, using hypnosis (Vaitl et.al., 2005). Would it be possible that psychological theories could offer a common terrain upon which the phenomenology of NDEs could reasonably stand, as they point out to psychological mechanisms that might be compatible, and sometimes combinable, with neurobiological causes?

2.6.2. Psychological Explanatory Theories

In much resemblance to physiological theories, there is a tendency to resort, mostly, to explanatory mechanisms that might be present in NOSCs in general and in abnormal perceptions in particular, disregarding any novel psychological processes.

A popular psychological theory views depersonalization, defined as a *subjective mental phenomenon having as its central feature an altered awareness of the self* (Noyes and Kletti, 1977:375), as an explanatory mechanism. Commonly occurring in psychopathological states, depersonalization works as an adaptative reaction of the nervous system, acting as a *defense against the threat of extreme danger or its associate anxiety* (*idem*: 383), either real or fantasized. By splitting the subject into participant and observer, and combining opposing reactional tendencies, alertness is intensified, as an attempt to dampen the effects of overwhelming and potentially disintegrating emotions. However, during an

NDE people retain their full identity and, paradoxically, experience sharp thought processes, normally incompatible with depersonalization, which are known to cause confusion and disorientation, making this attribution highly unlikely (Van Lommel, 2011). Also, depersonalization would require the existence of, at least, a perception of imminent death, as it happens with those who go through a *fear-death experience* (Stevenson, Cook and Mc Clean-Rice, 1990).

Other theories postulate the existence of an organizational principle for the unconscious and envisage NDEs as no more than a recollection of the birth experience, where the phenomenology of death would reflect the perinatal level (Grof and Halifax, 1977; Grof, 1993). However, this theory does not seem plausible, not only because of the apparent perceptual limitations of new-borns (Becker, 1973), but also because no differences were found between those born by elective or emergency caesarean (Blackmore, 1983), whose experience would be compromised, as caesarean babies do not experience the tunnel-like feeling of the birth channel. Within this line of thought valuing remembrance, other explanations include the concept of false memories (Loftus, 1996): knowing about an experience could help in making sense of what happened during a period of unconsciousness, building up a coherent, even though distorted story, from a previous belief. As French (2001:2010) put it, it would be a trick of the mind, *trying to retrospectively "fill in the gap" after a period of cortical inactivity.* However, as it happens, people who had no prior knowledge of NDEs describe the same type of experience as others who were unfamiliar with the concept (Ring, 1980; Sabom, 1982). In fact, no correlation was found between prior beliefs and specific features of the experience (Greyson and Stevenson, 1980). Also, a previous influence of 1975's Moody's model on the type of experience was tested, between groups who had NDEs before and after the book's publication: only an increase on the tunnel feature was noted, demonstrating that episodes do not seem to be influenced by prevailing cultural models (Athapilly, Greyson and Stevenson, 2006).

The likeness of an episode also cannot be linked to the existence of prior psychopathological problems. The results of a study conducted with 61 suicide attempters (Greyson, 1991), concluded that the occurrence of NDEs is not influenced by prior psychiatric treatment or family history of suicidal behaviour. A different study revealed that NDErs had fewer symptoms of psychological disturbance than others, who had been near-death but without an episode (Greyson, 2003). The mental health status of people who undergo an NDE has been repeatedly discussed, and conclusions pointed to the fact that NDErs are as psychologically healthy as non-NDErs (Van Lommel et al., 2001). As Greyson (2007:50) concluded, *retrospective studies of near-death experiencers have shown them collectively to be psychologically healthy individuals who do not differ from comparison groups in age, gender, race, religion, religiosity, or mental health (…).*

Regarding personality traits, a study comparing a group of NDE experiencers with a group of people who experienced OBE's, revealed that there is *little evidence of serious psychopathology in the population, but some definite evidence of a different cognitive perceptual style in those prone to a near-death experience* (Twemlow and Gabbard, 1984-85:232). This different style manifested itself as a proneness, in the NDE group, to be more attention absorbed, assessed by the scale *Attention Absorption*, a measure for the capacity to alter consciousness (Kumar and Pekala, 1988; Tellegen and Atkinson, 1974). Even so, the authors admitted this trait's influence in its occurrence (or recall) remained unclear. Even more, it was not possible to discern if this specific cognitive style was already present at the time of the episode or developed later, as an aftereffect.

Theories linking NDEs to a proneness to dissociate in people who go through traumatic events, are not explanatory either. A sensitivity to non-ordinary realities as children, and a higher incidence of child abuse and trauma is noted amongst NDErs (Council and Greyson 1985). Also, Ring's (1992) Omega Project found that NDErs had troubled childhoods, as they revealed a higher incidence of serious illnesses, trauma, or abuse in early years. But a survey done on 121 NDErs (Irwin, 1993), did not identify a dissociative response style in experiencers who evidenced a distinctive history of traumatic events in childhood. Finally, Greyson (2000), exploring the

frequency of symptoms in people who came close to dying, revealed that NDEs cannot be equated to pathology, nor to any manifestation of dissociative disorder, consisting, instead, of a *non-pathological experience that involves the psychological mechanism of dissociation as a normal response to intolerable trauma* (*idem:* 463). This type of traumatic background might engender a dissociative response whenever a severe and unpredictable episodic trauma arises, making the mechanism situation specific. However, it still fails to explain spontaneous NDEs in people who were not expecting to die; when NDEs do not arise as a reaction to any stressors; or when the NDE is, in turn, very different from what was expected, as it happens with atheists who have a transcendental episode (Lommel, 2010).

In all, it is impossible to predict, based on psychopathological explanations, who will have an NDE, and there is no founded reason to question the sanity of those who go through an episode. In conclusion, the truth is that, up to date, no psychological explanation has been found that could satisfactorily justify the fact that some people go through this type of experience. And even if, phenomenologically, they may have similarities with pathological states they cannot be confounded with them. Insomuch as it happens with neurobiological theories, even if some degree of co-existence might be present, a single causal factor does not seem enough, since *most of them fail to fully explain the empirical features of an NDE* (Van Lommel, 2010:133). More even, neither mechanism was demonstrated to occur on a near-death situation in all possible cases.

This is why some theories have gained in complexity and tend to encompass a wider approach, comprising biological and psychological domains (Saavedra-Aguilar and Gomez-Jeria, 1989; Gomez-Jeria and Saavedra-Aguilar; 1994). A recent theory, comparing characteristics of NDEs memories, to memories of real and imagined events (Thonnard et al., 2013), hypothesized that the former manifest as flashbulb memories[9] of really perceived hallucinations. And even though their neural signature is still unknown, they cannot be considered as imagined events, otherwise

[9] The definition of a 'flashbulb memories' describes them as *a highly emotional, personally important, and surprising event, benefiting from a preferential encoding, making them more detailed and longer lasting than everyday memories* (Thonnard et al., 2013:4).

suggesting that the physiological origins of NDEs *lead them to be really perceived although not lived in reality (i.e., being hallucination- or dream-like events), having as rich characteristics as memories of real events* (*idem*:4). Bókkon et al. (2013) advanced a complex multidisciplinary hypothesis, linking philosophical concepts and self-consciousness with a previous theory that attributes seeing lights in NDEs to the transient enhancement of bioluminescent biophotons. But, as Greyson (2015:781) pointed out, even multifactorial models *invoke untestable speculations regarding unspecified chemicals and in order to explain 'all' features of an NDE they ignore key features of the experience that they do not explain (…).* And it is precisely these unexplained aspects that call for novel approaches. More challenging theories have been coming up, suggesting new hypothesis regarding consciousness and the possibility, not only of its separate existence after the cessation of all brain functions, but also about the existence of certain aspects of reality that can only be accessed through NOSCs (Van Lommel, 2010). As Owens et al. (1990:1177) affirmed, the results until now, far from refuting any of the three principal interpretations of NDEs offer, in different ways, some support to each of them. Besides, what seems to matter for NDErs is not what lies at the origin of their experience, but its deep, transforming impact.

2.7. The Life-Changing Aftereffects of an NDE

2.7.1. Aftereffects in an overview

Beyond the yet unknown ontological status of NDEs, they have deep and wide-ranging effects on the experiencer. Most NDErs ascribe their experience a profound, transcendental meaning, which extension is not fully understood, but is clearly associated with long-term positive aftereffects (Parnia, 2016). Two thirds of those who come close to death report a consistent pattern of changes in attitude and stance towards life and others (Fenwick and Fenwick, 1995;

Noyes, 1980), that is clearly holistic and includes psychological, social, biological, and spiritual aspects (Holden, Kinsey, and Moore, 2014).

> *So, in the end, my NDE brought me back to myself. I believe this is the most powerful idea for each of us: realizing that we're here to discover and honour our own individual path.*
>
> Anita Moorjani *in* 'Dying to be Me'

Psychological effects are reflected in significant changes in personality and inner values that may include: increased self-worth and self-acceptance, a more benevolent, tolerant, altruistic, empathic and compassionate attitude towards life and others, a greater flexibility towards challenges and uncontrollable events, a pull towards knowledge and learning, and a new found or increased sense of purpose or mission coming from a re-evaluation in priorities (Moody, 1975; Parnia, 2016; Ring, 1980; 1996; Ring and Valarino, 1998; Sabom 1982; Sutherland, 1990; Van Lommel et al., 2001). Noyes (1980:235) compared NDErs favourable pattern of attitude and personality change to those of people who recovered from accidents and serious illnesses, including the following: *(1) a reduced fear of death; (2) a sense of relative invulnerability; (3) a feeling of special importance or destiny; (4) a belief in having received the special favor of God or fate; and (5) a strengthened belief in continued existence.*

> *'I value people more. I don't think I value worldly goods that much.'*
> *'I feel so totally different about . . . material things. They're not so unimportant to me [now]'*
>
> (Ring, 1980, pp. 143-144 *in* Flynn, 1982).

Ensuing inner changes, social effects also follow, and a radical shift in interpersonal relations is commonly reported, expressed through an increase in the level of concern for others, comprising

aspects like the desire to help, enhanced patience, tolerance, understanding and acceptance (Flynn, 1982).[10] This transformation has a considerable external impact, since NDErs describe feeling more engaged in social and ecological activities, coming from a newfound love, caring sensitivity, respect and responsibility for the planet and all life forms (Greyson, 1983c; 2015; Ring, 1982).

Common physiological changes encompass bodily functions such as metabolism, appetite, and sleep patterns (Holden, Kinsey, and Moore, 2014). Often, unusual physical adjustments also occur at the perceptual level, through heightened intuition and sensibility, both to electric and other fields of unknown nature. Ring (1992) reported changes in allergies, light sensitivity, hearing acuity, mood fluctuation, psychic abilities, and development of healing gifts. Data collected from Ring's (1992) Omega Project, suggested that NDEs consequences might go as far as to reprogram the physiological and nervous system, making the individual more sensitive to inner and external stimuli. In fact, electromagnetic aftereffects, often translated by interferences in technological equipment malfunctions, for no apparent reason, are reported by 71% of NDErs (Fracasso and Friedman, 2012). Other events with apparently paranormal features, like OBE's and veridical perceptions seem to open subjects up to an entire new range of experiences (Greyson and Stevenson, 1980; Ring 1993).

Such outcomes have been corroborated by significant others and in long-term longitudinal studies (Greyson, 2007; 2013). These variations grow to be more stable with time, so that they become more visible at eight than at two years of follow-up (Van Lommel et al., 2001) Also, the magnitude of the adjustment seems to be greater and wider for NDErs than for those who go through life-threatening situations without the NDE (Groth-Marnat and Summers, 1998). In fact, within a sample of psychiatric patients, NDErs showed lower scores on measures of psychological distress than those who came close to dying without a NDE (Greyson, 2003a),

[10] The life review element, by facilitating the access to very a deep awareness of the consequences of one's actions on others, is hypothesized to have a role in this attitudinal change (*idem*).

suggesting that NDEs may *mitigate the distress of mental illness* (Greyson, 2013). Meaning that some of these effects have been demonstrated through standardized measures (Greyson, 2003a), pointing to the fact that such encounters with death are associated with decreased suffering, thus encouraging us to investigate the possibility of reproducing such effects with induced events.

2.7.2. Spiritual Aftereffects of a NDE

This new range of experiences is also related to a wide range of so-called spiritual aftereffects, to which, according to Ring (1996), the term *universalistic* should be applied, as they become spontaneously ingrained into the NDErs new set of rules for life and seem to be a direct consequence of the transcendental tone of the experience. Which cascades into other consequences, one of them being the loss of death fear. Regarding the importance of this theme, a separate section will be dedicated to it.

In general, NDErs are marked by a profound conviction that, even though death was imminent or even occurred, life does not end (Flynn, 1982; Matamua, 2013; Owens et al, 1990). This conviction predisposes them to a transpersonal approach towards life, leading, among others, to a shift from ego-centred to other-centred consciousness, different attitudes towards death and dying, and deepened spiritual awareness (Greyson, 2006; 2014; 2014a; Holden, Kinsey, and Moore, 2014). In some cases, a spiritual identity makeover happens, which has a strong, however not always clearly beneficial, impact on close relations, that sometimes breakup because of incompatible worldviews. This new perspective on life is grounded on a significant shift, from a materialistic value system to a spiritual one, regarded as a major turning point, as NDErs feel that they die and are reborn, after coming face-to-face with a transcendent reality and a personal God, with whom they keep a close relationship with (Noyes et al, 2009).

During my nde, there was nothing outside of my greater awareness because I was one with the entirety of Universal energy. It felt as though I encompassed totality. In that state, there was total clarity, and all became known. I seemed to become everything, and I existed in everything. The ability to see my own magnificence and to realize that the universe and I are one and the same caused my healing. I became conscious that there isn't an external creation separate from me—because the word external suggests separation and duality. Living with this awareness allows me to continue to interact in the physical world with strength, love, and courage.

Anita Moorjani *in* 'Dying to be Me'

Sabom (1998) concluded that NDErs *consistently demonstrate a deepened belief in the existence and universal laws of God following their experience – a finding in support of my contention that the NDE involves the general revelation of God. (idem*: 212). Ring (1996) concluded that, by being the same across religions, this relationship with the divine aspect should be enhanced. He affirmed that NDErs *are more likely to express an unconditional belief in 'life after death' for everyone and to endorse the conviction that not only will there be some form of post-mortem existence, but that the 'Light' will be there for everyone at death, regardless of one's beliefs (or lack of them) about what happens at death (idem*: 189).

Noyes et al. (2009) pointed out two important consequences of NDEs, one the existential crisis forcing individuals to question life's meaning, and the other the spiritual encounter that, for most, results in a spiritual awakening, and in a new relationship with a personal God. This process does not seem to be associated with pre-existent religious beliefs, but to a new conviction in the afterlife born out of a personal and direct experience (Greyson, 1992). Death, according to NDErs, is described as a peaceful and benign process, a belief that is strengthened by the conviction that a transition to an afterlife unfolds, and by a reinforced faith in the existence of a superior loving and caring being Who can be called by many names (Greyson, 2007b; 2007c; Moody, 1975/2001; Ring and Valarino, 1998; Sabom, 1982; 1998). This effect seems to be independent of any previous biographical experience in religious or spiritual contexts or practices. Several studies tried, unsuccessfully, to find relationships between NDEs and previous religiousness (Greyson, 2006; Ring, 1980; Sabom, 1982). McLaughlin and Malony (1984), after

interviewing 40 NDErs, found no association between previous religious orientation and depth of the NDE. Sutherland (1990), investigating changes in religious beliefs, attitudes, and practices in the lives of 50 NDErs, found that before the episode, the sample was no more religious or spiritually inclined than the general population. What has been observed is that NDEs are associated, instead, with an increase in the subjective relationship maintained with transcendent elements, irrespective of previous religious practices or beliefs (Greyson, 2014a). A significant shift was noticed towards spirituality, in a study sample who reported a feeling of having gained an *ongoing direct contact with God or a Higher Power that requires no mediation by institutions such as a church or interpretation by the teachings of any denomination or tradition* (*idem*:30). As described by Musgrave (1997:197), most changes point to the fact that NDErs, *regardless of religious affiliation, became more spiritually oriented and less church-oriented after the NDE*.

More recently, Khanna and Greyson (2014a), by studying the frequency of daily spiritual experiences, observed that NDErs (especially those with deeper experiences) reported an increased sense of spirituality and a more intense connection with themselves, than those coming close to death but without an NDE. Accordingly, the absence of differences in daily spiritual experience between NDErs and non-NDErs before the close brush with death, *makes the influence of a predisposing personality factor a less tenable hypothesis* (*idem:* 307). However, a decline in adherence to formal religious practices and organizations was observed, in favour of an unnamed spiritual relationship with the divine element (Greyson, 2006; Ring, 1980). As Ring (1996:189) stated, *the formal more external aspects of religious worship often appear to have weakened in importance.*

Other spiritual effects have been reported, like stronger beliefs in reincarnation (Ring, 1996), a sense of relative invulnerability, a feeling of special importance, a belief in being favoured by God or fate, and a newfound certainty about the preciousness of life (Noyes, 1980). Also, a frequent increase in paranormal abilities has been reported, such as premonition, telepathy, and healing, among other psi-related activities (Ring, 1984; Sartori, 2014; Sabom 1998; Van Lommel, 2001**)**. This happens*, in such a way that an episode appears to be not only psi-conducive for the duration of the*

*experience, but psi-enhancing for the individual's subsequent life (*Greyson, 1983b:29), whether these abilities existed before, though unrecognized, or not.

Ring and Rosing (1980) stated that the endpoint of an NDE might be the *emergence of what appears to be a more highly evolved human being that Greyson (1990) has called the Omega prototype (…). Hardship may have preceded the NDE, trauma may accompany it, but judging from our research, human transformation seems to be the fruit of its womb* (*idem*:237). The authors envisaged this transformation model as psychophysical, in the sense that NDErs inevitably go thorough certain changes allowing for a *higher level of human nature to manifest* (*idem*). In this sequence, Ring (1996) developed the hypothesis that NDEs function as spiritual catalysts to *promote the spiritual awakening and growth of the individual because of its power to thrust one into a transcendental state of consciousness whose impact is to trigger a release of an universal 'inner programming' of higher human potentials* (*idem*:190). The mechanism by which this change occurs is yet to be demonstrated, but meets the definition of spiritual transformation (Greyson and Khanna, 2014; Pargament, 2006). Spiritual transformation can be defined as a phenomenon involving some type of change *initiated by a certain sense of wrongness, crisis, or character deficiency that can be transcended only by external help from some higher spiritual source*. (Williamson and Hood, 2013:890). NDEs seem to hold such possibilities.

In fact, after an NDE, there is often a need to seek a new meaning for the life one has returned to, that can lead to a kind of spiritual quest, which in turn reflects an attempt to relive, daily, the same type of emotions and transcendent connection that were accessed during the episode, especially in deeper experiences. And this is an important aspect to be emphasized, that has to do with the level of psycho-spiritual growth that NDErs manifest, and through which they acknowledge the existence of other dimensions of reality beyond death.

> *Since I am here writing this, and you are here reading my words, it is quite apparent that, during my OBE/NDE, I exercised my free will choice and elected to 'extend my contract' and returned to my lifetime for some reason. I have since reflected on what that reason could be, and since everything in my current lifetime has really been about the central theme of Communication in one form or another, I*

have concluded that my Life Purpose for returning is to inform others, through the books I have published since my OOBE/NDE, of the many great benefits and methods of establishing conscious communication in a conversational dialog with 'the other side.' This 'other side' is from where we incarnate and to which we return when it is time to take off our physical 'suit.'

Account posted in April, the 27th, 2021 in IANDS.org

As a concluding remark, it should be mentioned that this overall transformative effect is life-changing, in a way that distinguishes NDEs from other *fragmentary experience, sometimes glibly equated with NDEs* (Kelly, Greyson and Kelly, 2009: 412), some forms of mental illness (Greyson, 2014),[11] or from the process of being close to dying but without an NDE (Greyson, 1983c; Van Lommel et al, 2001). The transformation effect, emerging from the spiritual meaning NDErs ascribe to the experience is, undoubtedly, one of the most impressive consequences of NDEs, that are said to deliver the same range of effects as classical mystical episodes, as they have been reported by initiates throughout millennia.

2.8. NDEs as Mystical Experiences with a Transformation Effect

The transformative effect of a non-mediated spiritual experience, rich in unexplained transcendental elements, led some authors to consider NDEs similar to mystical (Greyson, 2006;

[11] Greyson (2014a) differentiates symptoms of mental illness from spiritual transformative experiences by its **context**, by **conten**t, by the way the experience **is remembered**, and by how it **affects** the individual. In this respect, Flynn (1982:134) concluded that *a non-ordinary experience that leads only to increased distress and dysfunction and withdrawal from others may be best considered a symptom of mental illness, whereas a non-ordinary experience that leads ultimately to personal growth, increased serenity and sense of meaning and purpose, and engagement with others may be best considered a spiritual experience*.

2007c; 2014; 2014a) or 'conversion' experiences (Kelly, Greyson and Kelly, 2009), in attributes and effects.

Underhill (1914) proposed a definition for mysticism that, as others, highlights the unity aspect: *mysticism is the art of union with Reality. The mystic is a person who has attained that union in greater or less degree; or who aims at and believes in such attainment* (*idem*:9). Griffiths et al. (2018), to those experiences that have been called conversion, religious, peak, transcendental, or epiphanic, and following Miller (2004), referred to them as *quantum change experiences*, best described as *sudden, distinctive, benevolent, and often profoundly meaningful experiences that are said to result in personal transformations that affect a broad range of personal emotions, cognitions and behaviours* (*idem*:49). Yaden et al. (2017:1), following classical classifications, described mystical experiences as *temporary mental states that include profound feelings of unity, positive emotions, a noetic quality, and (…). alleged ineffability* (*idem*:1). Because they involve a shift into a different kind of consciousness, moving people from an undefined sense of isolation to a feeling of being a part of a conscious universe filled with purpose, NDEs can be compared to mystical episodes.

> *These experiences made me cherish all life as I had never done before. I really began to be aware of everything in my experience on a deeper level. I even began to "salute" animals I would meet, recognizing their individual worth, and of course, my recognition of human individual worth began to grow.*
>
> Kenneth Ring *in* The Omega Project

Both NDEs and mystical experiences culminate into unity experiences (Greyson, 2006; 2014), where people acquire the boundless certainty of being an unreplaceable part within the higher scheme of things, much like a single drop in the ocean is important for the whole ocean to exist. Martial et al. (2021) retrospectively explored the frequency and intensity of the experience of ego dissolution during NDEs, that might be responsible for the feeling of unity reported by mystics

(Cressy, 1996). Her results (Martial, 2021:10) are *in line with existing literature suggesting that mystical-type experiences, including NDEs, may feature important disturbances in ego-boundaries and highlight the fact that NDEs in particular can be considered as a probe to explore human (self) consciousness.*

> *This seems to have taken place after I had seen ray life pass before me. It seemed that all of a sudden, all knowledge—of ail that had started from the very beginning, that would go on without end- that for a second, I knew all the secrets of all ages, all the meaning of the universe, the stars, the moon— of everything.*
>
> Raymond Moody *in* Life After Life

In fact, NDEs seem to be another pathway to the mystical experience, by sharing the same experiential features (Greyson, 2007c), that have been recognized through the transcendental component in the NDE Scale (Greyson, 1983). According to a study that quantified mystical elements, by comparing responses from NDErs with those who had come close to death but without a NDE, concluded that 2/3s of NDErs described mystical features as opposed to none in the control group (Greyson, 2014) The same study (*idem*:298) listed mystical features like *a sense of sacredness and divine union, timelessness/spacelessness, positive mood, noetic quality, and ineffability* as being typical components of NDEs. Despite suggesting that NDEs can be differentiated from mystical experiences, it still concluded that *the profound transformation that follows NDEs may be related to their mystical elements* (*idem*:308). An analysis comparing Pahnke's (1969) nine categories of mystical experiences with NDEs (Pennachio, 1986) concluded that, by sharing the same typology, they exhibit many attributes of mystical awareness and carry the same kind of self-transformative effects: those elements were identified as *Unity*, *Transcendence of Time and Space, Deeply-felt positive mood, Sense of Sacredness, Objectivity and Reality, Paradoxicality. Alleged ineffability, Transiency and Persisting Positive Changes in Attitude and/or Behaviour*. In NDEs case, they seem to encompass a psychological restorative function that facilitates unexpected, profound, and crucial renewal and transformation (Pennachio, 1988).

> *But most of all, I felt that I was at the edge of something wonderful that was about to unfold. I felt that there was some greater purpose to having experienced everything I'd just been through. Even with this inner excitement, however, with this feeling that I was on the precipice of some great adventure, I still didn't feel that I had to do or pursue anything for it to happen. I just had to be myself, fearlessly! In that way, I'd be allowing myself to be an instrument of love. I understood that this was the best thing that any of us could possibly do or be, for both the planet and ourselves. Since I realized this, problems just didn't seem that big anymore.*
>
> Anita Moorjani *in* Dying to be Me

The means by which this conversion happens are unknown, but do not seem to be as important as the result, a firm relationship with the transcendental world. As Underhill (1912) stated, *the testimony of the mystics, however, and of all persons possessing 'an instinct for the Absolute', points to the existence of a further faculty in man; an intuitive power which the circumstances of diurnal life tend to keep 'below the threshold of his consciousness, and which thus becomes one of the factors of his 'subliminal life' This latent faculty is the primary agent of mysticism and lives a 'substantial' life in touch with the real or transcendental world. Certain processes, of which contemplation has been taken as a type, so alter the state of consciousness as to permit the emergence of this faculty, which according as it enters more or less into the conscious life, makes man more or less a mystic* (*idem*:80). As the mystical state seems to imply, at its origin, a shift from an everyday state of consciousness, this fact allows for comparisons with other non-ordinary states. Both NDEs and other type of experiences (Martial et al., 2021), allow for a unifying contact with a transcendental reality, made by an unknown part of the subject's awareness, located beyond the boundaries of everyday consciousness, and is linked to irrevocable changes.

. . . 1 was going down a long black tunnel with a tremendous alive sort of light bursting in at the far end. 1 shot out of the tunnel into this light. I was in the light! I was part of it, and 1 knew everything—a most strange feeling.

Carol Zalesky *in* Otherworld Journeys

According to James (1902/1902:169) to be converted, to be regenerated, to receive grace, to experience religion are *so many phrases which denote the process, gradual or sudden, by which a self, hitherto divided, and consciously wrong inferior and unhappy, becomes unified and consciously right superior and happy, in consequence of its firmer hold upon religious realities. This at least is what conversion signifies in general terms, whether or not we believe that a direct divine operation is needed to bring such a moral change about.*
As Grosso (1996) affirmed, *we could describe the full-fledged NDE as an archetypal conversion process (…) and it might be useful to speak about the metanoid component of the NDE* (idem:138). This understanding, that arrives with the strength of a dogmatic truth, seems to work as a direct cause for the loss of fear regarding death and dying, probably caused by the transcendental experience and the spiritual transformation that ensues. The conversion effect cannot be disconnected from the heightened awareness of death that inevitably comes from the experience which includes, according to Noyes (1980:235) aspects such as:(1) a sense of the preciousness of life; (2) a feeling of urgency and re-evaluation of priorities;(3) a less cautious approach to life; and (4) a more passive attitude toward uncontrollable events. Death awareness coming from a mystical-like experience, which will lead into the loss of death fear, are part of the same process, and one cannot exist without the other: this connection will be inevitably reflected in the experimental part of the study and, for its importance, deserves a separate section.

2.9. NDEs and death fear

The loss of death fear has been considered as the most uniform *a posteriori* manifestation of a NDE and seems to be linked to its transcendental nature, and to the unshakable belief in an afterlife developing from it (Flynn, 1982; Greyson, 1992; Noyes, 1980; Musgrave, 1997; Ring, 1980; Sabom, 1982). As Moody affirmed *(*1975*:* 87-88), *as one might reasonably expect, this experience has a profound effect upon one's attitude towards physical death, especially for those who had not previously expected that anything took place after death. In some form or another, almost every person has expressed to me the thought that he is no longer afraid of death.*

2.9.1 Concepts and theories over death fear and anxiety

Before exploring the effect, it is important to overview the concepts of death fear and anxiety that have been treated indistinctly in some classical literature (Hoelter and Epley, 1979), as the terms have been interchangeably used (Abdel-Khalek, 1998, 2002), leading to some confusion, that remained unresolved until recently. Authors such as Neimeyer, Moser and Wittkowski (2003) defined death anxiety as a psychodynamic cluster of attitudes characterized by a sense of threat, restlessness, discomfort, and a diffuse fear without a known object, along with other negative emotional reactions. However, death fear has been classified in a uniform way in the catalogue of human emotions, ranging from what is thought to be an adjusted reaction to the question of mortality, to a typical manifestation of a personality maladjustment, with possible relevance for the psychopathological disorders catalogue (Barr and Cacciatore, 2008; Mikulincer and Florian, 2007). The expression*, death*, appears in a qualitatively different way from other fears connected with aversive events, and seems to be associated with more specific threats to life that, when disproportionate, may become phobic (Kastenbaum, 2003).

From this conceptual framework, several theories tried to explain how various reactions to death can emerge from a diversified spectrum of situations and its set of associated concerns. The popular *Terror Management Theory* (TMT) developed from the postulate that the idea of death is the source of an inevitable state of terror, determined by an innate drive for self-preservation, shared with other living beings, combined with evolved cognitive abilities (Greenberg, Pyszczynski, and Solomon, 1986, Greenberg and Pyszczynski, 1998). Such unique human capacity brings forth an awareness of life's fragility and the inevitability of death, causing the need to transfer primary and too fallible security bases, to broader and more protective constructs. According to TMT, it is the adhesion to symbolic systems and to their propagated cultural worldviews that guarantees a safe mediation between a state of terror and the need to preserve self-esteem, in face of the purposelessness of life and subjective vulnerability. A less pessimistic approach, given by the *Theory of Meaning Management* (TMM), provides an eminently hopeful outlook towards the transience of life, by defending the possibility of reaching a less conflictive state of acceptance. Here, the search for meaning constitutes not a defence, as in TMT, but a main motivation directed to the possibility of living under an ideal of growth and authenticity, resting on the human capacity to construct and re-signify ideas and events, even when life unfolds at the shadow of death (Wong, 2008). A mixed perspective, the *Dual System of Coping with Death,* by combining pessimistic and optimistic aspects, assumes that individuals depend on the interaction between avoidance and approach strategies for the pursuit of life goals (Wong and Tomer, 2011). If avoidance has a protective function, insofar that at its base is a motivation to adopt tactics that, in the search for a sense of security, induce the withdrawal of pain, anxiety, danger and death; approach strategies imply the adoption of tendentially expansive behaviours. The primary function of this system is to bring individuals closer to ultimate life goals and personal fulfilment even if, on occasions, a confrontation with issues causing pain, danger and even the risk of death, is necessary. The question of death, in this context, must be resolved through a commitment to life and a search for meaning, regardless of anxiety. But what we might be seeing with NDEs, in

line with Cozzolino (2006), is that a direct confrontation with death can also lead to drastic processes of personal growth, within which the loss of death fear and anxiety are important outcomes, instead of bringing denial or despair. According to Cozzolino et al., (2004), mortality awareness, brought by a NDE, can generate reactions that challenge the limits of the human condition and also, pessimistic theories. For them, NDEs, are one of *the tools required for people to manage their transcendence over existential terror* (*idem*:289).

2.9.2 The loss of death fear

There is no certainty about which aspects of NDEs are responsible for reducing death fear even if they seem to be part of the abovesaid overall conversion effect following an episode (Greyson, 1992). The Van Lommel et al. (2001:2042) study showed that the coping process that NDErs undergo, includes *a significant increase in a belief in an afterlife and decrease in fear of death compared with people who had not had this experience*. As Gabbard and Twemlow (1981:45) put it, p*eople who have near-death experiences may never fear death again. Their faith is strengthened so that the sense of catastrophe with which they live is finally mastered*. This effect that does not seem to fade with time (Van Lommel et al.2001) and seems to be in opposition to the existential terror predictions of TMT, calling upon the activation of psychological defences.

> *I no longer viewed death in the same way as others did, either, so it was very hard for me to mourn anyone. Of course, if someone close to me passed on, I was sad because I missed them. But I no longer mourned for the deceased, because I knew they'd transcended to another realm, and I knew that they were happy! It's not possible to be sad there. At the same time, I also knew that even their death was perfect, and everything would unfold in the way it was meant to in the greater tapestry.*
>
> Anita Moorjani *in* 'Dying to be Me'

It might be that the unshakable certainty NDErs acquire that something survives the death of the body somehow appeases, or eliminates, any disturbance caused by the idea of dying. The intensity of the experience, coloured by feelings of peace and joy and the presence of otherworldly living presences, assumes the shape of a revelation, sometimes triggering a spiritual conversion. This process, according to Lancaster and Palframan (2009:257)*, can be conceptualized as a process of continual movement into the unconscious, where the totality of the self is awakened, resulting in a reinterpretation of life purpose*.

> *I am no longer afraid of death. I know now in my soul that there is so much more after life. I feel that once I have learned what it is I am supposed to learn or a task that I must complete, that I will be rewarded with a life after death!*
>
> Jeffrey Long and Paul Perry *in* 'Evidences of the Afterlife - The Science of Near-Death Experiences'

This type of transformation leads to the conclusion that NDEs seem to be a powerful vehicle not only to eliminate death fear, but to potentiate spiritual well-being. The scope of this conclusion is wide-ranging, since it seems that, for a at least 4% of the population (according to the lower incidence estimates in Gallup, 1982 *in* Parnia and Fenwick, 2002), the advances in resuscitation techniques, have provided the opportunity for accessing a higher self-actualizing stage in human development (Maslow, 1943; 1968). Before, only mystics had potential access to such experiences after long periods of arduous and, sometimes, even life-threatening practices. Ironically, medical science, reluctant to approach non-mainstream themes, is at the cause of some of the same effects it tries to dismiss. But it seems more and more difficult to deny that, by being at the threshold of death and having a glimpse of what might happen afterwards, the result might well be the opposite of what has been traditionally expected.

I now held a view of life that very few, if any, in my social circle shared or even related to. And I was no longer afraid of anything. I didn't fear illness, aging, death, loss of money, or anything. When death holds no horror, there isn't much else left to be afraid of because it's always considered the worst-case scenario. And if the worst doesn't faze you, then what else is left? I was also finding it challenging to integrate back into life because this world still didn't seem real to me. The other realm felt more genuine.

Anita Moorjani *in* 'Dying to be Me'

Even if people don't see death as threatening anymore, a paradoxical anti-suicide effect has been reported: by renewing the will to live in subjects who survived attempts, a decrease in suicidal ideation following NDEs has been observed (Greyson,1983c; 1986). In fact, NDEs have been said to promote *the cause of life, not death, and especially not death via a suicide attempt (*Ring and Franklin, 1981-82:206). According to Sutherland (1990:30) *people who have had NDEs do not take their own lives* (…) to the point that, as Greyson (1981) affirms, a transcendental NDE following a suicide attempt *may decrease rather than increase subsequent overt suicide risk, despite the NDEs' apparent "romanticization" of death*.

It was like I got to see some good things! had done and some mistakes I had made, you know, and try to understand them. It was like: "Okay, here's why you had the accident. Here's why this happened. Because so and so and so."… it all had meaning.

Carol Zalesky *in* Otherworld Journeys

The importance of the loss of death fear, as an almost transversal effect of NDEs, is undeniable and makes us wonder on how people with life-threatening illnesses, in end-of-life situations or in grief could benefit from such an outcome. However, and despite what was said above, not all aftereffects are created equal, and sometimes NDErs struggle, not only during, but after the experience, whether their difficulties were caused by the contents of the experience, or by

problems in communicating and integrating the event in their lives. Instead of positive, NDEs can bring negative experiences and aftereffects, and trigger challenging life crisis.

2.10. NDE as Spiritual Crisis

2.10.1. NDEs Aftereffects and Associated Difficulties

Grey (1985 *in* Greyson and Bush, 1996:213) defined a negative NDE as being *characterized by feelings of extreme fear or panic, emotional or mental anguish, desperation, intense loneliness, and desolation.* Not all transcendental experiences, and amidst them NDEs, are necessarily blissful, or even beneficial and, often, significative psychosocial and psychospiritual problems ensue (Greyson, 1997). They might manifest themselves as symptoms bearing some level of resemblance to psychopathological diagnosis criteria, which may hinder the process of overcoming an episode. Ring (1980) estimated that 1% of all NDE accounts reflect unpleasant experiences, even though more recent estimates point out that the widely varying numbers (up to 22%), are based on experiences of people who were available to disclose the episode (Bush, 2002). Those might not represent the population and their experience might have been filtered by interpretation biases: as Bush (*idem*) underlined, the experience is not static, and can change over time in one direction or the other. If there are people who will use it as a stepping-stone towards a path of self-development, others will always remember it as a terrifying event.[12]

Many subjects envisage NDEs aftereffects as challenging, as they face difficulties in integrating them in their everyday lives, and within the milieu of their interpersonal contacts (Holden, Kinsey, and Moore, 2014). An initial phase of frustration, mixed with feelings of confusion,

[12] There are no available data that accurately document the frequency of frightening NDEs, since they were only based on extrapolations from Gallup statistical samples (Bush, 2002).

depression and doubts regarding their sanity has been reported by NDErs (Morris and Knafl, 2003), making the subsequent process of integration of uttermost importance. Especially, the first experience of disclosure. Several emotional problems have been catalogued, including anger and depression caused by an abrupt return against ones' will to an often-broken body, but also because of the impossibility of reliving, daily, the same state of bliss experienced elsewhere.

> *That was probably the most frustrating six months of my existence. After experiencing perfection ... 1 didn't want to let it go. And it wasn't easy. After I recovered the second time and went home . . . everything just seemed to change. It was almost like 1 was starting my life all over.*
>
> Carol Zalesky *in Otherworld Journeys*

As Greyson (1997:328) affirmed, *having experienced a sense of unconditional love in the NDE, the experiencer cannot accept the conditions and limitations of human relationships.* Considering the importance of this meaning-making process, it *appears to be influenced in part by the degree to which disclosure needs are met at key turning points* (Hoffman, 1995:246). But disclosing the experience to health professionals, family and friends is not a straightforward decision, for fear of being undervalued, dismissed, or utterly rejected (Hoffman, 1995a). Members of clinical staff, generically, are not prepared to reduce the emotional impact of an NDE. As Holden Kinsey and Moore (2014:285) affirmed, *current research-based information about NDEs is not reaching health professionals, at least in ways that make them less prone to doing harm.* Indeed, a study on NDErs experiences of disclosure revealed that *the most noteworthy experiences to healthcare professionals were, on average, on the positive side of neutral* (Holden, Kinsey, and Moore, 2014: 284). However, 19% of the subjects felt harmed, in the sense that reactions from professional groups have ranged from mildly to extremely negative, unpleasant, or even harmful (*idem*). As it has been reported by a sample of NDErs, the importance of not having the experience minimized by health professionals, but validated in its genuineness, is more important than having them believing in its reality (Morris and Knafl, 2003).

2.10.2. Integration of a NDE as a Spiritual Crisis

Despite the increasing dissemination of information, probably people are more familiar with the typical symptoms of mental disorders than with NDEs. Thus, aftereffects end up being confounded with criteria for the differential diagnosis of conditions that might demand psychiatric attention, instead of being presented, as culturally bounded and adaptative mechanisms of coping. However, common manifestations that seem fit to conditions such as depersonalization (Gabbard and Twemlow, 1984), dissociation (Irwin, 1993; Greyson,2000), PTSD (Greyson, 2001)[13], autoscopy (Blanke and Dieguez, 2009)[14] or drug induced hallucinations (Bates and Stanley, 1985; Greyson, 2007b), are not appropriate to translate the complexity of a NDE, and to explain what seem to be non-pathological responses to a specific state of consciousness. In this context, it is expectable that some of the difficulties reported by NDErs are caused by fear of having their experiences pathologized, *as many have received reactions bordering on catastrophic* (Griffith, 2009:35) from relatives, friends, and healthcare providers. NDErs fear a never-ending calvary of after-events, starting with being labelled as mental patients and medicated, on top with dealing with the consequences of having collateral health challenges. For this reason, they hesitate to report episodes to medical staff and close relations and, normally, a process of disclosure develops in stages and shifts over time (Hoffman, 1995a). Also, the changes that NDErs go through, commonly provoke a profound and disruptive impact on family and friends, who are not sure on how to deal with someone who suddenly seems to be a different person.[15] And, if changes in every area of life are expected, often they are not understood nor accepted. So, the adjustment and the reconfiguration in identity goes in more than one direction:

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[13] Greyson and Bush (1986:226) suggest that *the vivid recall and persistent aftermath of near-death experiences* can be compared with PTSD, and question if the distressing experiences and its aftereffects could reflect in *an atypical posttraumatic stress syndrome.*

[14] See footnote 2.

[15] With children, it is especially difficult to integrate the experience, by the unpreparedness of adults to help, so that such difficulties can persist into adulthood and facilitate the development of emotional disturbances that later turn into episodes of depression (Sartori, 2014).

the most difficult adjustments were in those relationships where the family of the NDEr could not accept the transformation that had taken place in the experiencer's person (Insinger (1991:179).

Such experiences, that may look like psychotic episodes have, as other experiences with similar aftereffects, been called *spiritual emergency crises*, when one breaks down to break through: the process of growth and change becomes chaotic and overwhelming, the sense of identity is lost, old values no longer hold true, when the very ground beneath a former reality is disintegrated, resulting in anxiety, fear, and confusion (Grof and Grof, 1990). On top of it, little help is available to aid in the integration of negative responses, as clinicians might feel caught up between a too esoteric subject on the one side, and the tendency to look at symptoms as a typical manifestation of a mental disorder, on the other. Thus, being unable to take a balanced perspective. However, the term spiritual emergency', at the same time it suggests a crisis, also suggests *the potential for rising to a higher state of being.* (Grof and Grof, 2017).

The Diagnostic and Statistical Manual of Mental Disorders (DSM), the standard reference and practical guide for clinical practice in the mental health field, in its 5th version (American Psychiatric Association, 2013), brought an important change to its previous edition, by including a category (V-code section 62.89) that can be used *when the focus of clinical attention is a religious or spiritual problem.*[16] This approach takes these, until now largely denied, powerful human forces out of the periphery of health care, increasing the possibility of differential diagnosis, and preventing the pathologizing of existential challenges. The originators of the code pointed out to the importance of including *anomalous experiences as: peak experiences, near-death experiences, the state of being possessed by devil forces, experience of previous incarnations, experience of being kidnapped by a foreign power, contacts with spirits or a psychic, psi experience, awakening of the kundalini, shamanic crises, intense experiences connected with meditation or other spiritual practices* (Prusak, 2016:180), as long as they encompass the possibility of being at the origin of a positive outcome, despite any initial suffering.

[16] *Examples include distressing experiences that involve loss or questioning of faith, problems associated with conversion to a new faith, or questioning of spiritual values that may not necessarily be related to an organized church or religious institution* (DSM-V, 2013:725).

This transformative spiritual effect has been under the attention of a study (Khanna and Greyson, 2015) where NDEs, envisaged as spiritual events, were found to be correlated with greater posttraumatic growth (PTG) than close brushes with death without an NDE. In fact, as it happens with other extreme states, *the majority of these experiences are not problematic, do not disrupt psychological/social/occupational functioning, and do not lead to mental health treatment. (…) The acceptance of religious and spiritual problems as a new diagnostic category in DSM-IV and DSM-5 is a reflection of increasing sensitivity to extreme state experiences in mainstream clinical practice* (Lukoff, 2019: 760).

Further research is needed to clarify what are NDErs real difficulties in making sense and effectively integrating their experience in their lives. Even if the NDE is negative, its consequences are not necessarily so, depending on the type of approach healthcare professionals use in dealing with anomalous experiences and what are now currently accepted in psychiatry, as spiritual problems. Nowadays, that there is mounting evidence regarding the benefits of spirituality as an important factor in mental health, a healthy integration of NDErs experiences might aid in turning an otherwise traumatic experience into an opportunity for psychological growth. Given the impact that the transcendent character of this experience has on how NDErs live their relationship with spiritual aspects of existence, a deeper approach to this topic is justified. Including the part where individual differences in terms of who will be able to integrate their experience and who may fall into crisis is considered. These aspects should be taken under consideration when studying induced NDEs, as some people might be better subjects than others, depending on the type of relationship they have with spiritual issues.

2.11. A closer look at the concept of spirituality and spiritual maturity as an attribute of the individual

This section is meant to explore the concept of spirituality and its benefits in terms of health outcomes, so that the spiritual transformation effect following an NDE can be more clearly understood. The strong relationship with the sacred provided by a NDE, is at the core of the increasingly studied multidimensional construct of spirituality. For a long time and until the transpersonal advent, psychology did not focus on the theme of spirituality, apart from individual inroads, as it was the case of William James, Jung, or James Hillman. Only when the general public's interest started, in the 1960s, did psychology follow, albeit in a hesitant and somewhat non-autonomous way.

An interest on part of researchers started with religion, from which spirituality had some difficulty in detaching itself, because its multidimensional nature meant the existence of communicating areas and overlapping aspects. Religion and spirituality often have co-occurrent psychosocial, cognitive, and affective manifestations, relevant to the study of personality and with important implications to mental health (Hill et al., 2000). However, spirituality, as an inner and active personal search for the transcendent aspects of life, goes far beyond organized practices and cannot be reduced to belief, adhesion to, or respect for a certain doctrine or ritual alone. Piedmont et al. (2009) views spirituality as an attribute of the individual who is concerned with a personal relationship with a transcendent reality, as opposed to religiosity, as an organized, social phenomenon. In trying to overcome conceptual challenges, Hill et al. (2000) proposed four criteria: any definition of spirituality should include a sense of the sacred, as well as the idea of non-sacred, an individual quest and, sometimes, community support. Accordingly, the term spirituality should be generally used in reference to *feelings, thoughts, experiences, and behaviours that come from a search for the sacred* (Hill et al., 2000:66), involving experiences and states of consciousness on a transcendental level, but not necessarily organized practices, unmovable doctrines, or religious institutions (Lancaster and Palframan, 2009; Pargament, 2007).

Close to a personality trait, spirituality can be seen as a distinct dimension of individual differences, with enough unique variance to be separately used, as a relevant construct, amidst other personality variables, in the search for better theories and interventions (Piedmont, 2001; Piedmont et al., 2009). Even though spiritual aspects of the individual should have not been considered as part of traditional personality dimensions, measures of spirituality were found to be highly correlated with domains of high *Openness* and high *Agreeableness* (MacDonald, 2000). However, Piedmont (2005), defended that even though the overarching *Five Factor Personality Model* is not based on numinous constructs, it is a useful point of departure for understanding the motivational, attitudinal, and behavioural correlates of spirituality (McCrae and Costa, 1997).

A clear definition, used by Koenig (2012:3), distinguishes spirituality *from humanism, values, morals, and mental health – by its connection to that which is sacred, the 'transcendent'. (…) is intimately connected to the supernatural, the mystical and to organized religion, although also extends beyond organized religion (and begins before it). Spirituality includes both a search for the transcendent and the discovery of the transcendent and so involves travelling along the path that leads from non-consideration to questioning to either staunch non-belief or belief, and if belief, then ultimately to devotion and finally, surrender.* This volitive aspect, related to a sense of agency, seems to be as important as faith or belief, but the process of understanding why some people have a well-developed spirituality comes with its caveats, and well-grounded theories are lacking, let alone research. Closely associated personality constructs, like *spiritual openness* or *spiritual maturity*, as potential explanatory traits on why some people have closer connections than others, require solid theoretical foundations and investigation. Neither construct has been a favourite object of scientific inquiry and, as Eyer et al. (2018) underlined, this area suffers substantial challenges, starting from overlapping and complex concepts, to going through assessment and the final identification of spirituality related constructs.

However, Eyer et al, (*idem*) highlighted Genia's (1991) Spiritual Experience Index (SEI) as an adequate measure of assessing *spiritual maturity*, independently of any specific theological beliefs. Nonetheless, in this scale the concepts of religion and spirituality are used interchangeably, and

the items seem to be strongly correlated with the concept of faith, falling short on an experiential component that might be one of its more distinctive aspects. In fact, the instrument does not seem to acknowledge that spirituality can be separated from religious involvement and be based, instead, on a strictly personal relationship with the sacred aspects of existence.

The SEI Scale, and a recent revised version, SEI-S (Eyer et al., 2018), intended to distinguish mature faith from less evolved religious forms. SEI, as a measurement tool, was grounded on a developmental model of faith, acknowledging that *those who progress to higher psychospiritual stages have acquired the internal resources that enable them to develop e more mature spiritual commitment* (Genia, 1990: 338). In the original instrument, 38 items were built *to distinguish the spiritually mature from those with less evolved forms of faith* (Genia, 1997:345) and it comprises two subscales, *Spiritual Support* (SS) and *Spiritual Openness* (SO), offering the possibility of categorizing individuals into subtypes, according to four combinations between high and low scores. *Spiritual Openness*, one of the SEI subscales, is theoretically linked with the personality trait of *Openness to Experience*. By the time the instrument was built, its theoretical framework stood on developmental psychology principles, applicable both to religious and spiritual themes, rather than *a multidimensional concept of faith* (Genia, 1991:339), which is meant to reflect a Western conception of spiritual faith. The eleven criteria for building the scale were solidly grounded on the works of Gordon Allport (1950, 1967), William James (1902) and Erich Fromm (1950), around the psychology of religion (all *in* Genia (1990; 1991). Genia (*idem*) adapted these criteria to a developmental model, to explain individual adaptations throughout life to a process of faith development, where a fifth and highest stage, called *Transcendent Faith*, describes those individuals who are well-integrated and autonomous in terms of their spirituality. The original criteria, devoid of any religious construct, are the following:

1. *Transcendent relationship to something greater than oneself;*
2. *Consistency of lifestyle, including moral behaviour, with spiritual values;*
3. *Commitment without absolute certainty;*

4. *Appreciation of spiritual diversity;*
5. *Absence of egocentry and magical thinking;*
6. *Equal emphasis on both reason and emotion;*
7. *Mature concern for others;*
8. *Tolerance and human growth strongly encouraged;*
9. *Struggles to understand evil and suffering;*
10. *A felt sense of meaning and purpose;*
11. *Ample room for both traditional beliefs and private interpretations.*

As Eyer et al. (2018:884) concluded, higher scores on SEI represent a mature stage of spirituality *characterized by faith-consistent (or congruent) behaviour; an open, accepting orientation to other faiths; tolerance of uncertainty and other's beliefs and ideas; and a sense of meaning and purpose devoid of specific doctrines*. They (*idem*:898) also underlined the importance of reviewing existing scales as a method of assisting research to *meet the challenges of the twenty-first century* (*idem*: 898), a period when research on spirituality seems to be growing in popularity and separating itself from religious faith and organized practices, even concerning health outcomes.

In the following chapters, the concept of spiritual maturity will be used, as well as the criteria that led to the construction of the SEI Scale (Genia, 1991), but not the instrument itself. The fact that the scale does not seem to be particularly sensitive to the fact that spirituality can be fully experienced in a personal, idiosyncratic way, separated from any religious involvement, is one of the reasons that prevented its use on the present study. However, the concept of *spiritual maturity* remains interesting, in the sense that it was created within a psychodynamic developmental paradigm, that sees spirituality as the progressive outcome of and individual and effortful pursuit of maturation (Genia, 1991)[17], in the same way as in any other human dimension, whether emotional, physical, or mental.

[17] In support of the developmental theory, Genia (1991) cites the following authors: E.g., Fowler, J., Stages of Faith: The Psychology of Human Development and the Quest for Meaning. San Francisco, Harper & Row, 1981; Kao, C,

In this sense, without attributing any type of value, it acknowledges the fact that some people are more advanced than others in terms of what they achieved in terms of incorporating a certain number of spiritual principles or ideas in their worldview, in the same way as it would happen with emotional maturity, for example. Saul and Pulver (1965) addressed this question, stating that the word 'maturity' should not be considered as *value-determined*, if envisaged as a purely developmental concept, which remains the case. Alexander (1948:1) considered that the expression, "maturity," refers to a significant phase in the growth of a living organism. *Maturity is achieved when individual growth is complete, and the organism is ripe for propagation. The concept of maturity is used also in psychology and psychiatry. In this field it designates that phase of personality development which corresponds to biological and psychological maturation*. Spiritual maturity simply acknowledges the state of development regarding a certain personality dimension. For this reason, the use and discussion of the criteria can be performed without any concern for value premises (making someone better or worse, because of their adhesion to certain spiritual principles). The criteria remain independent of any subsequent meaning that Genia (1991) might have provided, as she considered that they could in some way, reflect spiritual maturity and be a solid basis for the construction of an assessment tool. This scale simply reflects *the fact that in spiritual development undergoes a maturation process: shifting toward developmental paradigms of individual spiritual striving. These theorists conceptualize faith as a developmental phenomenon which, under favourable psychosocial conditions, follows a normative progression from a highly egocentric religiosity in childhood to a self-transcending faith in middle adulthood.* (*idem*331)

It is true that more neutral expressions could be used, like 'spiritually informed' or 'spiritually experienced'. However, since there is an already validated instrument using the concept 'spiritual maturity', in the following chapters this expression will be used, even if the SEI Scale (Genia, 1991:338) was not adopted, as we assume that what will be pragmatically relevant to this study

Psychological and Religious Development: Maturity and Maturation. Lanham, Md., University Press of America, 1981; Meadow and Kahoe, op. cit.

will be the result of our observation, according to the chosen criteria, and not any value that might be attributed to it, or to the participants developmental stage.

2.12. Spirituality and health and well-being associations

Despite conceptual and measurement challenges, religion and spirituality are now seen as important factors increasingly associated to favourable mental and physical health outcomes (Koenig, 2012; Koenig, McCullough, and Larson, 2000). Studies investigating the relationship between religion, spirituality, and coping have found that beliefs and practices may be helpful in the process of dealing with life experiences (Lancaster and Palframan, 2009).

For example, a well-developed spirituality seems to be associated with dimensions of better mental health, well-being, and emotional stability, and with better coping in health and illness (Chandler, 2012; Klein at al., 2016; Koenig, 2008; 2010¸ Lancaster and Palframan, 2009). Empirical findings pointed to an association between spiritual well-being, psychological functioning, and disease adjustment (McClain, Rosenfeld and Breitbart, 2003). A causal link has been documented between the development of a more spiritual perspective, and an equanimous attitude towards the degradation of health and the imminence of death (Neimeyer et al., 2011). McClain, Rosenfeld, and Breitbart (2003), in a study conducted with a sample of patients with end-stage cancer, revealed significant correlations between depressive states and the desire to anticipate the moment of death, in those who revealed lower levels of spiritual well-being. Other individuals view spirituality as an important support as they attempt to deal with life-threatening diseases (Breitbart et al., 2004; Stefanek et al., 2005), making the area of spiritual care fertile ground for the implementation of strategies aiming to improve the overall quality of life of people facing death (Edwards et al., 2010, Williams, 2006).

Assuming death contains psychosocial, interpersonal, intrapsychic, developmental, and spiritual dimensions (Iglesias, 2004), there is an increasing acceptance of the need to actively integrate

spirituality in the type of care provided to people in end-of-life situations. In a meta-analysis of the literature, Williams (2006) confirmed the possibility of considerable increases in the spiritual health of people in terminal situations, when they are given the possibility to work on this dimension. Recommending, therefore, a greater effort in terms of research and intervention. The urgency of this type of approach is evident, as people in terminal situations face the last great crisis of their lives and, at the same time, the last opportunity for change. Their greater challenge being to maintain the integrity of their identity in the face of disintegration, and reconcile life and death (Hinshaw, 2005).

Recently, Khanna and Greyson (2014:1605), examined spiritual well-being among 224 persons who came close to death, and concluded that participants *who reported having near-death experiences reported greater spiritual well-being than those who did not, and depth of spiritual well-being was positively correlated with depth of near-death experience*. Even considering that a predisposition to spiritual experiences might have been present before, the authors concluded that the data *support previous research suggesting that NDEs may be considered a form of, vehicle for, spiritual awakening* (*idem*:1613). The contact with sacred dimensions may include a phase of spiritual transformation (Gall and Guirguis Younger, 2013), much like what happens after an NDE.

Indeed, if a relationship between psychological health and spiritual variables does exist, there is a vast field of therapeutic applications that can benefit from the dynamic that seems to be present in NDEs. And this is also a reason to further explore the relationship between such benefits and the spiritual transformation effect caused by a NDE, often equated with the impact of mystical experiences. In the experimental part of this study, the effects of psychological and spiritual well-being and the loss of death fear caused by a spontaneous NDEs will be included as research goals. However, before that, in the following chapter, containing the second part of the literature review, how this type of experience can be artificially induced using a well-known therapeutic tool, hypnosis, will be addressed.

2.13. Chapter Summary

In this chapter we reviewed, in considerable detail, key scientific information on NDEs, with a special emphasis on phenomenology and aftereffects, before attempting to put together a relevant account on how hypnosis can be used as a bridge to facilitate transpersonal experiences. We have outlined several situations when NDEs occur spontaneously, without any life-or-death risk to the participant, through NOSCs. With this material, we attempted to demonstrate that there was theoretical ground from where a serious connection between NDEs and beneficial aftereffects, especially psychological and spiritual, could be drawn. A clear frontier exists between a before and an after moment, in most people's lives, when an NDE lies in-between. This intense process, tinted with an undisputable spiritual quality, sometimes equated with mystical experiences, as they have been described across centuries, leaves an indelible mark in NDErs. Life becomes different, not only because in some situations, people are left with physical reminders of what happened before the episode, but mainly because how they start to see themselves, others, and the world changes forever. The importance of the reduction of death fear was also highlighted, in the context of a wider spiritual transformation ensuing a spontaneous NDE. The process conducive to such effects is unknown, but the literature supports the hypothesis that possible causes might be related to an indelible impression left by transcendental, mystical-like elements permeating a non-ordinary experience as a NDE is. This relationship between a mystical-like experience and a process of positive psychological transformation demands further research. Since NDEs can be triggered in various ways, through NOSCs, it might also be that a similar phenomenology, and even aftereffects can be provoked, without any life-threatening experience or psychological detriment. By this point, the question of how non-spontaneous NDLEs, and its array of transcendental aspects, can be brought to people in safe, therapeutic contexts, without any detriment to the participant, might be legitimately raised. This seemed an experience worth pursuing, since there is no research, yet, dealing with

this exact topic, with a few parallel exceptions. Hypnosis has been increasingly used as a clinical tool in many contexts and is also a safe clinical tool to bring transcendental experiences to people who want them, within a Transpersonal Psychology framework. Besides that, spirituality has recently been more and more included, as a respectable theme of research in Psychology, since it has been associated with a whole variety of health and well-being indicators. Therefore, in this chapter, hypnosis, and its transpersonal uses, will be addressed, as a possible tool to be used in the induction of NDLEs, in the degree of detail that was considered appropriate to this kind of study. An account of similar hypnotic experiences, involving the death theme, will be described. Finally, the Ariadne thread linking NDEs, hypnosis and spirituality, will find its end when the final purpose of bringing them together is presented, which is to bring an induced NDE-like event to healthy volunteers, in a safe context.

Chapter III

Hypnosis: an overview of a non-ordinary state of awareness

> *When I first began to work in regressive hypnosis and past-life therapy in 1979, I never imagined the unusual places and situations that road would take me. Over the ensuing years it has taken me into some strange byways. (…) All of this changed when I was inadvertently introduced to the phenomenon of UFO abduction experiences. My adventures took a totally different and unexpected direction. Doors opened and I was allowed glimpses of a world that others thought should be left shrouded in the murky darkness of the unknown. Some say it is better not to probe into things that our human mind is probably incapable of understanding. But if knowledge and understanding are there, I knew I would have to search and ask my inexhaustible questions. Any new avenue of research always presents a challenge to me, and it is a challenge that I cannot ignore.*
>
> Dolores Cannon *in* The Custodians

3.1. Chapter Overview

In the first part of the literature review, an account of the most relevant literature on near-death experiences (NDE) was presented and its main aspects were summarized, like core elements, incidence, explanatory theories, and aftereffects, especially those bearing a transcendent component which seems to facilitate a positive transformation process, that includes the loss of death fear and increases in well-being. It was also said that in some cases, NDEs do not occur spontaneously, but are purposefully induced, which can happen with hypnosis, among other triggering agents. Regarding such cases, few research papers have been published yet, but the possibility exists, at least theoretically, that the same phenomenology and aftereffects develop

from a non-life threatening, non-spontaneous event. Since positive aftereffects overweigh any negative consequences (which happen in 1% of the cases, and can be resolved with post-event interventions), it is worthwhile exploring how artificially induced NDEs might bring about the same benefits in a safe, therapeutic environment.

The exploration of how this goal might be achieved with a tool like hypnosis, within a transpersonal framework will be performed. In this chapter, hypnosis will be conceptualized, and some of the ways it has been used to approach the death and dying theme will be summarized, after going through some of the ways in which transpersonal psychology uses non-ordinary states of consciousness (NOSC) as a tool of election. Including hypnosis, as a privileged vehicle to bring awareness to transpersonal aspects of life and death. Transpersonal psychology, in Shapiro's (1994:35) words, *has emerged as an alternative framework for recognizing, legitimizing, and exploring a deeper and more fulfilling dimension of existence*. This type of dimension might correspond, among other possibilities, to the realms where NDErs dwell, when they describe how they journeyed to the other side and then came back, forever transformed. One of the possible causes for this profound and irreversible transformation is said to be the otherworldly, indelible quality of the experience, that inevitably shakes, or shatters even, the previous worldview of NDErs. Which becomes replaced with another, that includes an all-embracing transcendental outlook on life. This equanimous standpoint seems to be responsible for the dissolution of death fear and a more joyful and peaceful attitude towards life's circumstances.

The possibility of delivering such an experience with hypnosis, within a transpersonal framework, as it has already been done in comparable circumstances (Babb, 1989; Facco, 2012; Ohkado and Greyson, 2018; Pederzoli, de Stefano and Tressoldi, 2018), brings the opportunity of studying the benefits of transcendental experiences in safe, therapeutic, settings. Also contributing to the growing number of scientific papers that are helping to bridge the gap between scientific discourse and spirituality related themes.

Therefore, in this chapter a perspective will be given on how all these themes, NDEs, hypnosis and spirituality, can be combined, even if in a necessarily concise manner, given their extension and multiple possibilities of theoretical approach. Special emphasis will be given to the theoretical possibility of inducing a non-spontaneous and non-life threatening NDE with hypnosis. An encouraging example comes from PTG-Post-Traumatic Growth theory (Tedeschi and Calhoun, 2004) and from individuals who successfully overcame serious life crisis, causing growth instead of distress. In this context, it seems reasonable to think that those changes reported by NDErs are alike to those post-traumatic changes, bringing the same array of benefits. It is also reasonable to think that induced NDEs might have similar effects, especially in situations where people are confronted with life and death situations, and with the possible shortcomings of other interventions. In this regard, this chapter complements and expands the previous one, with the goal of guiding the reader through what was the thought process behind the exploratory part of this project, the hypnotic induction of NDEs and the assessment of possible positive aftereffects.

3.2. Defining Hypnosis as a Non-ordinary State of Consciousness

Since early ages hypnosis has been intertwined with the fields of consciousness studies but has also gained increased recognition as a useful clinical tool in psychotherapy and medicine (Lynn et al., 2000; Simões, 2002). APA, the American Psychological Association (APA, 1993) conceptualized hypnosis as a therapeutic technique by which a clinician makes suggestions to a patient who has undergone a procedure that helps him to relax and focus. Vickers, Zollman and Payne (2001:269) defined hypnosis as *the induction of a deeply relaxed state, with increased suggestibility and suspension of critical faculties*. More recently, hypnosis has been described as *a state of consciousness involving focused attention and reduced peripheral awareness characterized by an enhanced capacity for response to suggestion* (Elkins et al., 2015:6). As a state of highly focused attention associated with an increased

responsiveness to certain cues, coupled with a dissociation of competing thoughts and sensations, which are referred to the periphery of consciousness (Spiegel, 2013), hypnosis can be considered as a NOSC.

A well-known debate around the nature of hypnosis, which goes way beyond the scope of this thesis, divides 'state' and 'nonstate' theorists around the question of the need of a state of trance to account for hypnotic suggestibility in a causal sense. According to Kirsch (2000: 277), the questions dividing state from non-state theorists are: *(1) is there a uniquely hypnotic background state (trance) produced by hypnotic inductions (2) if so, are the experiences produced by suggestion in any way dependent on this trance state.* Kallio and Revonsuo (2003) propose that hypnosis is 'something more' and forwarded the *Altered State Theory* (AST), according to which hypnotic behaviour consists of both a special state of hypnosis and a *degree of suggestibility that is not dependent on the presence of the state but is affected by it*' (*idem* 113). Hasegawa and Jamieson (2002:112) defended that the outcome of this debate is that although hypnosis may involve an altered state of consciousness, this state may not be unique to hypnosis. Khilstrom (2005) considers the state-nonstate debate to be a distraction, and what is of interest if what happens in the context of hypnotic suggestion: *a comprehensive understanding of hypnosis must emphasize that the phenomena of hypnosis reflect both alterations in consciousness and social interactions* (*idem*: 34).

Whatever position is assumed, the three basic characteristics of the hypnotic state are *absorption, dissociation,* and *suggestibility*, allowing the individual to focus on 'what' rather than on 'why' questions, considered as fundamental in moving him away from non-adaptive or dysfunctional patterns (Spiegel, 2013), and attribute new meanings to the experience. Indeed, the increased state of absorption and selective attention to a given stimulus (or suggestions), or set of stimuli, coupled with the dissociation of the usual frame of reference, allows for the use of resources outside the scope of conscious experience. *Absorption*, moreover, is the personality trait that has

been consistently associated with hypnotizability[18], by creating a predisposition to be in a full attention mode, resulting in an altered sense of reality in general, and an increased focus on the object in question. (Tellegen and Atkinson, 1974; Facco et al, 2019).

3.3. Hypnosis, Clinical Applications and Uses

Hypnosis therapy is a well-known tool that has been effectively used in many conditions. Hypnosis can, in fact, bring to surface and amplify pre-existing strengths, starting from the premise that the person has resources, albeit hidden, which can be deliberately used to overcome symptoms and problems. The possibility of developing associations and implicit resources that would not be present in a normal state of vigil consciousness, is what defines hypnosis as a therapeutic tool par excellence (Yapko, 1992).

The best-known applications are in the field of anxiety, depression, and stress related diseases **(**Hammond, 2010; Yapko, 2003; 2010), pain therapy (Oakley, 2006), PTSD (Spiegel, 1988), phobias (Mott, 1986), childhood disorders (Kuttner, 2009), and anxiety-related diseases such as migraine and irritable bowel syndrome (Lynn and Cardeña, 2007). Within an integrative therapeutic model, cognitive-behavioural hypnosis has shown good results with individuals suffering from anxiety disorders, by helping them to bypass mechanisms located outside of focal attention that could otherwise be an obstacle to the reconstruction of dysfunctional cognitive patterns (Alladin, 2012; 2013; 2013a; Golden, 2012). From this picture, anxiety spectrum disorders represent the most common psychiatric disorder and, also, an archetypal problem of the mind-body relationship (Spiegel, 2013). A connection between psychological and somatic suffering is not only a characteristic sign of its manifestation, but also one of the difficulties in the

[18] Hypnotizability has been defined as the change in suggestibility produced by inducing hypnosis (Kirsch and Braffman, 1999).

treatment. Hypnosis has been considered as a reliable modulator of the homeostasis of the HPA axis and of the immune response (Kendrick et al., 2015; Wood et al., 2003; Vargas and Zoltan, 2014), by improving mood and reducing levels of clinical depression and anxiety (Gruzelier, 2002).

Assuming that hypnosis allows, on the one hand, to effectively address anxiety-related disorders, it can also be assumed than it constitutes an appropriate tool to deal with issues of death fear and anxiety. However, a survey of scientific literature in this area, produced few results. The interventions themselves, have been more focused on the treatment of physical and psychological disorders associated with oncological disease (Liossi, 2006, Newton, 1982), where hypnosis is sometimes part of a comprehensive multidisciplinary approach to alleviate associated symptoms (Liossi, 2006; Elkins, Fisher, and Sliwinski, 2012; Elkins, Johnson and Fisher, 2012). Facco et al. (2018) summarized the wide-ranging use of hypnosis in palliative care, providing a thorough philosophical reflection upon several areas demanding for less conventional therapeutic strategies to improve resilience in patients.

An approximation to a focused use of hypnosis in preparation for death, and not only as a coadjutant in the treatment of symptoms associated with severe or terminal illness, derives from an existential approach to psychotherapy. In existential theory, life and death are seen as interdependent and, consequently, disturbing psychological symptoms, such as end-of-life depression and anxiety, can be seen as signs of some unfinished task or interpersonal difficulties that need to be overcome (Iglesias, 2004). Psychological disturbance is, in this context, a result of the avoidance of truth or inability to deal with it (van Deurzen, 2007). Death fear and anxiety, insofar as they generate a series of defence mechanisms, are a quintessential target of existential therapy to help in overcoming the incessant struggle with oneself resulting from an unpredictable reality (van Deurzen, 2007). For this reason, hypnosis, in an elegant and powerful way, can serve as a therapeutic tool, by helping patients to face end-of-life challenges, deal with existential

conflicts and live meaningfully to the last moment, despite limitations. By accepting disease and death, significant improvements in associated symptomatology can result.

For example, Iglesias (2004) used hypnosis to mediate somatic and psychosomatic symptomatology, through the resolution of existential conflicts associated with patients' terminal status, so that they could respond to medical management. *A combination of techniques included classic inductions, classic hypnotic suggestions, and indirect Ericksonian methods (Zeig, 1980), including metaphorical stories (…) re-framing techniques (Hammond, 1990) were used to address existential meaninglessness. Life review strategies, by regression with revivification (Greenleaf, 1969; Erickson and Rossi, 1979) were also employed to address existential meaninglessness by reviewing and reliving successes in these patients' lives. Time progression strategies (Rosen, 1985) allowed the patients to have glimpses of their perpetual influence on their families. Existential aloneness and isolation were addressed by means of hypnotic hints, indirect cues, and by an adaptation of the "my-friend John" approach (Bakal, 1981) for continued communality and connectedness with significant others.* (Iglesias, 2004:206).

Also, Rosenberg (1983) used a remembering technique, to bring past accomplishments to memory, to help terminally ill cancer to resolve the existential sense of meaninglessness. However, such techniques, however useful, do not approach death, *per se*. Instead, they help patients to make peace with life and what they were able to accomplish, giving them a sense of resolution and the certainty of a 'job well done' while alive. Other techniques, using NOSCs, provide first person experiences into what death might be, eventually creating the same type of positive benefits as NDEs do, including the reduction of death fear and anxiety. Transpersonal Psychology is known for making a privileged use of such techniques.

3.4. The Transpersonal Use of Non-ordinary States of Consciousness

Because for some people belief may be insufficient, a direct experience that one interprets as evidence for continued existence may be essential to reduce existential distress (Meyersburg and MacNally, 2011). The spiritual dimensions of human reality have been commonly, and often controversially, considered *to be the hallmark of the transpersonal* (Daniels, 2013:28). An inclusive definition regarding transpersonal psychology as an integral psychology of self-expansiveness (Hartelius, Rothe and Roy, 2013), defends the purposeful use of NOSCs as effective therapeutic tools to catalyse self-actualization processes (Maslow, 1943;1968).

It has been recognized by the transpersonal approach, that NOSCs function as a therapeutic vehicle for experiences located outside the usual emotional spectrum and associated with a wide range of sensory and cognitive alterations. Such uncommon processes may be at the origin of lasting transformations, insofar as they correct locally the problems that originated them in the first place (Grof, 2009). Far from constituting an epiphenomenon, NOSCs have the ability, like a radar, to locate areas of traumatic emotional blocks that are spontaneously brought to consciousness, for the purpose of being integrated (Cook, 1997). The experience of other phenomena, outside everyday consciousness but equally real, may be the source for an expansion of the current model of the human mind, in which therapeutic strategies taking advantage of NOSCs deserve closer attention from researchers. Among commonly used non-ordinary states, differentiating transpersonal from other psychological approaches, hypnosis plays an important role. As other NOSCs, hypnosis is often used to enhance the integrative role of spirituality, which is to offer *an expanded framework for spiritual growth and mental healing (Gilot, 1998). (…) In this integral perspective, transformative spirituality is a means of ego transcendence and a healing factor for egocentric suffering* (Boggio-Gilot, 2000:138). As we have seen in the previous chapter (*see* Section 2.12.), spirituality has become associated with better health and well-being, potentially reinforcing the connection transpersonal psychology might have with these areas. Alongside medical mainstream forms,

hypnosis, as a multifaceted experience in consciousness (Lynn, Lawrence and Kirsch, 2015) has shown marked potential for inducing transpersonal experiences (Cannon, 1999; Tart, 1970), and integrating seemingly incompatible realities within an individual (Leskowitz, 2000).

Zahi (2009), within the field of transpersonal psychotherapy and hypnotherapy, included three areas: research of NDEs and OBEs; past-life regressions and experiences; and the curative forces of spiritual interpretations. According to him, (*idem*:294), *spiritual hypnosis aimed to provide help by means of evoking past life, prenatal, and perinatal experiences* and *spiritual interpretation suggested during hypnotic trance*, thus helping in reframing symptoms, by pointing to their spiritual meaning A systematic description on the transpersonal uses of hypnosis is beyond the reach of this chapter, but Nardini-Bubols et al. (2019) review about the transpersonal use of NOSCs in transpersonal psychotherapy found several benefits.[19] In this context, only the description of transpersonal experiences that in some way approach the subject of death through the looking glass of a NOSC, will be addressed. Hypnosis has already been used when death anxiety and grief are critical concerns, and a few strategies will be summarily described below.

3.4.1. Hypnosis as a tool to facilitate transcendental experiences related to death

One example of a technique used to induce a mild NOSC and a transcendental experience with therapeutic benefit, is the *psychomanteum*, or oracle of the dead, developed by Moody (1992) and involving mirror gazing, a technique the Greeks have allegedly used in healing temples to contact the spirits of the deceased. This procedure, which is experienced as real and not hallucinatory, seems to successfully assist those who are going through a grieving process (Roll, 2004) and to reduce bereavement responses (Hastings et al, 2002).

[19] However, they recommend that, in future studies, rigorous experimental designs, a clear definition of concepts and methods as well as ethical guidelines should be considered.

Beyond that, straightforward hypnotic techniques have been already used to induce after-death communications (Botkin, 2000) and experiment what death might feel like, by rehearsing a future transition or regression to dying moments in alleged past lives, showing that NDEs and hypnosis might share similarities as vehicles to promote experiences beyond ordinary consciousness (Facco, 2012).

A technique known as *death rehearsal* (Levitan, 2011) has been used to help terminally ill patients dealing with death anxiety, by inducing a projection into the future, through which the therapist takes the patient along a scene, visualized up to a certain point in time when death is inevitable. From this confrontation, a re-signification of the death process is made so that, through the correction of equivocal ideas, the patient approaches it with a sense of equanimity, security, and control. According to the author, the experience of visualizing a dissociation of the body, as it happens in a classical OBE (*see* Footnote no.2), seems to appear spontaneously, without a suggestion. The expression NDE was never used in the description of this technique, and the therapist's suggestions do not point in that direction. However, the conclusion was that death rehearsal was *useful in reducing anxiety in patients facing imminent death* (*idem:* 215).

Other strategies using hypnosis have also been used to induce *waking dreams*, an interactive projective technique containing some components that correlate with NDEs to evoke durable change (Schenk, 1999; 2006). The patient is asked to imagine being a fictional character of his choice, who is experiencing clinically relevant situations, that sometimes imply dying, without any physical or psychological detriment. Drawing on the work of Sacerdote (1967 *in* Schenk, 1999), the therapist induces *conscious dreams* into the hypnotized patient while awake, so that he symbolically tests his capacity to be the owner of his own destiny, without suggesting an OBE or NDE explicitly. More recently, other studies investigated the effects of death experiences performed during so-called hypnotic life regressions and described the possibility of inducing OBE's with hypnosis.

In alleged past life therapy, and by focusing on incidents that provoked a strong emotional charge, regressed participants report circumstances belonging to a past-life death, namely physical sensations, and spatiotemporal displacement, showing several similarities with NDEs. Wade (1998) made a systematic comparison between the typical phenomenology of *post-mortem* states induced during past life regression sessions, and the effects of NDEs on resuscitated subjects. After the experience of regressing to an alleged previous life until the moment it ends, a kind of psychological maturity seems to be acquired, bringing meaning and purpose to the current existence (*idem*), as it happens with true NDEs.[20]

Under the same theme, and in an exploratory study where so-called *death experiences* under past-life regression therapy were examined and compared to NDEs in terms of their phenomenology, Ohkado and Greyson (2018), concluded that "death" experiences coming from hypnotic regression m*ay be comparable in phenomenology and aftereffects to spontaneously occurring near-death experiences* (*idem*:76). Pederzoli et al., (2021), who studied the characteristics and nature of death experiences during *hypnotic past-life regressions*, also concluded that they conform with what is observed in spontaneous NDEs, in terms of a predominant affective tone and OBEs. Whether real or imagined, they found elements pointing to the genuineness of the hypnotic experience.

Also, the possibility of inducing OBEs using hypnotic suggestions was described by Pederzoli and Tressoldi (2018), who studied their perceptual and cognitive characteristics using electroencephalography. They have found a consensus regarding perception, movement around the environment, and sense of time, concluding that there is a state of consciousness in induced OBEs very similar to, or the same, as the one described by NDEs, also corresponding to what several philosophical/spiritual traditions teach (Tressoldi et al. 2014; 2015). Pederzoli et al. (2016), found that the neurophenomenology and neurophysiology of a hypnotically induced

[20] Interestingly, in the case of regressed subjects, residual emotions seem to link personalities of present and alleged past lives, except for fear, an emotion that does not seem to cross the death barrier.

OBE state differs from imaginary OBEs, showing that hypnosis might be an effective tool to induce OBE-like states. In this sequence, Facco et al. (2019) by successfully inducing OBEs with hypnosis in highly hypnotizable participants, observed several EEG changes and measured its phenomenological intensity. An 'intriguing link' was found between feeling out of one's body and resulting positive emotions, an aspect that might be associated with the transformational potential and possible therapeutical implications of such experiences (*idem*).

Even though these papers have not reported an induced NDE experience, some research suggested that the straightforward *hypnotic recall* of true *NDEs* with motivated, former NDErs under controlled conditions, is not only physically and psychologically safe, but brings several benefits. Instead of creating a mock experience, hypnotic regression has been used to recall positive effects, and it was observed that whatever benefits were obtained before, they could be renewed by re-experiencing pleasant emotions, without any physical or psychological risk (Holden and MacHovec, 1993).[21]

Considering what was said above, all these research papers are pointing in the same direction, stating that hypnosis can be effectively used to induce OBE and death-like experiences, whether past or future. In some of them, a parallel similarity with NDEs has been established. However, as far as we know, none of these studies has attempted inducing a near-death-like experience (NDLE) with hypnosis, except for one with the candidate as first author (Machado, Farinha and Simões, 2022). Within a transpersonal framework and in a safe setting, hypnotically induced NDLEs were facilitated by using a protocol designed by the candidate and the 3rd supervisor and tested with 25 volunteers (*idem*). The conclusion was that as far as phenomenology was concerned, a structured hypnosis protocol caused a similar response reaction seemingly

[21] It should be noted that this absence of risk assessed in these hypnotic reexperiences of a NDE only occurs provided it is done with motivated subjects and under controlled conditions: appropriate selection of subjects, set and setting, induction by a qualified therapist and use of adequate procedures (Holden and MacHovec, 1993).

indistinguishable, in content and intensity, to a true near-death scenario, according to what the NDE Scale measured (Greyson, 1983): 94,4% of the sample reported the same experience as the original sample of NDErs from the validation study. Yet, it remained unclear how much of the outcome was a mere expression of the hypnotic suggestions. As such, the study concluded that other variables beyond phenomenology should be addressed (Machado, Farinha and Simões, 2022). Thus, the present experimental study was the next logical step to that experiment, as the method proved itself to be safe and effective.

3.4.2. Hypnosis as a Tool to Induce NDEs

In Section 2.5., several ways in which NDEs could be triggered were shown, including hypnosis (Babb, 1989; Facco, 2012; Ohkado and Greyson, 2018; Pederzoli, de Stefano and Tressoldi, 2018). Along with other non-ordinary experiences, NDEs allow for a peek, if not a deep dive, into a larger band of possibilities regarding consciousness exploration, through what we have called NOSC. Others have been referring to NOSCs by NOMEs, or Non-Ordinary Mental Expressions, that should be understood *as complex mental processes, which differ from ordinary ones but still belong to the field of "normality"* (Facco, Greyson and Agrillo, 2015, 88). Regardless of the denomination, NDEs fall under their umbrella and overlap with other non-pathological anomalous experiences. These experiences happening beyond and outside ordinary awareness, are shared by a significant number of people, and can be accessed via an expansion of consciousness, facilitating the connection with dimensions of reality that, normally, are not accessible from an everyday state of awareness. We can hypothesize that a larger field of information is adequately filtered from the reach of everyday perception, so that irrelevant material in terms of survival is discarded and navigating in a material world becomes feasible: a phenomenon to which Huxley (1952), following Bergson, called *Mind at Large*.

In fact, transcendental experiences that facilitate an expansion of perception often *involve altered states of consciousness, reports of anomalous experiences and of consciousness beyond the body (*Moreira-Almeida, 2013:1). Such experiences, by disconnecting the subject from the immediate urge to satisfy biological demands do not serve survival needs. However, by ignoring the potential of accessing a wider field of possibilities, we would be running the risk of missing the point permeating the therapeutic use of NOSCs. Which is that consciousness is not fixed and can be purposefully enhanced with tools, as common and widespread as meditation, or clinically recognized as hypnosis (Facco, 2012; Facco et al., 2015; 2019). Such expansion can in fact be helpful, whether it might be reflected on the loss of death fear, or in a new level of psycho-spiritual growth.
With induced NDEs, coming from the premise that spontaneous episodes have been interpreted as spiritual experiences (*see* Section 2.7.2.), a step ahead could be taken, when someone is theoretically allowed to undergo a transcendental experience, by setting a metaphorical foot on the other side of life. An induced NDE, we gathered, could help in making peace with death lying ahead, and not just with life as it was, however important that process is. NDEs, in a mysterious way, seem to give something to look forward to. Hopefully, hypnotically induced NDEs could have the same role, by providing the same type of transcendental experience, within a transpersonal approach to psychology, which has been explicitly connected, to the study of spirituality (*e.g.* Lajoie and Shapiro, 1992).

3.4.3. Possible Implications for Clinical Situations

Within clinical settings, especially in the context of humanistic based therapies, just talking about NDEs might help people with the therapeutic exploration of existential issues (Lundhal, 1993). This approach could be especially useful with those facing challenging health conditions or in

palliative care, but also with caregivers or mourners, as well as with health professionals who accompany them and who, often, lack preparation. Also, in otherwise healthy participants, the exploration of existential issues might help relieving mental suffering, not equated with pathology but natural to the human condition, by gaining a self-actualized perspective of oneself, others, and the world (Grof and Grof, 1990; Maslow, 1943; 1968).

There is a vast field of possibilities regarding the facilitation a process of reconciliation with the idea of death and dying, which coincides with what the proponents of the PTG defends: positive psychological transformation may result from overcoming dramatic life-circumstances, that challenge the adaptive resources of individuals, their understanding of the world and their place in it (Tedeschi and Calhoun, 2004). In fact, PTG theory appeals to cognitive mechanisms and processes, allied to personal characteristics and a given social framework, to explain the fact that, after potentially traumatic events, growth experiences going far beyond the return to previous adaptation levels may happen (*idem*). It should be emphasized that individuals who undergo this type of experience were not previously and explicitly involved in any search for meaning, and that, after the event, their primary objective was to survive difficult circumstances, seek emotional relief and mental clarity. Thus, growth arises, not as a primary target, but as a positive side effect of this process. By taking distance from any kind of unrealism or naivete, this theoretical position does not disregard the fact that very adverse circumstances provoke a profound disturbance, even though it also assumes that, in some cases, such events constitute adequate precursors for positive transformation. Situations of loss, despair and helplessness are inevitable in the human experience but sometimes, some find a way to thrive in the aftermath of such events.

In this context, it seems reasonable to think that those changes reported by NDErs are alike to those occurring in individuals who successfully overcome serious life crisis, causing growth instead of distress (Tedeschi and Calhoun, 2004). Such growth seems to happen with most of those experiencing the spiritual catalysis of a NDE, due to the transformations that occur in the set of values they defended, and in the way in which their attitudes and beliefs change. In

addition, and in relation to death fear theories, these post-traumatic transformations if, on the one hand, seem to potentiate the capitulation of an existent worldview, as defended by the TMT, on the other, can also provide a new sense of meaning, as defended by the TMM (*see* Section 2.9.1.).

These transformations seem to occur in three crucial areas for the satisfaction of innate psychological needs: self-perception, interpersonal relations, and philosophy of life (Cozzolino et al., 2004). This process seems to match Cozzolino's (2006) model, that integrates NDEs with PTG theories by defending that, after an encounter with death, there are many situations when people accelerate their personal development and improve their psychological functioning. What seems to happen in NDEs falls outside the scope of any current scientific explanations (*see* Section 2.6.). However, a close brush with death might trigger a process of psychological integration, carrying the ability to instantaneously resolve any disruption caused by the idea of dying (*see* Section 2.9.). As Cozzolino concluded (2006), such a growth-oriented motivational state, instead of a defence-oriented state, might help someone, who contemplates death from such a perspective, to be guided *from relative existential darkness to a place of self-awareness and growth* (*idem*:284).

Within a more inclusive and multidimensional care delivery philosophy, the use of therapeutic tools with the capacity of eliminating death fear, and enhancing well-being, can be legitimately defended. In fact, the exploration of the possibilities of consciousness expanding tools, like hypnosis, might bring us a step further in helping people who are facing life and death issues and could benefit from a first-person experience. Such a resource, used in clinical settings, can sometimes open unexpected therapeutic possibilities, by helping to address pressing existential questions that demand urgent shifts in attitude. One of the possibilities of hypnosis would be the exposure to a risk-free NDE in people facing life and death issues, by leading them through a

similar situation but without the death threat, with the goal of taking advantage of those unique characteristics and aftereffects (*see* Section 2.7.).

Hypothetically, and following on Cozzolino's (2006) conclusions, through an exposure to the idea of death and after-death in a safe therapeutic context, using deep relaxation and appropriate suggestions, it would be theoretically possible to achieve the same effects of a spontaneous NDEs. And as NDEs can occur spontaneously without any life-threatening disease or can be induced through a NOSC like hypnosis (Babb, 1989; Facco, 2012; Gaona-Cartolano, 2012; Ohkado and Greyson, 2018; Pederzoli, de Stefano and Tressoldi, 2018), the attainment of some of the therapeutic aspects of such experiences to facilitate PTG seems viable, without the life-or-death crisis or emotional discomfort. As long as appropriate risk-management procedures are established, NDE induced by hypnosis might, in fact, allow participants to explore new approaches to their concerns and develop new insights within the frame of a NOSC. Some considerations about the safety of the technique will be made in the next chapter, and from it, combined with what has been said until now, the inevitable conclusion was that the exploration of hypnotically induced NDEs should be pursued, adding to previous results (Machado, Farinha and Simões, 2022), but now adding variables regarding aftereffects. This will be the subject of the next chapter, where the methodology of the study will be described.

3.5. Chapter Summary

In this chapter, the concept of hypnosis as a NOSC has been approached, as well as some of its clinical uses within a transpersonal approach to therapy, as a bridge to facilitate spiritual experiences. What was done so far, in terms of dealing with the death theme, was summarily described, including previous research studies experimenting with hypnotic strategies that can be

legitimately compared to the induction of NDLEs, including the induction of OBEs and past-life regressions to the moment of death. Hypnosis, we have seen from several examples, can be used as a therapeutic tool to help patients facing end-of-life challenges, overcome existential conflicts and live meaningfully in the face of imminent death.

The importance of the reduction of death fear and the increase in well-being was highlighted in the previous chapter, in the context of a wider spiritual transformation ensuing a spontaneous NDE. Therefore, the possibility of expanding typical aftereffects to people in need, without going through the near-death process, was considered. The process conducive to such aftereffects is unknown, but wherever might lay the explanatory cause, it demands for further research, considering the possible benefits for people facing life-threatening diagnosis, end-of-life care, or pathological grief. In conclusion, from this review, possible research areas were identified, starting from the premise that hypnosis can be used as a valid tool to induce a NDLE, phenomenologically similar to a spontaneous episode, with equivalent aftereffects. From a theoretical approach, it became possible to establish a connection between NDEs and hypnosis, as an induction tool, departing from the fact that there are situations where they can be purposefully triggered, without any life-threatening situations at their origin, or any relevant risks to the psychological health of the participant. And this is exactly what this research is about: the induction of a NDLE using hypnosis and the assessment of possible aftereffects.

Such goals will be addressed through an experimental protocol that will be described in detail across the following chapters. In the next chapter the empirical design will be described in detail, including the assessment tools that were included to evaluate the ability of hypnosis to induce a NDLE, in its phenomenology and aftereffects. With this information, we hope to be able to collect data that can add to the understanding of the NDE phenomenon, reveal aspects related to their healing potential and, eventually, find new ways of bringing such powerful experiences to people in need, within a transpersonal approach to clinical psychology.

Chapter IV

Methodology for an Exploratory Study of Hypnotically Induced NDEs

> *Nothing in our everyday experience gives us any reason for supposing that water is made up of hydrogen and oxygen; and yet when we subject water to certain rather drastic treatments, the nature of its constituent elements becomes manifest. Similarly, nothing in our everyday experience gives us much reason for supposing that the mind of the average sensual man has, as one of its constituents, something resembling—or identical with—the* Reality *substantial to the manifold world; and yet, when that mind is subjected to certain rather drastic treatments, the divine element, of which it is in part at least composed, becomes manifest, not only to the mind itself, but also, by its reflection in external behaviour, to other minds. It is only by making physical experiments that we can discover the intimate nature of matter and its potentialities. And it is only by making psychological and moral experiments that we can discover the intimate nature of mind and its potentialities. In the ordinary circumstances of average sensual life these potentialities of the mind remain latent and unmanifested.*
>
> Aldous Huxley
>
> '*Perennial Philosophy'* (1945:3)

4.1. Background and Overview

In Chapters II and III the most relevant scientific literature on near-death-experiences (NDEs) and hypnosis was described, as well as how both themes could be connected, so that a theoretical framework for the experimental study could be firmly established. In Chapter II, key information on NDEs was described, emphasizing the fact that these events mostly occur in a spontaneous way, but can also be induced with hypnosis, among other techniques that do not pose any life-or-

death risk (*see* Sections 2.5.). The aftereffects aspect was also highlighted (*see* Section 2.7), especially the typical loss of death fear, in the context of a wider spiritual transformation ensuing a spontaneous NDE (Khanna, and Greyson, 2013; 2015). The undisputable spiritual quality of a NDE, leaves an indelible mark in experiencers, causing their previous worldview to be replaced by a new one, where the way they see themselves, others, and the world forever changes (Noyes et al., 2009). This process, following a NDE, which is considered by some authors as a 'spiritual catalyst' (Ring, 1982), has been compared to PTG or post-traumatic growth (Cozzolino, 2006), with far reaching implications demanding for future research that could benefit people facing life-threatening or terminal situations (*see* Section 2.11. and 2.12).

In Chapter III, hypnosis as a safe, approved, clinical tool to bring transcendental experiences to people was presented and the possibility of inducing a NDE, in a safe context and without any physical or psychological risk for the participant, was theoretically considered. Hypnosis, as a non-ordinary state of consciousness (NOSC), could be used as a tool to induce a near-death like experience (NDLE) and facilitate equivalent aftereffects (Machado, Farinha and Simões, 2022). The transpersonal use of hypnosis as a bridge to facilitate spiritual experiences was reviewed, including some of the ways in which it is used as a tool to deal with the death theme (*see* Section 3.4), supported by research with hypnotically induced OBEs and past-life regressions (Babb, 1989; Facco, 2012; Ohkado and Greyson, 2018; Pederzoli, de Stefano and Tressoldi, 2018).

This chapter aims to provide an overview of the methodology that was used to explore the theoretical ability of hypnosis to mimic the phenomenological experience of a NDE, and some of its most typical aftereffects. It includes the description of an innovative hypnosis script where the core elements of a NDE are suggested, like leaving the body and journeying through a transitional near-death space. The assessment of its adequacy to mimic the phenomenological similarity of an induced episode is the main goal of this exploratory study, followed by the measurement of a few selected typical outcomes of a 'true' event. As the potential of hypnosis to

generate a NDLE is the main goal, without generalizability concerns, neither a control group nor a randomization procedure will be considered necessary, and a convenience sample of non-clinical participants will be used in this part of the project, called Study I.

A quasi-experimental mix-method research design with pre and post-test assessment phases, seemed to be the best option to explore the similarity of an induced NDE to a spontaneous one, both in phenomenology and aftereffects. The use of two different methods of data collection, quantitative complemented with qualitative, also seemed to be the best way of gathering as much information as possible, regarding an unexplored research topic. A quantitatively driven design facilitated the analysis of a few selected indicators with pre-existing psychometric tools, related to NDE core elements and typical aftereffects, in case, levels of mental health, death related attitudes, and spiritual well-being. A qualitative component was simultaneously integrated in the design, in the form of two open-ended questionnaires, with the aim of exploring possible aspects of the experience not covered by standardized instruments.

The details of the three rounds of data collection in Study I, quantitative, qualitative, and case studies, will be addressed in Chapters Five to Seven. With the information that was gathered, we hope to add relevant data that contribute to the understanding of the NDE phenomenon, uncover aspects related to their transformative potential and, eventually, find new ways of bringing such powerful experiences to people in need, within a transpersonal approach to clinical psychology that uses hypnosis as a preferred tool.

4.2. Goals and Hypothesis for Study I

In the previous chapters, the possibility of using hypnosis to induce NDEs was considered, as it has been demonstrated that, in this context of NOSCs, such experiences are achievable (*see* Section 2.5 and 3.4.). And since they can be induced with different techniques, it was plausible that, by using suggestion through hypnosis, the NDE phenomenology could be replicated as well as the subsequent cascade of beneficial aftereffects, using an adequate script, in a safe context, and outside a life-threatening situation. The protocol that was used in this study was successfully applied in a workshop integrated in a Transpersonal Psychology conference with a population experienced in transpersonal psychology themes (Machado, Farinha and Simões, 2022). The present research, conducted within a sample of non-clinical participants, intended to further investigate the effectiveness of the hypnosis protocol to induce a NDLE through:

a. The presence and depth of the phenomenological components of a NDE, according to the NDE Scale (Greyson, 1983).

b. The presence of aftereffects, through changes in levels of:

i. Mental Health, according to the Brief Symptom Inventory-18 (Derogatis, 2001);

ii. Death Related Attitudes, according to the DAP-R Death Attitude Profile Revised (Wong, Reker and Gesser, 1994)M

iii. Spiritual Well-Being, according to SHALOM- Spiritual Health and Life-Orientation Measure (Fisher, 2010).

c. The presence of subjectively relevant elements and aftereffects exclusive to each participant, related to personality, life-story, expectations, and intentions for the experience, in the same way as spontaneous NDEs.

d. The presence of any type of uneasiness associated with a direct confrontation with the subject of death and dying.

The goals of the study generated six (6) related hypotheses:

H1. The participants will be able to experience the typical core elements of a spontaneous NDE, according to the NDE Scale (Greyson, 1983);

H2. Indicators of psychological distress will decrease after hypnosis among those who initially present high levels, according to the BSI-18;

H3. Indicators of psychological distress will not increase after hypnosis among those who initially present low or moderate levels, according to the BSI-18;

H4. Indicators of death fear and anxiety will decrease, among those who initially present high levels, according to the DAP-R (Wong, Reker and Gesser, 1994);

H5. Indicators of death acceptance measures will increase, among those who initially present low levels, according to the DAP-R (Wong, Reker and Gesser, 1994);

H6. Indicators of spiritual well-being will increase, according to SHALOM (Fisher, 2010).

4.3. Method for Study I

4.3.1. The Design for Study I: a Convergent Mixed Method Quasi-Experimental Study

A quasi-experimental approach, or pre-post intervention, was used to collect data and establish a causal association between the intervention (hypnosis) and possible outcomes (Cook and Campbell, 1979). The strength of this strategy lied upon the use of pre-post-intervention measurements allowing for the observation of its effectiveness in a non-randomized sample of participants (Maciejewski, 2020). In general, using a control group within a quasi-experimental design, is preferable to a design that does not use a control group (Elioupolos et al, 2005), to prevent the risk of confounding variables, due to the lack of randomization (Harris et al., 2006). However, in this study, the observation was conducted without a comparison cohort, since the assessment of the effectiveness of a novel intervention using hypnosis was the major goal, and not its potential generalizability to a population. Even without a randomization procedure, a quasi-experiment carries the advantage of generating a robust estimate of the protocol's impact on selected outcomes, by establishing a cause-effect relationship.

Also, a mixed-method approach, using quantitative and qualitative tools, seemed to be the most advantageous option to collect the maximum volume of data from different sources. According to Johnson, Onwuegbuzie, and Turner (2007:123), mixed method *is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e. g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration*. Having chosen hypnosis as the preferable intervention to induce a NDLE, the methodological priority was to use standardized quantitative tools to address the main goal of assessing the similarity between spontaneous and hypnotically induced events. Within the mixed method approach, the quantitative approach was given priority (Creamer, 2018) and psychometric instruments were chosen to assess:

a. The presence and depth of the phenomenological components of a NDE.

b. The presence of aftereffects, through changes in levels of:

   i. Mental Health according to the Brief Symptom Inventory-18 (Derogatis, 2001)

   ii. Death Related Attitudes, according to the DAP-R Death Attitude Profile Revised (Wong, Reker and Gesser, 1994);

   iii. Spiritual Well-Being, according to SHALOM- Spiritual Health and Life-Orientation Measure (Fisher, 2010).

Choosing a quantitatively driven design for the collection and analysis of closed ended data, carried the advantage of addressing the constructs in analysis (NDEs core elements, attitudes towards death and psychological and spiritual well-being), with previously developed psychometric tools, to facilitate the assembly of an objective and reasonably inclusive set of data. However, given the innovative character of the study, the need to leave room for unexpected information to be revealed, complementing objective data was considered (Cresswell and Plano Clark, 2011).

None of the psychometric instruments was specifically designed or used, let alone validated, for the type of experience in analysis, regarding which little is known. Hence, even if the preferred method of data collection was quantitative, open-ended questionnaires were applied concurrently, even though subordinately, to address unanticipated levels of information, specific to each participant and subjective experience, that might not be captured by pre-existing standardized instruments, related to:

c. The presence of subjectively relevant elements and aftereffects exclusive to each participant, related to personality, life-story, expectations, and intentions for the experience, in the same way as spontaneous NDEs.

d. The presence of any type of uneasiness associated with a direct confrontation with the subject of death and dying.

The importance of first-person narratives on the contents of subjective experience should not be understated when exploring a new technique, but especially when NOSCs and their rich, and sometimes unusual, phenomenology is involved. As Overgaard (2017:1) stated*, scientists across disciplines generally agree that consciousness is subjective, characterized by a kind of privileged first-person access.* So, qualitative data, collected through semi-structured questionnaires and interviews, were needed to inform, and refine quantitative data, sort out discrepancies and explore individual cases, providing for a cohesive collection of information in terms of width and depth (Denzin, 1978). Besides enriching the present study, qualitative information could bring potentially useful clues to future research, opening the possibility of building new theories regarding hypnosis as a method of induction for NDEs.

A convergent parallel mixed method approach seemed the best way to combine quantitative and qualitative data sets, offering the advantage of triangulating different aspects of each experience, by facilitating the observation, collection, and integration of relevant information from both sources (Cresswell, 2014; Holstein, 2014). According to a convergent method, both sets of data are collected simultaneously, analysed separately, and finally merged and compared, using a side-by-side approach, presenting one set of findings first, and then the other (Cresswell, 2014). The unbiased observation of subjective perspectives of a lived experience, as well as the varieties of possible meanings attached to it, can provide fresh raw material upon which a wider, deeper, and unprejudiced understanding of a certain phenomenon can be obtained.

4.3.2. Sampling and Screening in Study I

4.3.2.1. Choosing a Convenience Sample

The data collection phase was planned to be conducted at the University of Northampton (UoN) with English speaking participants, recruited from a convenience sample of students, staff, and local population, interested in experiencing what a NDE would feel like, if lived under hypnosis. A convenience sample is available to the researcher by virtue of its accessibility (Bryman, 2001). One obvious shortcoming is that it does not allow to generalize the findings to the population, because it does not represent the population. However, regarding this type of exploratory study, with its main focal point on investigating whether hypnosis was effective in inducing a NDLE, the representativeness of the sample was not a relevant selection criterion. At this stage the advantage of availability was more relevant that representativity. All considered, a decision was made to let the sample self-select itself, based on the volunteer's motivation to participate. Normally, the assessment of hypnotizability is encouraged in clinical hypnosis studies (Jensen et al., 2017), to help in informing about the mechanisms backing therapeutic effects. However, it is not required to establish the efficacy of a hypnosis-based treatment. As this study was exploratory, the hypnotizability of the participants was not considered, which is in accordance with recent guidelines (Kekeks et al.2022). It is true that other hypnosis studies selected participants based upon their previous experience with being hypnotized, degree of suggestibility and/ or high motivation (Facco et al., 2019; Tressoldi et al, 2014). However, the selection of participants with such characteristics, beyond a high degree of motivation would be difficult, given the available resources, time, and access to people (*see* Introduction). Also, previous experience with hypnosis workshops, had always provided for willing and considerably hypnotizable, participants. So, a problem in terms of number, with volunteers, was not expected at this stage.

In addition, and according to Braffman and Kirsh (1999) behavioural response to hypnosis can be also predicted by motivation and expectancy. So, a high degree of motivation to participate was considered as a good enough pre-requisite. And, to address potential sample weaknesses, several inclusion and exclusion criteria were considered to filter the type of participants who would self-select themselves. They should, presumably, have similar characteristic to those who normally accept such an intervention in other contexts. Hopefully, the type of people who would be open to a non-ordinary therapeutic strategy would be also those motivated enough to participate.

4.3.2.2. Screening Participants

The purpose of screening volunteers aimed at detecting physical and mental health fragilities that might make them more vulnerable to emotionally charged situations, carrying the risk for unwanted aftereffects including: a) diagnosis of serious, uncontrolled or life-threatening physical disease or psychiatric disorder; b) recent surgery or hospitalization; c) drug consumption, psychiatric medication or heavy alcohol use within the previous month; d) pregnancy or breastfeeding situations; e) aversive experience related to the scenario of the hypnosis protocol and f) a previous life-threatening situation or NDE.

In every round of data collection, an information sheet including explanations about the study's purpose and criteria of inclusion/exclusion was provided. Answers to frequently asked questions (FAQ's) were read aloud and carefully explained to minimize the risks of adverse experiences (*see* Appendix 3). Volunteers were asked to read and sign an informed consent containing a short demographical questionnaire and 19 questions regarding participation requirements (*see* Appendix 4). A Q&A session with the volunteers was conducted immediately before the intervention to clarify remaining doubts (*see* Section 4.7). All pre-test measures, including the BSI-18 (Derogatis,

2001) which was used to screen the participant's mental health state were applied before the hypnosis protocol, as defined in Section 4.5.1. The participants were also informed that the research met the ethical guidelines of the British Psychological Society[22], Ordem dos Psicólogos Portugueses (for Portugal)[23] and the General Data Protection Regulation (GDPR).[24] Finally, they were guaranteed that any data would only be used for research purposes and were informed about their right to withdraw without any explanation, up to one month after completing the protocol. Additional ethical issues regarding the specificity of the method and safeguards regarding the hypnosis protocol, *see* Section 4.5.2.

4.4. Recruitment in Study I

Two groups of self-selected, English-speaking volunteers were used: the first group was used in a pilot test, to assess the adequacy of the hypnosis protocol in a sample of Psychology graduate students. This preliminary assessment aimed at testing and refining the protocol, regarding its adequacy and ability to effectively induce a risk-free NDE in a sample of students. The second group was recruited with the goal of achieving a big enough number of participants, so that a statistically significant outcome could be identified (Andrade, 2020). The pilot group was then combined with the second group, after the protocol revealed itself to be adequate and the samples statistically homogenous (see Section 5.3.).

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[22] *See* the BPS Code of Human Research Ethics, containing general principles that are applicable to all research contexts with human participants, through the following link:
https://www.bps.org.uk/guideline/bps-code-human-research-ethics-0

[23] *See* Section 7 of the Deontological Statute, applicable to research, which can be consulted through the following link:
https://www.ordemdospsicologos.pt/ficheiros/documentos/web_cod_deontologico_pt_revisao_2016.pdf

[24] *See* https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/

4.4.1. Recruitment for the Pilot Study at the UoN

This phase was designed to perform a preliminary assessment of the hypnosis protocol (*see* Section 4.5.1), regarding its adequacy to effectively induce a NDE in a population of students. After a live presentation and a verbal announcement (Appendix 2) were made in a classroom of undergraduates enrolled in a Parapsychology module within a Psychology graduate course, a total of 13 participants (two men and 11 women) volunteered. Apart from an extra credit, as an incentive to those who completed all tasks, no financial compensations were offered, nor any other benefits not directly related to the experience. The participants were informed about ethical guidelines and assured that their participation would have no influence on their academic results or relationship with the researchers and/or teachers.

4.4.2. Setting for the Pilot Study at the UoN

All sessions were conducted at the UoN, with interviews and experiments taking place in rooms located inside the campus building, where the lights could be dimmed to help inducing a resting state. Two large couches accommodated one to four participants *per* session, so that they could comfortably sit or recline, while keeping their eyes closed. In the class presentation, they were briefly introduced to the experimental protocol, the goals of the study, what a typical hypnosis session entailed and, specifically, what the NDE protocol involved, including the pre and post-test procedure and possible risks or discomfort.

4.4.3. Recruitment for the Main Study at the UoN

For the main study, a written announcement (Appendix 2) was posted on several channels of communication, including the UoN website, emails sent by the PR's office and the Students

Union, as well as handouts circulating throughout campus, inviting interested volunteers. The following question was asked in the written handouts and emails:

> *Would you like to know how it is to go through a Near-Death Experience in a safe environment, using guided imagery and without any risk to your physical or psychological health?*

Potential volunteers were given an email address to enroll and were booked for a specific time slot to undergo the experiment. Additionally, and in parallel, students were directly contacted by the experimenters, as well as potential volunteers at the Society for Psychical Research (SPR), during an open day event held in May 2019 at their London headquarters, where a short informal presentation was made. No financial compensations were offered, nor any other benefits not directly related to the experience. A total of 21 volunteers were recruited: 17 at the UoN and four at the SPR.

4.4.4 Setting for the Main Study at the UoN

In the sessions conducted at the UoN, both interviews and experiments took place in neutral rooms located inside the campus building. None of the rooms had couches, but three large bean bag seats were moved as needed, allowing for a number of one to three participants *per* session. Every allocated room offered the possibility to adjust the lighting conditions to promote a sense of relaxation. At the SPR headquarters, the library room was made available, and all four participants were able to sit in comfortable armchairs, with favorable light conditions in a quiet environment.

4.5. The Intervention

The adequacy of the protocol to mimic a spontaneous NDE would be assessed in face of the results achieved from the NDE Scale (Greyson, 1983), fully described in Section 2.3. (Appendix 5). The choice of this instrument had to do with the fact that, by containing valid and reliable criteria for the occurrence and amplitude of an NDE, it is considered as the standard measure for the identification of its typical phenomenology. The main assumption behind this decision was that, if the hypnosis script suggested a common pool of manifestations, its ability to induce the typical NDE phenomenology would be considerably improved. And, if the phenomenology manifested itself within each participant's experience, the probability of producing aftereffects would also increase. The adequacy of the hypnosis protocol would be verified if the participants scored above the cut-off defined as the threshold for the determination of a NDE for investigative purposes. For clinical use, a minimal threshold might be considered untherapeutic (Greyson, 1983), in the sense that it might be dismissive of the subjective experience. However, for this study purposes, a pre-defined minimal cut-off point was considered suitable (*idem*).

4.5.1. The Hypnosis Protocol

The protocol was planned to be applied in single sessions with small groups from one to five participants, conducted by the candidate and the external supervisor, both trained clinical hypnotherapists. Normally, there is an advantage in having few participants *per* session, to facilitate a tailor-made experience, where specific needs in less proficient volunteers might be addressed more adequately, minimizing the risk of interferences that sometimes result from being in a larger group. Some basic comfort requirements and acoustics were guaranteed in every session, including the possibility of adjusting the intensity of the lights, to promote a more relaxed environment. Along the protocol application, rooms with comfortable chairs, couches or

beanbags were used, where the participants were able to restfully sit or recline during the phases of induction, debriefing, integration, and follow-up.

A standardized hypnosis procedure using a common verbal protocol was applied, which included a relaxation phase, meant to produce a modification in the ordinary state of awareness and prepare the volunteers for the upcoming suggestions. A relaxation phase includes specific cues to minimize inner and external distractions, focus attention on the voice of the experimenters and reduce any risk of discomfort. Thus, increasing the participants' ability to respond to suggestions, by facilitating a hypnotic trance (Elkins, Barabasz, Council, and Spiegel, 2015; Nash, 2005). Which, according to Vickers, Zollman and Payne (2001:270), is *a deeply relaxed and focused state with increased suggestibility and suspension of critical faculties,* where suggestions are received with less resistance.

The hypnoidal state was induced, starting with the instruction '*close your eyes'*, followed by several verbal suggestions to focus on the voice of the experimenters, towards a state of deep physical and mental relaxation, beyond any distractions. The external signs of hypnosis were empirically verified through body cues, including eye closure and lids fluttering, breathing rate, absence of movement, physical tension, and head and mouth position. Afterwards, direct hypnotic suggestions related to the NDE core elements were integrated within a coherent narrative, using storytelling strategies, guided visual imagery and music, all combined to deepen the shift from ordinary awareness. The procedure remained identical from session to session, with the same words, intonation, and soft, repetitive, background music, to guarantee the least amount of variation throughout the study (*see* Appendix 25).

During this process, and by using straightforward hypnotic techniques, a gentle transition to a near-death event was, at some point, proposed, and the participants were steered along a dream-like narrative, where they would be able to feel as though they were the main character of a fictional life, where the core components associated with a typical NDE were suggested. The

narrative included a situation where an accident was at some point suggested, and for a certain amount of time, there would be some uncertainty concerning the survival of the body. Within this space of psychological uncertainty, the participant would be introduced to the possibility of leaving the body, seeing it from above, entering a tunnel or a similar point of access to a different reality, where transcendental elements were then suggested. The wording was carefully chosen, to include most phenomenological elements of a spontaneous NDE, and to ensure that the average participant could, at the same time, feel immersed in, and detached from the experience, to minimize eventual discomfort. The script was loose enough, leaving room for the person to bring, within the suggested elements, their own subjective material. As an example, suggestions like the following were used:

> *You have the feeling you are not alone… you feel that this incredibly bright life attracted other life forms, you can sense them around you… they might be people, animals, plants… You might know them… or not… but they feel somehow familiar to you…It seems that you might have known them…even loved them …or simply heard about their existence before, even if they never existed in your real world… they might have existed in stories, legends, myths… But whoever or whatever they might be, they bring you great joy… a feeling of belonging… of being welcome… so much joy and happiness in this encounter...*

In the end, the participant would be certain that the accident was not detrimental to life or well-being, and only a temporary loss of consciousness had occurred. Then he/she would be safely brought back to the room and to the present moment with appropriate suggestions:

> *Now you feel this is time to go back… and there is this strong reluctance to return to the earth plane, but you realize that either your job on earth is not finished or a mission must yet be accomplished before you can stay here. (…) And you decide to return to your body… And this is when you feel warm, strong arms gently pushing you back…*

This protocol was tested beforehand and was considered appropriate for that setting (*see* Section 3.4.1. and Machado, Farinha and Simões, 2022).

4.5.2. Potential Risks and Precautions

The risks of psychological disturbance associated with hypnosis were found to be minimal in this type of experimental context, according to the contents of Appendix 28, where the arguments that were initially presented to the Ethical Committee are extensively described. In this context, it suffices to say that, in accordance with the principles laid down in paragraph 17 of the Helsinki Declaration, and for ethical approval purposes, any foreseeable risks were considered negligible and transitional. However, any possibility of occurrence could be significantly reduced, by filtering volunteers with poor insight, or suffering from any form of psychopathology predisposing to a loss of contact with reality. Even with the smallest possibility of adverse effects arising, however negligible, safeguards were applied before, during and after the application of the protocol, in accordance with the BPS Code of Human Research Ethics that, in Section 2.4., points to the need of maximizing benefits and minimizing harm through several standards, including putting in place measures to assess, mitigate, minimise, and manage unavoidable additional risks to the participants.[25]

This principle of benefiting and not harming, imposed the need to inform that there were no anticipated benefits of this intervention, since it was a part of a study and not designed to the individual situation of each participant, and that they could withdraw at any time even if at the outset consent was given. The participant's information sheet and the informed consent provided

[25] Available at: https://cms.bps.org.uk/sites/default/files/202206/BPS%20Code%20of%20Human%20Research%20Ethics%20%281%29.pdf

some information, and the Q&A session allowed the participants to ask more specific questions, especially around several misinterpretations

around hypnosis. Volunteers were informed that strict confidentiality about the session would be kept, and if their cases should be used for academic purposes, they would be anonymised.

A screening procedure was designed to monitor psychopathological and neurophysiological vulnerabilities, through a short face-to-face Q&A, a participant's information sheet, an informed consent form and the application of the BSI 18 (Derogatis, 2001), described below (*see* Appendixes 3, 4 and 6). The form included medical and psychosocial questions about previous experiences, current and past physical and mental health, as well as recent use of psychiatric medications, alcohol, or drugs, all functioning as exclusion criteria. Given the nature of the hypnosis protocol, that included a natural landscape and the process of near-dying, volunteers showing death-related phobias or aversion to that specific scenario should be excluded, to minimize the possibility of galvanizing pre-existing trauma (Page and Green, 2002). Also, those who had been through a spontaneous NDE should be excluded, not only because pre-existing effects would be difficult to separate from those induced by the protocol, but also because they might be susceptible to reactivate unpleasant circumstances related to their original experience.

Even if any risk of psychological disturbance was previously assessed at a minimal level, and there were no reports of less favourable experiences (Machado, Farinha and Simões, 2022), during the procedure the participants were monitored for unexpected responses, especially emotional discomfort. In such situations, several actions could be applied, but normally, the statement *'open your eyes and return to where you are sitting*' is enough, if participants manifest any disturbance. In the beginning, and as a precaution, all participants were instructed about what to do if any discomfort surfaced, since most of them were novices to hypnosis. Several other appropriate techniques are available if the need to deal with emotionally impacting contents arises, going from soothing and grounding the person, to bringing them back to the hypnotic state and addressing any issues from

the same perspective that caused them. Other techniques are commonly used to dissociate the person from the contents of the experience, by making the person shift to a third person perspective (Schenck, 2011), and observe their own reactions.

Page and Green (2002) recommended that all references to post-hypnotic effects should be eliminated either before, during or after the session, to avoid situations where prophecies self-confirm, simply because they were pronounced. The theoretical framework for the hypnosis intervention was introduced in the most neutral way possible, as a verbal protocol, much like a guided meditation, meant to suggest a transcendental experience that many people have, and which is felt mostly as benign and pleasant. Great care was used at that point to manage displaced expectations and not to suggest any possible adverse effects. It was also mentioned that no therapeutic goals attached to the procedure were intended. After the experiment, a post-test moment offered the opportunity to assess the existence of undesired effects. As a precaution, the participants were allowed to leave the room only when it was evident for the experimenters that they had fully returned to their usual state of alertness. The possibility of following-up on them was safeguarded, to address any delayed reactions: the participants were encouraged to contact the experimenters if at any moment they felt the need to discuss their experience or report effects that they might relate to the session.

4.6. Research Instruments

4.6.1. Quantitative Measures

For the choice of the assessment tools two main criteria were taken under consideration: the instruments should be preferably translated and adapted to the Portuguese population, to compare data to similar studies being conducted in Portugal and eventually, extend the participation to Portuguese volunteers if needed (*see* Introduction). Also, they should demonstrate good psychometric properties for the constructs in analysis. With exception of the NDE Scale (Greyson, 1983), of which only a translated and semantically equivalent version exists (Serralta et al., 2010), all instruments gathered such pre-conditions, besides the features that will be described in the next sections. The NDE Scale, developed by Greyson (1983), was presented in the literature review chapter in Section 2.3. to which we refer.

4.6.1.1. BSI 18- Brief Symptom Inventory -18 (Derogatis, 2001)

The Brief Symptom Inventory 18 (BSI-18) is a psychological distress screening instrument and the shortest and most recent measure of a series of instruments developed by Derogatis (2001) to evaluate psychopathological symptoms (*see* Appendix 6). Even though short, it has been considered as a reliable instrument for the assessment of psychological distress in the general population and has been used in a variety of settings as a mental health screening tool and as a method of measuring symptom reduction during and after treatment (Franke et al., 2017). Even though a growing number of studies demonstrate that mental health, does not equate with the absence of mental illness (Bohlmeijer and Westerhof, 2021)), the measurement of mental wellbeing is far too complex for the scope of this study, since it would involve the assessment of

emotional, psychological, and social wellbeing indicators (Keyes, 2005). For the purpose of this study, BSI-18 was considered as a short and psychometrically reliable instrument that would, at the same time, filter candidates with pathology that could be a risk to undergo hypnosis and, at the same time, allow for the assessment of possible aftereffects of the intervention.

Consisting of 18 items, it was drawn from two longer inventories developed by the same author: the 53 item BSI- Brief Symptom Inventory (Derogatis, 1993) and the SCL-90-R, Symptom Checklist-90-Revised (Derogatis, 1992), built to assess nine dimensions of psychopathological symptomatology: somatization, obsessions-compulsions, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The shorter BSI-18 was organized into three subscales, '*Somatization', 'Depression'* and '*Anxiety'*, each consisting of six items. In selecting these specific subscales for the BSI-18, Derogatis (2001) concluded that most psychiatric disorders, in general and in clinical populations, are mostly anxious and/or depressive in nature, and that less prevalent psychiatric disorders (*e.g.*, schizophrenia) are often associated with depressive, anxious, and somatoform symptoms. The '*Somatization*' subscale (items 1, 4, 7, 10 13 and 16) assesses malaise associated with manifestations of automatically regulated systems (*e.g.*, cardiovascular, or gastrointestinal). The '*Depression*' subscale (items 2, 5, 8, 11, 14 and 17) focuses on the core symptoms of depressive disorders (e.g., dysphoric mood, anhedonia, hopelessness, and suicidal ideation). And finally, the '*Anxiety*' subscale (items 3, 6, 9, 12, 15 and 18) includes symptoms indicative of panic states (*e.g.,* nervousness, tension, motor agitation and apprehension). Respondents also evaluate the intensity (from 0 – Nothing- to 4 - Extremely) with which, during the last seven days, they experienced such manifestations (Derogatis, 2001; Wiesner et al., 2010).

The sum of the 18 items provides a '*Global Severity Index'* (GSI), corresponding to the general level of individual psychological malaise. Although recognizing that, for diagnostic purposes, panic symptoms may be a specific clinical phenomenon, Derogatis (2001) advocated the use of a three-

factor structure, instead of a four-factor structure found in a sample of the general population in line with the BSI-18 objective: the '*Anxiety'* subscale can be divided in two factors, one representing anxiety and another representing panic symptomatology, a conceptual component of clinical anxiety. The factorial structure of the BSI-18 has been tested in several studies, exploratory and confirmatory and, in both cases, on account of parsimony, the preference lies in the theoretical three-factor model (Durá et al., 2006; Galdón et al., 2008, Recklitis et al., 2006, Wang et al., 2013; Wiesner et al., 2010). The BSI-18 can be used by adult participants belonging to general or clinical populations with any type of pathology, as long as they can understand the questions and have the ability to fill out the instrument.

The versatility and reliability of the BSI-18, based on the internal consistency of the subscales and the total index, has been attested in numerous studies and within different samples with diverse physical and mental conditions (Andreu et al., 2008, Franke et al., 2011; Recklitis et al., 2006, Recklitis and Rodriguez, 2007¸ Spitzer et al., 2011). Regarding temporal stability, the BSI-18 has presented very satisfactory results (Andreu et al., 2008; Houghton et al., 2012; Mejer et al., 2008; Spitzer et al., 2011). Also, its validity has also shown significant and elevated correlations with constructs with which the psychopathological symptomatology is expected to be related, such as anxiety (Andreu et al., 2008; Spitzer et al., 2011), depressive symptomatology and negative affect (Meachen et al., 2008). Even though it is recognized as a good tool for mental health screening and distinguishing individuals who present emotional disturbances from those who do not, the exclusive use of the inventory is not considered enough for formulating a diagnosis

All considered, data provided by different studies have supported BSI-18's reliability and validity, making it a psychometrically secure instrument which use can be advantageous when a rapid and effective screening of psychopathology is needed, by focusing on the most prevalent manifestations of psychological disorders (Derogatis, 2001). It should also be noted that, since it has already been adapted for different languages, this instrument makes it possible to compare

data from different countries and cultures, including Portugal (Canavarro, Nazaré, and Pereira, 2017). In this study, it was chosen not only to evaluate three main domains of psychological symptoms, before and after the protocol, but to filter candidates who might present some risk of being disturbed by hypnosis, because of pre-existing psychological vulnerabilities that might make them more susceptible to emotional contents (Gruzelier, 2000). The test was purchased directly from the copyright holder by the University of Northampton (Pearson Assessment Order No 840607 from Pearson Education Ltd - Clinical Assessment).

4.6.1.2. DAP-R Death Attitude Profile-Revised (Wong, Reker and Gesser, 1994)

The DAP-R or Death Attitude Profile-Revised (Gesser, Wong and Reker, 1987-88) is a multidimensional measure of attitudes towards death, and a revision of the 21 item Death Attitude Profile, originally consisting of four factorially derived dimensions (*see* Appendix 7). The scale measures a broad spectrum of death attitudes ranging from avoidance to acceptance. Five independent attitudes are measured through the DAP-R 36 items: '*Fear of Death/Dying'* (7 items: 1, 2, 7, 18, 20, 21, and 32), which measures negative thoughts and feelings about death, and three distinct types of '*Death Acceptance':* the '*Neutral Acceptance'* Scale (5 items 6, 14, 17, 24, and 30), measuring the extent to which a person accepts death as a reality in a neutral manner; the '*Approach Acceptance'* Scale (10 items: 4, 8, 13, 15, 16, 22, 25, 27, 28, and 31), measuring the extent to which a person views death as the entry point to a happy afterlife; and the '*Escape Acceptance'* Scale (5 items: 5, 9, 11, 23, and 29), measuring the extent to which a person views death as offering an opportunity to escape from a painful existence (Clements and Rooda, 2000). Later, from subsequent research, another dimension was added with the '*Death Avoidance'* Scale (5 items 3, 10, 12, 19, and 26), implicating the existence of a defense mechanism that keeps death away from one's consciousness (Wong, Reker and Gesser, 1994). Even though a study suggested that the DAP-R may consist of six rather than five factors (Clements and Rooda, 2000), the

instrument is reputed to have good psychometric qualities (Neimeyer (1997-98), with the factor analysis results showing that the five-factor structure was internally consistent, stable, and valid (Wong, Reker and Gesser, 1994). Dimensions were shown to be independent from each other and the high alpha coefficients demonstrated that the factors are pure and internally consistent, showing good to very good reliability (*idem*:12) and ranging from a low of .65 in ('*Neutral Acceptance*') to a high of .97 ('*Approach Acceptance*'). For scoring, a Likert scale from 1 to 7 is used in all items, in the direction of strongly disagree (1) to strongly agree (7). For each dimension, a mean scale score can be computed by dividing the total scale score by the number of items comprising each scale. Written permission for its use was obtained from the first author. The Portuguese version was translated and adapted by Loureiro (2010)

4.6.1.3. SHALOM- Spiritual Health and Life-Orientation Measure (Fisher, 2010)

This instrument, which is an updated version of the SWBQ-Spiritual Well-Being Questionnaire (Gomez and Fisher, 2003), was theoretically grounded on the 'Four Domains Model of Spiritual Health and Well-Being' (Fisher, 2011), from which different dimensions of spiritual well-being derived, and were conceptualized into four domains of personal, communal, environmental, and transcendental well-being (*see* Appendix 8). The instrument measures two larger components with 20 items each, in turn, comprising the four domains: '*Spiritual Health'*, reflecting the 'lived' experience of how people feel most of the time, and '*Life-Orientation'*, reflecting an ideal of what spiritual health should be, allowing for comparisons. The 'lived experience' component of SHALOM has been extensively studied and tested as the SWBQ-Spiritual Well-Being Questionnaire, with well-established psychometric properties, showing good reliability (Cronbach's alpha, composite reliability and variance) as well as construct, concurrent,

discriminant and predictive validity across a variety of settings, with different age groups (Gomez and Fisher, 2003; 2005a; 2005b). Even though its use has resulted in few publications SHALOM, with its two components, has shown its general applicability in 29 languages and in several contexts, including education, healthcare, churches, business, and wider community (Fisher, 2016). Each of the four domains of spiritual well-being is expressed through 5 items each, where the '*Personal'* domain expresses how one relates with the self in terms of meaning, purpose and values in life (items 5, 9, 14, 16, 18); the '*Communal'* domain reflects the quality and depth of relationships with others (items 1, 3, 8, 17, 19); the '*Environmental'* domain expresses a possible sense of unity, care and respect for the ecosystem (items 4, 7, 10, 12, 20) and, finally, the '*Transcendent'* domain, echoes a possible relationship with a supra-human reality (items 2, 6, 11, 13, 15). Each of these four domains of spiritual well-being is scored through a Likert response scale going from 1 (very low) to 5 (very high), in a total of 40 items in two components, proving solid information in the described four elements. Even if it is possible to use only the Spiritual Health column, equivalent to the SWBQ, comparing the lived experience with the ideal, provides a more complete measure of the quality of relationships in all four domains. The instrument also gives us a measure of spiritual harmony and congruence or, instead, 'spiritual dissonance', translated in a difference in the mean values greater than 1.00 (>1 SD) between how people feel as the 'lived' experience and their 'ideal' difference, on a scale from 1 to 5 in each of the four domains (Fisher, 2010; 2016). In a recent study, it was shown that the construct of spiritual harmony shared the strongest relationship with mental health when compared to any other variable used in this study (Moore, 2013 *in* Fisher, 2016). For scoring, both the mean value of the 5 items in each group, or the sum of the items can be used. The design, content and validation studies have been considered consistent with standard quantitative research methodology, and a series of studies have already shown its adequacy for a variety of research contexts (Fisher, 2010; 2016). The original SWBQ (Gomez and Fisher, 2003) showed good reliability (Cronbach's alpha, composite reliability and variance extracted), and validity (construct, concurrent, discriminant, predictive and

factorial independence from personality). Written permission for its use was obtained from the first author. The Portuguese version was translated and adapted by Gouveia, Marques and Pais Ribeiro (2009)

4.6.2. Qualitative Measures

In Section 4.3, a convergent parallel mixed method approach was described as the best way to combine quantitative and qualitative information (Cresswell, 2014; Holstein, 2014). Even though the methodology of the study imposed that both sets of data should be collected simultaneously (Cresswell, 2014), qualitative data were envisaged as subordinate, in the sense that they should be used to add value to the main set of quantitative data, increasing its amount and depth (DiCicco-Bloom and Crabtree, 2006). Including questions in an open format allows the participant to answer with less constraints, as answers are not suggested nor directed, which might be especially useful in new areas of research (Bryman, 2001). Following this rational, and considering the possibility of an induced episode reflecting subjectively meaningful elements beyond the scope of what the quantitative instruments measured, two open-ended questions were conceived with the aim of observing:

a) The presence of subjectively relevant elements and aftereffects exclusive to each participant, related to personality, life-story, expectations, and intentions for the experience, in the same way as spontaneous NDEs.

b) The presence of any type of uneasiness associated with a direct confrontation with the subject of death and dying.

Therefore, immediately after the hypnosis protocol, the participants were asked to fill the first open-ended questionnaire (*see* Appendix 9):

(1) *Describe any elements that you found relevant regarding the contents of your experience* and

(2) *Any discomfort or any other feelings that you found relevant.*

In the second ope-ended questionnaire, applied two weeks after the hypnosis protocol, they were asked one question (*see* Appendix 10), where they should *describe the most relevant thing, if any, of having participated in this study*. Regarding these data, the participants were informed that, in case a citation was published in a scientific journal or presented at a conference, the respondent would always remain anonymous and unidentifiable.

4.7. Task Description

After the recruitment and before the intervention (hypnosis), a Q&A meeting was conducted individually or in small groups, where the contents of the information sheet and informed consent were read aloud (*see* Appendixes 3 and 4). In this meeting, the participants had the opportunity to ask additional questions about the purpose of the study and what was expected from their participation, get acquainted with the researchers and ease any discomfort due to the lack of familiarity with the procedure. This session aimed at demystifying the process of hypnosis, regarding which several misinterpretations exist which may, themselves, imply the production of undesirable effects (*e.g.*, the participant is afraid of losing control or that hypnotic susceptibility is linked to lack of intelligence, thus resisting the induction). An adequate management of false beliefs and previous expectations was therefore considered, taking care not to suggest what was intended to be avoided, as specifying minimal and transient risks tends to create expectancies that will increase the likelihood of adverse consequences (Kielhstom, *s.d.)*. After the informed consent

was signed, a battery of psychological tests was applied to each participant, as pre-test measures, before the hypnosis session, to assess the following (*see* Appendixes 6, 7 and 8):

a) Indicators of mental health with the BSI-18 Brief Symptom Inventory (Derogatis, 2001);

b) Attitudes toward death and dying with the DAP-R -Death Attitude Profile Revised (Wong, Reker and Gesser, 1994);

c) and spiritual health with SHALOM Spiritual Health and Life-Orientation Measure (Gomez and Fischer, 2003).

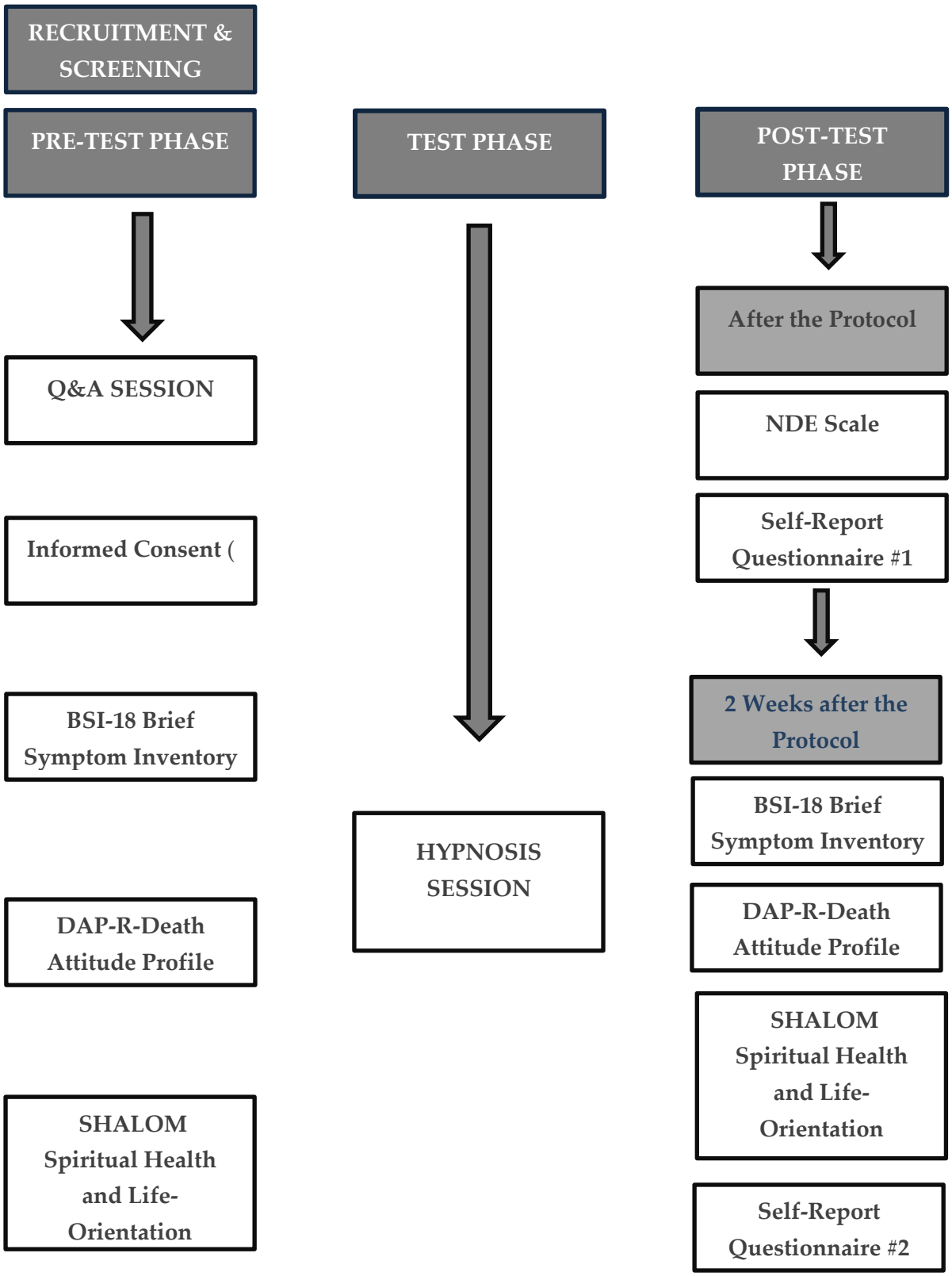
Since the BSI-18 (Derogatis, 2001) also served as a mental health screening tool, as the participants were preparing for the session, the candidate briefly analysed the questionnaire and checked for values that could point to the existence of symptomatology suggestive of any risk of psychological distress during the application of the protocol. After filling these instruments, the hypnosis protocol (*see* Appendix 25) was applied and, immediately after, the participants were asked to fill the NDE Scale (Greyson, 1983 *in* Appendix 5) and the first self-report questionnaire (*see* Appendixes 9 and 10). Before the volunteers were considered apt to be dismissed, a debriefing period occurred where they could openly share their experiences. This integration moment was conducted in an informal and unprejudiced manner, to make the volunteers feel free to share as many data as possible for the research study, however extraordinary or uncommon. They were informed that they could contact the researchers afterwards regarding the experiment.

The psychological measures from pre-test phase and the second open-ended questionnaire were distributed in paper format and the volunteers were asked to fill them following a two-week interval, to assess the medium-term aftereffects of the experience (*see* Appendixes 6, 7 and 8) and return them via pre-paid priority mail to the researchers.

All data collection was done via participants' self-administered paper questionnaires and inventories completed *in situ,* recorded on paper, then transcribed into a computer database for quantitative and qualitative treatment.

The time required to fill all the instruments before the hypnosis session was approximately 15 minutes, and again, 15-20 minutes after the protocol. The protocol, NDE or relaxation hypnotic induction, took 45 minutes approximately, in a total of 1.30-2 hours for the entire face-to-face procedure.

The participants were guaranteed full confidentiality thorough pseudonymization, and all demographic information was subject to statistical treatment only. To ensure anonymity they were assigned a number in order of participation, from which they were identified for data treatment purposes. Data on paper and computer media were then safely stored and only the candidate had direct access to the information. All data were processed according to the European General Data Protection Regulation and will be disposed of when they are no longer needed for treatment purposes. The research project should be considered finished after the results were sent for publishing. Below, a scheme with the full Task Description Model is included:



Scheme 4.1: Task Description Model

4.8. Study Approvals

This research study has been reviewed by the Research Ethics Committee at the University of Northampton and the final approval was granted on the 7th of September 2018 (*see* Appendix 1), after submitting an Application for Ethical Approval, that included information about the very low ethical risk of the project and a risk assessment form. The research meets the ethical guidelines of the British Psychological Society (BPS) and the EU Regulation nº2016/679 of the European Parliament and of the Council of 27 April 2016, on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and also Directive 95/46/EC on General Data Protection Regulation. Given that the approach we used can be considered as highly sensitive, the reader might need to be assured that all checks and balances are in place. For this, Section 4.5.2. can be consulted, where hypnosis was presented as a safe therapeutic technique and the arguments that were presented before the Research Ethics Committee were described in detail. [26]

4.9. Chapter Summary

This purpose of this chapter was to describe how this research study aimed to assess the aptitude of a hypnotically induced NDLE to produce the phenomenological components of a spontaneous NDE and cause similar aftereffects, measured through changes in measures of mental health, death-related attitudes, and spiritual well-being. Additionally, the assessment of subjectively relevant elements exclusive to each participant, in the same way as spontaneous NDEs, as well as the presence of any type of uneasiness associated with a direct confrontation with the death theme, were set as main goals.

[26] *See* Section 4.3.2.2. and Footnotes 18, 19 and 20.

The study sample was composed by two experimental groups of non-clinical participants, distributed between a pilot phase and a main study. This group of participants self-selected themselves from a convenience sample of students, staff, and local population, upon their interest in experiencing what a spontaneous NDE would feel like, if lived under hypnosis. The fact that the experimental groups were composed by self-selected participants from a convenience sample, was grounded on the fact that the main goal was the investigation of hypnosis as an effective tool for inducing a NDLE, and not on the possible generalizability of the findings to a population. Therefore, the observation was conducted without a comparison cohort in a non-randomized sample of participants.

To address potential sample weaknesses, several inclusion and exclusion criteria were comprised to filter the type of participants who would self-select themselves. All volunteers were carefully screened for situations that might make them more vulnerable to emotionally charged situations, carrying the risk for unwanted aftereffects. An information sheet included explanations about the purpose and nature of the study, and criteria of inclusion/exclusion. Also, answers to FAQ's about hypnosis were carefully explained to minimize the risks of an adverse experience The hypnosis protocol and its potential risks and solutions, were described in detail. The participants were also informed that the research met the ethical guidelines of the British Psychological Society, Ordem dos Psicólogos Portugueses (for Portugal) and the General Data Protection Regulation (GDPR).

Along this chapter, the justification for the research method was described, starting with the choice of a convergent mixed method quasi-experimental design, aiming at establishing a causal association between the intervention (hypnosis) and possible outcomes (phenomenology and aftereffects) Also, a mixed-method approach, using quantitative and qualitative tools within a pre-post-test design, seemed to be the most advantageous option to collect and compare the maximum volume of data from different sources and assess the adequacy of the intervention.

To collect and interpret data related to the aptitude of a hypnotically induced NDLEs to produce the phenomenological components of a spontaneous NDE and cause similar aftereffects, the NDE Scale (Greyson, 1983), the BSI 18 (Derogatis, 2001), the DAP-R (Wong, Reker and Gesser, 1994) and SHALOM (Fisher, 2010), were considered good options. Not only they showed robust psychometric properties, but they could be applied to English and Portuguese speaking samples, allowing for comparisons to be made between studies. Two open-ended questionnaires were also conceived, to capture subjective information not covered by the close ended items of the instruments. The innovative character of this study, and the fact that not enough data yet existed concerning similar experiments, could make this research fertile ground for the appearance of unexpected data, justifying the use of subjective sources of information. In the next chapter, the quantitative part of the first two rounds of data collection, collected according to this methodology, in what was called Study I, will be fully described.

CHAPTER FIVE

Study I: Quantitative Analysis of the Experiment conducted at the University of Northampton

> *The advantage of paying close attention to the way in which otherworld visions reflect imaginative modes of thought becomes evident when we look at visionary accounts of the soul's exit from the body. We have seen that near-death reports, like their medieval predecessors, presume an old-fashioned dualism that most contemporary philosophers and theologians find inadequate to deal with the complexities of mind-body interaction. For some, this makes it difficult to take near-death visions seriously. A philosophy professor told me that although he was fascinated by near-death studies, he would hate to give up his hard-won sophistication and go back to thinking of the soul as 'housed in the body like an oyster in a shell'. He could not decide whether to heed his philosophical training or the empirical data of out-of-body experience, one or the other would have to go.*
>
> Carol Zalesky (2006:339)

5.1. Background and Overview for Study I

In Chapter Two, the most relevant literature on near-death experiences (NDEs) was presented. Researchers observed that a significant proportion of people who survive a brush with death, report experiences characterized by transcendental elements that define what has been called a NDE (*see* Section 2.2.). The reduction of death fear is reported as one of the most common outcomes, amidst a cascade of life-changing effects, that permanently change the way near-death experiencers (NDErs) view the world, themselves, and others (*see* Section 2.7).

NDEs typically happen when there is a death threat situation, either real or imagined, but in some cases, they can occur without it, through the induction of non-ordinary states of consciousness (NOSCs), with tools such as hypnosis (*see* Section 2.5). In Chapter Three, a few current perspectives on the transpersonal use of hypnosis, as a bridge to facilitate spiritual experiences including NDEs, was presented (*see* Section 3.4.). Therefore, the possibility of simulating an NDE with hypnosis in a safe context was considered, as well as the possibility of harnessing some of its positive aftereffects and bring them to people who might benefit from them. The possibility of NDEs causing adverse reactions exists, but in negligible numbers, probably related to difficulties in interpreting the experience and not to the experience *per se* (*see* Appendix 28). Starting from the premise that hypnosis can be safely used as an adequate tool to mimic a near-death-like experience (NDLE), phenomenologically equivalent to a spontaneous episode, an empirical design study was presented in Chapter Four.

This previous chapter was developed around the clarification and formulation of research goals and the description of the research design. The hypnosis script, specially designed to induce the experience, as it has been classically reported, was considered the favoured tool of induction. And also operated as an independent variable, carrying the aptitude to affect dependent variables, translated into the phenomenology of the experience and some of the typical aftereffects that, ideally, would present themselves in the aftermath of the session (*see* Section 4.2).

A convergent mixed quasi-experimental method (*see* Section 4.3.), using quantitative and qualitative tools was used to collect, analyse, and interpret data. A selection of psychometric instruments was chosen to find out if the participants could experience the phenomenological aspects of a spontaneous NDE (Greyson, 1983), and report some of its aftereffects, manifested through changes in mental health, death related attitudes and spiritual well-being (Derogatis, 2001; Wong, Reker and Gesser, 1994; Fischer, 2010). Open-ended questionnaires were also used, to help revealing aspects not covered by standardized instruments.

We hoped that, by choosing such indicators, it would be possible to establish a link between a transcendental experience, similar to a 'true' NDE, and a process of positive psychological transformation, translated into some of its most reported aftereffects. Considering the benefits NDErs report in their life, the goal of the study is to add relevant information to the understanding of the phenomena, uncover aspects related to its transformative potential and, eventually, find new ways of bringing such experiences to people in need.

The first part of the research project, Study I, was conducted at the University of Northampton (UoN) and encompassed two rounds of data collection, starting with a pilot study that then progressed to the main study. The pilot study aimed to test the aptitude of the hypnosis protocol to induce the target experience, according to the criteria established by the NDE Scale (Greyson, 1983), leading to the conclusion that no significative adjustments were needed. Grounded on this conclusion, the main study was conducted with slight changes in the recruitment method. In this chapter the quantitative results of both studies, integrated within what was called Study I, are analysed.

5.2. Analysis of Pilot Study Data

5.2.1. Pilot Sample Overview

The recruitment for the pilot study at the UoN was defined in Section 4.4.1 and the screening procedure was described in Section 4.3.2. From 13 participants, two were excluded because they were not hypnotized, according to pre-established criteria regarding external signs of trance (*see* Section 4.5.1.): one fell asleep, and the other was too anxious and fidgety to follow the procedure. Another student did not return the post-test questionnaires. Therefore, the pilot study included ten (10) valid participants, two (2) men and eight (8) women.

Before moving on, a few considerations around the pilot sample should be made. First, that a low number of volunteers enrolled, considering the recruitment was made within a parapsychology course. Second, that those who participated showed very different degrees of motivation, which affected their capacity to engage with what was being proposed. In fact, it was empirically noticeable that the hypnotic response was different depending on subjective characteristics, like personal traits, previous experience, and expectations. Also, important information linking their psychological state, on the day of the trial, with the type of experience they had, was shared with the researchers *in situ*, after the experiment was completed. For example, very young, naïve participants had difficulties in following the protocol: they were tired and fell asleep, or were generally resisting the experience, by being too nervous, suspicious, and reluctant to let themselves be absorbed into the process.

From this experience, a few adjustments to the recruitment method were implemented, to try to achieve higher numbers of motivated individuals. It was therefore decided that, for the next phase, the recruitment method should be extended to people outside the University population. This was meant to increase the chance of recruiting higher numbers of participants and, also, to allow for the inclusion of participants with different degrees of expertise, expectations. and openness to experience, a construct normally associated with hypnotic susceptibility (Tellegen and Atkinson, 1974). Since the initial aim was to recruit a convenience sample of self-selected participants, without representativeness concerns, the hope was that by reaching a more diverse group of people, the possibility of having more motivated participants for the main phase of Study I would increase.

5.2.2. Pilot Study Preliminary Data

The preliminary data analysis concerned the possibility of inducing an event phenomenologically equivalent to a spontaneous NDE.. It revealed that all participants produced scores of 7 or higher following the full completion of the NDE Scale (Greyson, 1983), the criterion beyond which the presence of a true event was recognized in the validation sample (*see* Section 2.3.). In a sample of 10 participants, the distribution of the results was located between a minimum of 8 and a maximum of 28, with a mean value of 13.9 and a standard deviation of 5.66. The kurtosis of the total score was found to be 4.48, indicating that the distribution included a few more outliers than a normal distribution, and was left-skewed (1.87), indicating more lower than higher values. However, even if it was not uniform, the results revealed that the protocol was adequate to induce an experience subjectively similar to a spontaneous NDE. Hence, according to what the NDE Scale (Greyson, 1983) measures, hypnosis qualified as an adequate tool to replicate the process of transitioning from life to near-death in an imagined setting.

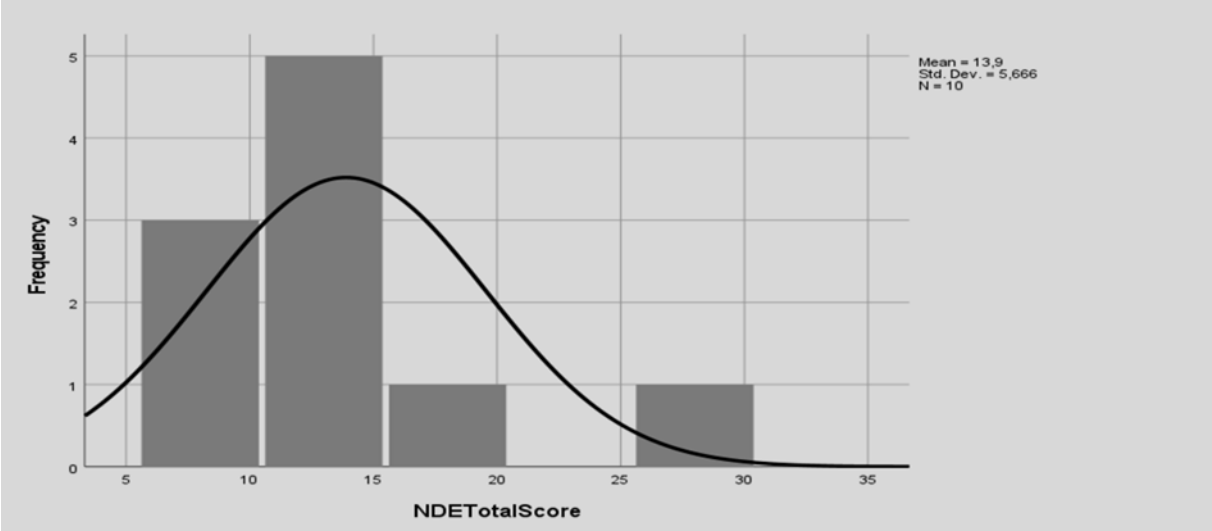


Figure 5.1. Pilot Sample Scores on the Total Index of the NDE Scale for Study I

5.2.3. Pilot Study Conclusions

The results reflected a mean value of 13.9, located above the cut-off point of seven, meaning that the criteria for considering the occurrence of a NDE were met. According to the NDE Scale (Greyson, 1983), the participants were able to experience the phenomenological aspects of a spontaneous NDE, translated thorough the occurrence of the main core elements. Even if the scale is divided in four component subscales, for the purpose of assessing the adequacy of the protocol, such distinction was not necessary. From these preliminary results, it was possible to proceed using the same hypnosis protocol without significative adjustments A more comprehensive analysis was performed by joining this sample to the main sample of volunteers, after testing its homogeneity (*see* Section 5.3.3.).

5.3. Preliminary Data Analysis from Pilot and Main Samples from Study I

5.3.1. Main Sample Overview

The recruitment procedure for the main study was described in Section 4.4.3. At this stage, 17 volunteers were recruited at the UoN and four participants at the London Society of Psychical Research (SPR), in a total of 21 volunteers. The screening procedure was the same as in the Pilot Study (*see* Section 4.3.2.) and all volunteers met the inclusion criteria described in the information sheet and informed consent, participated in the Q&A session, and filled the BSI-18 (Derogatis, 2001) used as a filtering tool. However, there was one situation where a participant recruited outside campus admitted having a previous neurologic condition during the post-test phase, that went unnoticed during the experiment. This person, who participated in the main study at the UoN, provided one of the most interesting experiences, which later led us to change the type of recruitment (*see* Chapter Seven).

Three participants out of four recruited at the SPR were excluded: one had severe and previously non-reported hearing difficulties, and two feel asleep, not being able to follow the induction. The sample recruited at the UoN provided a low-response rate, since nine participants, recruited *in situ*, did not return the post-test instruments. Differences in their response to the protocol, in both samples, as well as the attrition rate led to the theoretical possibility of combining them. When using quantitative analysis, the possibility of delivering meaningful statistical outputs also relies on the number of participants: the typical rule of thumb of no less than 30 cases, as a reasonable expectation to provide confidence about the stability of the findings (Kline, 2005).

Considering that the protocol did not change between studies and that the participants were all drawn from a convenience pool, the combination of samples seemed to be a reasonable solution to increase the number of valid participants for data analysis. In conclusion, concerning the sample size, the main part of Study I included nine valid participants (five men and four women) out of 21 volunteers. Therefore, Study I counted on 19 valid participants out of 34 volunteers, 10 from the pilot sample and nine from the main sample. In the next section, the method for combining both samples will be described in detail.

5.3.2. Combining Samples from Pilot and Main Phases of Study I

In the previous section, the high attrition rate was described and the rationale for combining samples recruited in two different stages, with slightly different methods, was explained. The first step, to achieve higher numbers of volunteers, was to find out if the two samples, pilot and main, were homogeneous enough to be considered as one for statistical analysis. The groups were differentiated between students in the pilot study, who received an extra credit, and volunteers in the main study, recruited from a larger pool, who did not receive any compensation.

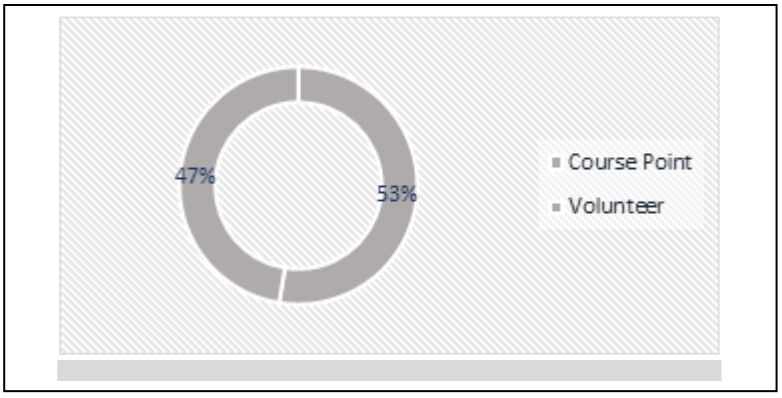


Figure 5.2. Recruitment Type for Study I

Before comparing samples, checking the normality assumption is necessary to decide whether a parametric or non-parametric test should be used (Orcan, 2020). As it was not possible to assume that the distribution followed a certain pattern, a **Shapiro-Wilk test** (< 0.05) was used to assess both samples normal distribution, before considering the use of parametric statistical tests, as it is usually recommended (Ghasemi and Zahediasl, 2012).

The Gaussian distributions were verified for the following measures: NDE Scale (Greyson, 1983) four subscores, DAP-R (Wong, Reker and Gesser, 1994) five dimensions, and SHALOM (Fisher, 2010) Life Orientation dimension (Tables 5.3 and 5.4).

However, the Shapiro-Wilk tests' results were significant ($p < 0.05$) in the case of 'age' and the NDE Scale (Greyson, 1983) total score for the pilot sample (Table 5.3), BSI- 18 (Derogatis, 2001) global index (GSI) for both samples, and SHALOM (Fisher, 2010) Spiritual Health dimension for the main sample, indicating that the normality assumption could not be verified in all cases (Table 5.4). Meaning that the distribution is different from a normal distribution in some measures and hat combining samples might not be advisable as they could be significantly different.

Therefore, a non-parametric test, like a **Mann-Whitney U test**, should be used instead of an independent sample t-test, as it does not assume normal distributions in all cases (Rachon, Gondan and Kieser, 2012). For details regarding the research instruments, *see* Section 4.6., and

for illustrative tables and box plots *see* Appendix 19. Below, tables 5.1. and 5.2 show data for the pilot and main study, by scale component.

STUDY I		Shapiro-Wilk ($p < 0.05$) Pilot Sample n=10	Shapiro-Wilk ($p < 0.05$) Main Sample n=9
	Age	**0.008**	0.424
NDE Scale	**Total Score**	**0.028**	0.290
	Cognitive Component	0.421	0.108
	Affective Component	0.070	0.135
	Paranormal Component	0.243	0.084
	Transcendent Component	0.080	0.382

Table 5.1. Analysis of Gaussian distribution at significance level of 0.05 for Age and NDE Scale

STUDY I	Shapiro-Wilk ($p < 0.05$) Pilot Sample n=10		Shapiro-Wilk ($p < 0.05$) Main Sample n=9	
	Pre-test	**Post-test**	**Pre-test**	**Post-test**
BSI-18 GSI	**0.038**	**0.010**	**0.006**	**0.023**
DAP-R Death Fear	0.519	0.706	0.151	0.402
DAP-R Death Avoidance	0.285	0.184	0.266	0.111
DAP-R Death Neutral Acceptance	0.087	0.057	0.076	0.068
DAP-R Approach Acceptance	0.193	0.752	0.760	0.726
DAP-R Escape Acceptance	0.343	0.796	0.537	0.134
SHALOM Spiritual Health	0.117	0.768	**0.017**	0.820
SHALOM Life Orientation	0.732	0.279	0.475	0.217

Table 5.2. Analysis of Gaussian distributions at significance level of 0.05 for BSI-18, DAP-R and SHALOM

Considering the non-uniform results, a distribution-free, nonparametric **Mann-Whitney U test** was used to observe if any significant differences ($p < 0.05$) existed between pilot and main sample, in terms of their dispersal on the following measures: NDE Scale (Greyson, 1983) total score and four components subscores; BSI- 18 (Derogatis, 2001) global index (GSI); DAP-R (Wong, Reker, and Gesser, 1994) five dimensions, and SHALOM (Fisher, 2010) two main measures. For illustrative histograms, *see* Appendix 20.

STUDY I	Mann-Whitney U Test ($p < 0.05$) n=19
Age	**0.022**
NDE Scale Total Score	1.000
NDE Scale Cognitive Component	0.780
NDE Scale Affective Component	0.842
NDE Scale Paranormal Component	0.315
NDE Scale Transcendent Component	0.661

Table 5.3. Comparison between samples for Age and NDE Scale at the significance level of 0.05 for Study

STUDY I	Mann-Whitney U Test ($p < 0.05$) Pre-test n=19	Mann-Whitney U Test ($p < 0.05$) Post-test n=19
BSI-18 GSI	.278	.905
BSI-18 Mood	.497	.968
BSI-18 Anxiety	.968	.968
BSI-18 Somatic	.133	.400
DAP-R Death Fear	.243	.161
DAP-R Death Avoidance	.278	.356
DAP-R Death Neutral Acceptance	.720	.546
DAP-R Approach Acceptance	.842	.243
DAP-R Escape Acceptance	.549	.549
SHALOM Spiritual Health	.400	.633
SHALOM Life Orientation	.482	.661

Table 5.4. Comparison between samples for BSI-18, DAP-R and SHALOM at the significance level of 0.05.

The Mann-Whitney U test indicated that no significant differences could be observed between the pilot and main sample ($p > 0.05$) for all analysed parameters, except for age. Only age proved to be statistically different ($p = 0.022$), in relation to the type of recruitment, since the participants from the pilot sample were younger (*see* Chart in Appendix 20).

Therefore, it was possible to assume that the individuals from the pilot and main sample could be combined into one sample, despite the small differences in their recruitment. Also, the fact that the score distributions did not present significant differences among groups ($p > 0.05$), except for age, pointed to the possibility of a future exploration of age groups in terms of results.

In terms of demographic information, the combined sample consisted of a total of 19 individuals, overrepresented by females (63%), with a mean age of 34.8 years and highly dispersed (Mdn = 30.0; SD = 16.0) between a minimum of 20 and a maximum1 of 75 years old. Individuals aged 18 to 25 correspond to almost half of the sample (48%). In terms of occupation, all participants had frequented tertiary education facilities (higher education), most of them were students (68.4%), 15.8% were teachers/researchers and 10.5% were retired.

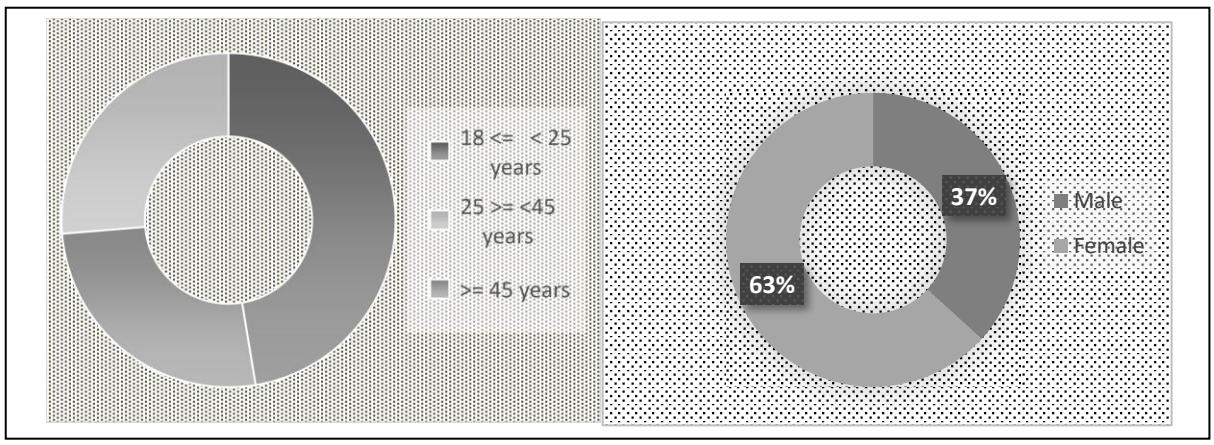


Figure 5.3. Gender and Age Distribution for Study I

5.4. Quantitative Data Analysis for Study I

The first part of the research project, entirely conducted at the UoN, was called Study I and encompassed two rounds of data collection. Except for the NDE Scale (Greyson, 1983), that was applied only once to assess the phenomenology of the experience, all other psychometric data were computed as differences between pre and post-test scores, *i.e.* before and after the hypnosis protocol, to measure changes that might be attributed to the intervention. For details regarding the procedure, *see* Section 4.7.

5.4.1. NDE Scale Results for Study I

The main assumption behind this study was that the participants would be able to experience the core elements of a non-induced NDE. The NDE Scale (Greyson, 1983), applied after the protocol, was meant to assess the equivalence of the phenomenological components of an episode, according to the cut-off point used for the determination of a spontaneous episode (*see* Section 2.3.)

From the results, it was possible to observe that all volunteers from the combined sample produced scores of 7 or higher following the full completion of the scale. All scores were located above the cut-off point (7) beyond which Greyson (1983) considered the existence of a true NDE within the validation sample used to build the scale. Within Study I sample, 52.6% of the volunteers scored 13 or higher, with 31.6%% scoring above 15.

NDE Scale n=19	Total Score	Cognitive Subscale	Affective Subscale	Paranormal Subscale	Transcendental Subscale
Mean	14.11	3.26	5.05	2.95	2.84
Median	13.00	3.00	5.00	3.00	2.00
Std.Deviation	6.07	1.52	1.96	1.58	2.32
Minimum	7.00	1.00	0.00	1.00	0.00
Maximum	28.00	6.00	8.00	7.00	7.00

Table 5.5. Descriptive Statistics on the Total Index and Subscales of the NDE Scale (Greyson, 1983)

According to Table 5.5., the total index produced a mean of 14.11 [SD=6.07; Md=13.0], with values ranging from 7 to 28. The maximum scores ranged from 6 in the cognitive subscale, to 8 in the affective subscale. The arithmetical mean scores and medians produced the highest score in the affective scale [M=5.5] among all four subscales. The paranormal [M= 2.95; Md=3.0]. and the transcendental [M= 2.84; Md=2.0] subscales produced lower scores than the cognitive component [M= 3.26; Md=3.0]. The mean score and variation for the total scale revealed that the sample who underwent hypnosis [M= 14.11; SD=6.07] and the original NDE sample [M= 15.04; SD=7.84] used in the construction/validation study (Greyson, 1983) are analogous in magnitude and variance. Figure 5.4., revealed that two participants scored higher than the others, *i.e.* 25 and 28 out of a maximum of 32.

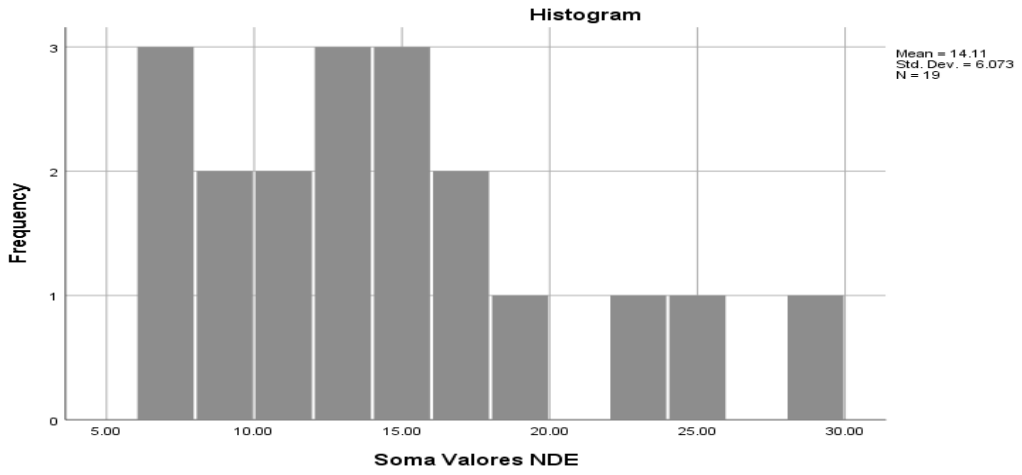


Figure 5.4. Total Index of the NDE Scale for Study I

The results indicated that undergoing a hypnotic experience designed to mimic the process of transitioning from life to near-death, allowed 19 participants (100%) to score above the cut-off point of 7, considered as the appropriate criterion for establishing the presence of a true NDE. As far as the analysis of the total score showed, a hypnotically induced NDLE could not be differentiated from a spontaneous episode, in terms of its phenomenology, according to what the NDE Scale (Greyson, 1983) measures. Regarding the components, and besides mean values, Greyson (1990) established weighed criteria to measure the components of the experience:

> *Cognitive NDEs were defined as those experiences that scored 5 or higher on the cognitive component, regardless of the scores on any other component. Transcendental NDEs were defined as those that scored 5 or higher on the Transcendental Component, but less than 5 in the Cognitive Component. Affective NDEs were defined as those that scored 5 or higher on the Affective Component, but less than 5 on either the cognitive or Transcendental Component. Paranormal NDEs were defined as those that scored 5 or higher on the Paranormal Component but less than 5 on any other component* (idem:153).

The results in Table.5.6 for each of the four subscales, according to the weighed criteria (Greyson,1990), indicated that the participants produced scores for two out of four possible discrete components of a spontaneous NDE: 84.2% of the sample experienced a predominantly affective event and 15.8%, had a transcendental episode, while none had a predominantly cognitive or paranormal episode.

The fact that the experience was, for the majority (84.2%), predominantly affective, meant that they selected items translating feelings of peace, pleasantness, joy, harmony, and being surrounded by a bright light, meeting with guides, ancestors, or spiritual entities, before returning

to the body. For the remaining sample (15.8%), the experience had a transcendental none, while none reported predominantly cognitive or paranormal events.

The transcendental values suggested that the experience affected a few volunteers in a very intense way, and others hardly at all.

NDE Subscales Values	Frequency	Percent
Cognitive	0	0.0
Affective	16	84.2
Paranormal	0	0.0
Transcendental	3	15.8
Total	19	100.0

Table 5.6. NDE Scale subscores according to the weighted criteria for Study I

The scoring *per item* and component is described in Tables 5.7. to 5.10. In the cognitive component the most scored item, apart from the 'neither' category, was related to 'remembering many past events', followed by the feeling that 'everything seemed to happen at the same time'. In the affective component, the feelings of 'incredible peace' and 'pleasantness' were the most scored item, apart from the 'neither' category in the whole scale, followed by 'happiness'. Thus, supporting the overall affective trend. In the paranormal component, feeling the senses 'more vivid than usual' and 'separated from the body' were the most scored items, along with the 'neither' options. In the transcendental component, none of the items, apart from the 'neither'

category, was significantly scored, corroborating the conclusion that only a few volunteers had strong transcendental experiences.

	NDE Scale Items	Responses	Frequency (n=19)	Percent
Cognitive Component	1. Did time seem to speed up or slow down?	Everything seemed to happen all at once/time stopped/lost meaning	8	42.1
		Faster or slower than usual	7	36.8
		Neither	4	21.1
	2.Were your thoughts speeded up?	Incredibly Fast	3	15.8
		Faster than usual	5	26.3
		Neither	11	57.9
	3.Did scenes from your past come back to you?	Past flashed before me, out of my control	1	5.3
		Remembered many past events	11	57.9
		Neither	7	36.8
	4.Did you suddenly seem to understand everything	About the Universe	4	21.1
		About myself or others	7	36.8
		Neither	8	42.1

Table 5.7. NDE Scale per item in the Cognitive Component (Greyson, 1983) for Study I

Affective Component	**5.Did you have a feeling of peace or pleasantness?**	**Incredible peace of pleasantness**	**14**	**73.7**
		Relief or calmness	4	21.1
		Neither	1	5.3
	6.Did you have a feeling of joy?	Incredible joy	6	31.6
		Happiness	11	57.9
		Neither	2	10.5
	7.Did you feel a sense of harmony or unity with the universe?	United, One with the world	9	47.4
		No longer in conflict with nature	5	26.3
		Neither	5	26.3
	8.Did you see or feel surrounded by a brilliant light?	Light clearly of mystical or other worldly origin	5	26.3
		Unusually bright light	8	42.1
		Neither	6	31.6

Table 5.8. NDE Scale per item in the Affective Component (Greyson, 1983) for Study I

Paranormal Component	**9.Were your senses more vivid than usual**	**Incredibly more so**	**5**	**26.3**
		More so than usual	10	52.6
		Neither	4	21.1
	10.Did you seem to be aware of things going on elsewhere, as if by ESP?	Yes, and facts later corroborated	1	5.3
		Yes, but facts not yet corroborated	3	15.8
		Neither	15	78.9
	11.Did scenes from the future come to you?	From the world's future	0	0.0
		From personal future	7	36.8
		Neither	12	63.2
	12.Did you feel separated from your physical body?	Clearly left the body and existed outside it	7	36.8
		Lost awareness of the body	10	52.6
		Neither	2	10.5

Table 5.9. NDE Scale per item in the Paranormal Component (Greyson, 1983) for Study I

Transcendental Component	**13.Did you seem to enter some other unearthly world?**	**Clearly mystical or unearthly realm**	**6**	**31.6**
		Unfamiliar, strange place	8	42.1
		Neither	5	26.3
	14.Did you seem to encounter a mystical being or presence?	Definite being or voice clearly of mystical or other worldly origin	4	21.1
		Unidentifiable voice	1	5.3
		Neither	14	73.7
	15.Did you see deceased spirits or religious figures?	Saw them	5	26.3
		Sensed their presence	4	21.1
		Neither	10	52.6
	16.Did you come to a border or point of no return?	A barrier I was nor permitted to cross or sent back to life involuntarily	3	15.8
		A conscious decision to return to life	5	26,3
		Neither	11	57,9

Table 5.10. NDE Scale per item in the Transcendental Component (Greyson, 1983) for Study I

5.4.2. BSI-18 Brief Symptom Inventory-18 Results for Study I

Pre and post test scores of psychopathological symptomatology were assessed using the BSI-18 (Derogatis, 2001): the Global Severity Index (GSI), corresponds to the general level of individual psychological malaise, and the three subscales correspond to '*Mood*', '*Anxiety*', and '*Somatization*' dimensions (*see* Section 4.6.1.1.). In 18 items (6 per component), the lowest score corresponds to 1 (Nothing), and the maximum to 4 (Extremely), with a maximum possible score of 72.

The frequency analysis, according to Table 5.11, showed that, beyond small changes, no significant differences were found. In the GSI, the mean value increased from pre to post-test [M=8 to M=9.5]. The 'A*nxiety*' indicator has contributed to this increase, with a mean value [M=3.26] that raised in the posttest phase [M=4.37], with a difference of 1.11. The other two indicators, '*Mood*' and '*Somatizatio*n' suffered slight increases.

BSI-18 n=19		**Pre-Test**	**Post-Test**	**Difference**	**Wilcoxon Signed Rank Test ($p < 0.05$)**
G.S.I	**Mean**	**8**	**9.32**	**+1.5**	0.948
	S.D	(5.57)	(9.86)	+4.29	
	Min	3	0	-3	
	Max	22	37	15	
SOMATIZATION	**Mean**	**1.58**	**1.63**	**+0.05**	0.975
	S.D.	(2.27)	(2.03)	-0.24	
	Min	0	0	0	
	Max	9	5	-4	
MOOD	**Mean**	**3.16**	**3.32**	**+0.16**	0.708
	S.D	(2.14)	(4.03)	1.89	
	Min	0	0	0	
	Max	8	14	6	
ANXIETY	**Mean**	**3.26**	**4.37**	**+1.11**	0.917
	S.D	(2.96)	(5.63)	2.94	
	Min	0	0	0	
	Max	9	18	9	

Table 5.11. BSI-18 differences between pre and post-test scores at 0.05 significance for Study I

Beyond frequency analysis, and within each group, pre-and post-test differences between variables were observed using a Wilcoxon signed-rank test. By comparing two paired groups, this test helps in determining if two score sets are different from one another in a statistically significant manner, as a result of the intervention.

No significative differences were found between pre and post-test results, confirming the frequency analysis outcome (*see* Appendix 21 for histograms). The observed increases were represented by dispersed maximum scores: the GSI reflected this increase and dispersion, with subtle increases in mean values [M=8 to M=9.5] but considerable increases in the maximum score [22 to 37], probably reflecting the increase in the maximum values of the '*Anxiety*' component [9 to 18]. The differences between minimum and maximum scores pointed to the fact that, overall, these visible differences were caused by a small number of participants, as shown by the figures below, where it is clear that a few participants (3, 9 and 11) were responsible for the increases, that do not reflect an overall trend of the sample.

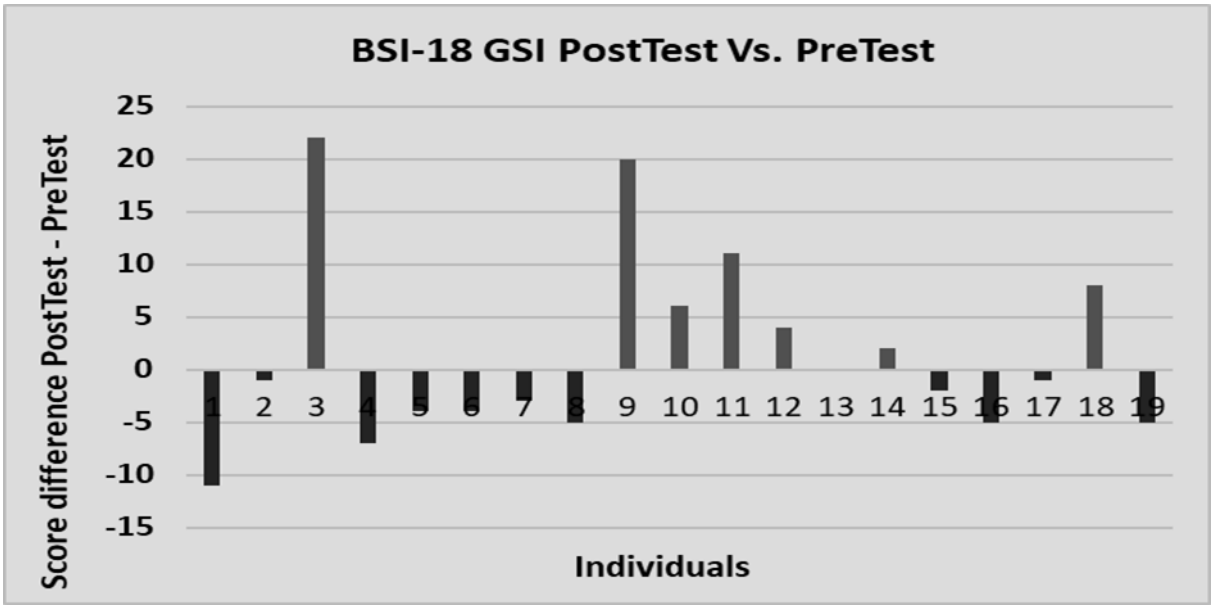


Figure 5.5. Differences between pre and post-test distributions in the GSI Score of BSI-18 (Derogatis, 2001) for Study I

The charts for each component illustrate the difference between pre and post-scores, identifying individuals who showed visible changes. Such scores, according to the distribution, reflected the fact that, in average the symptomatology was slightly more intense in few participants (3, 9 and 11).

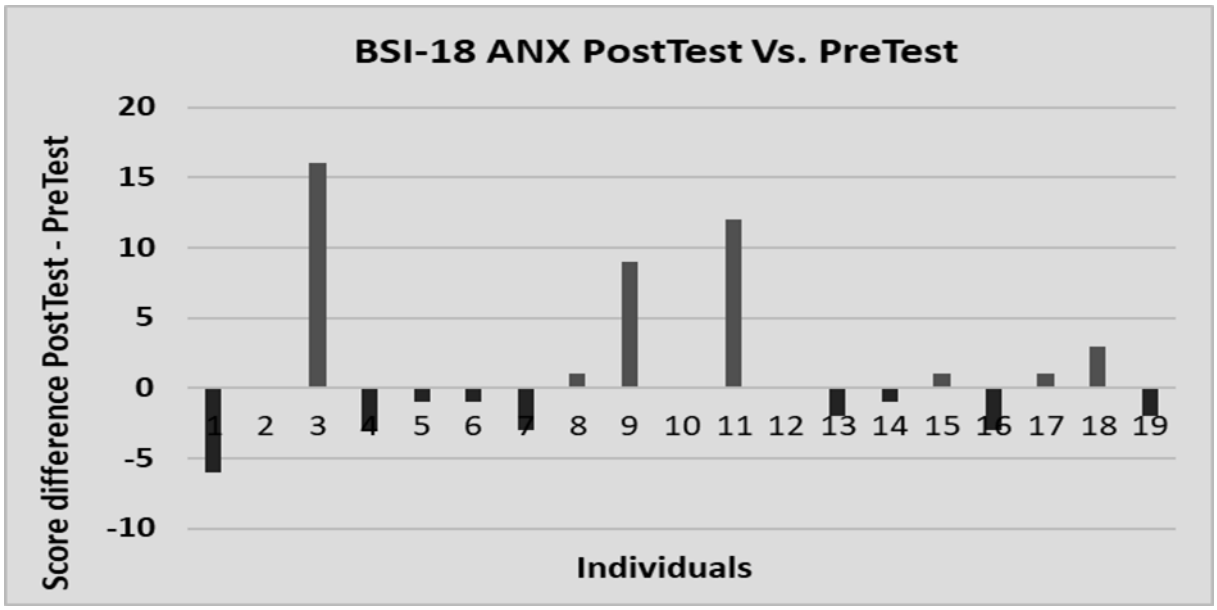


Figure 5.6. Differences between pre and post-test distributions in the Anxiety Component of BSI-18 (Derogatis, 2001) for Study I

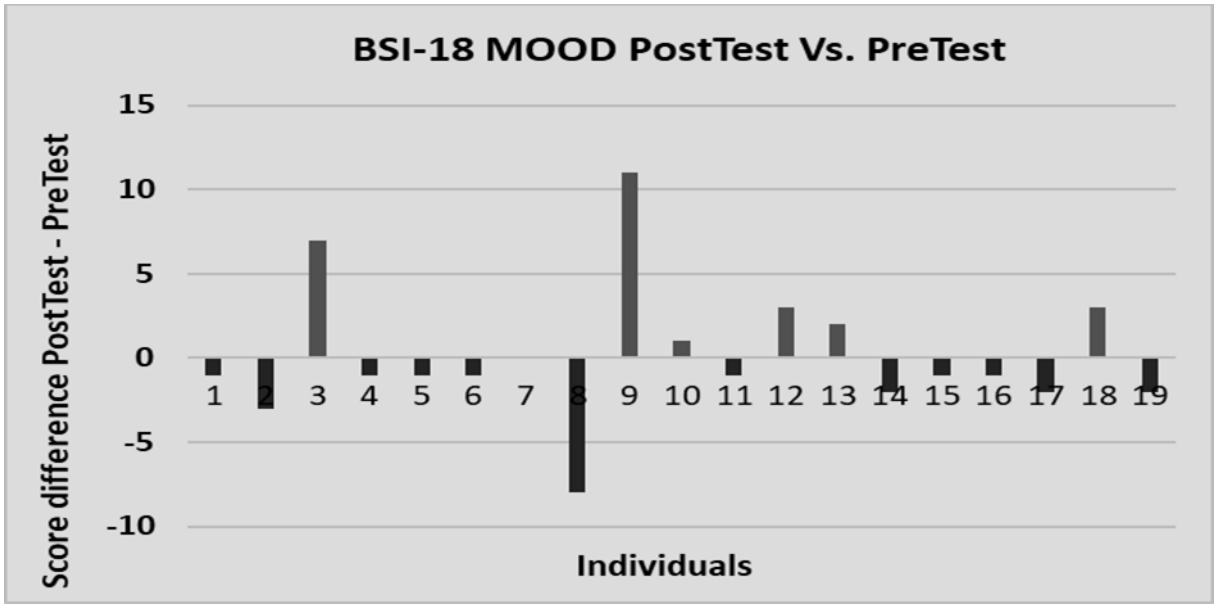


Figure 5.7. Differences between pre and post-test distributions in the Mood Component of BSI-18 (Derogatis, 2001) for Study I

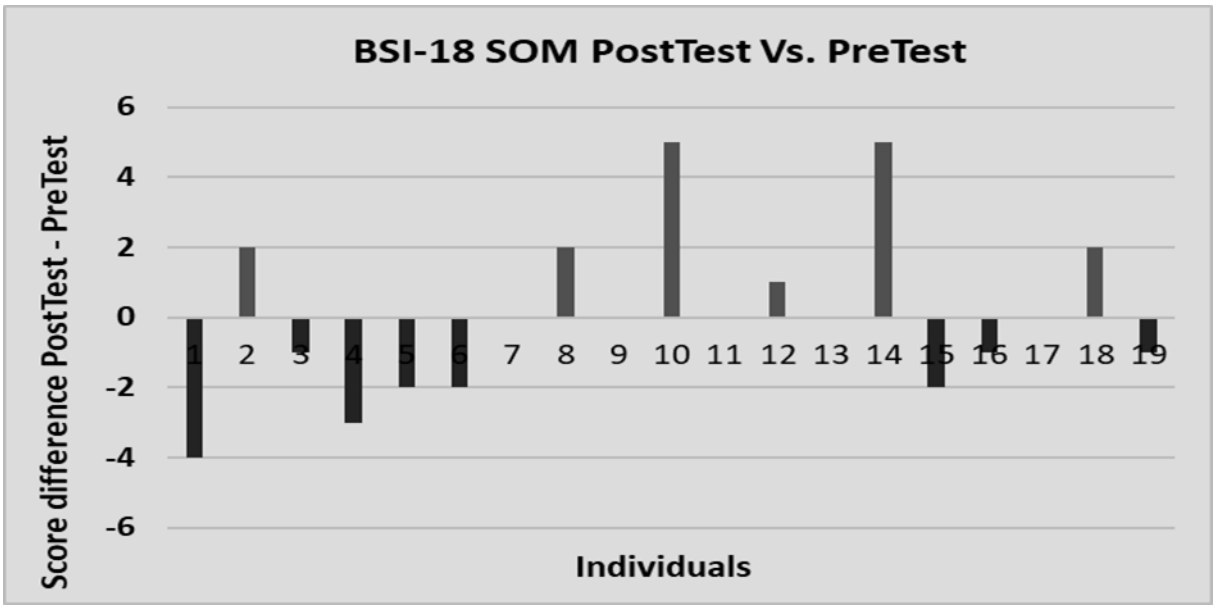


Figure 5.8. Differences between pre and post-test distributions in the Somatic Component of BSI-18 (Derogatis, 2001) for Study I

Considering the results, only the prediction that indicators of psychological distress would not increase in those who initially presented low or moderate levels, was confirmed (*see* Section 4.2.). As this was a sample of healthy volunteers and there were no high baseline values of psychological distress before the intervention that could be reduced, the prediction that they would decrease was not verified. Only the prediction that low scores in indicators of psychological distress would remain stable was confirmed (*idem*), even if the distribution reflected distinct increases in few participants (3, 9 and 11).

5.4.3. DAP-R Death Attitude Profile-Revised Results for Study I

With 36 items distributed by five independent factors, the DAP-R measures a broad spectrum of attitudes towards death, ranging from avoidance to acceptance. Each item is scored with a Likert scale from 1 to 7, in the direction of strongly disagree (1) to strongly agree (7): the maximum value for each dimension depends on the number of items included, ranging from five to ten. For each independent dimension, '*Fear of Death/Dying'*, '*Neutral Acceptance'*, '*Approach Acceptance'*, '*Escape Acceptance'* and '*Death Avoidance'*, a mean scale score is computed by dividing the total score by the number of items (*see* Section 4.6.1.2.).

According to the overall results showed in Table 5.12., an increase was observed in the '*Fear of Death*' dimension indicating that, at some level, negative thoughts and feelings about death grew, with the mean value rising from M=30.95 to M=34.16. The '*Death Avoidance'* measure showed almost no variations, pointing to the possible stability of any defense mechanism that might have been present before: the minimum and minimum scores remained stable, without any noticeable differences

In all '*Acceptanc*e' measures, minor differences were observed, with a decrease in '*Neutral Acceptance'*, from M=10.95 to M=9.37, and a difference of -8 between maximum values in pre and post-test. This might mean that death as a reality became accepted with less neutrality after the intervention, possibly matching the increase in '*Fear of Death/Dying'*. The minimum and maximum scores did not show major changes.

A Wilcoxon signed-rank test was used to determine if the scores changed significantly, as consequence of the intervention (*see* Appendix 21 for illustrative histograms). The increase in the '*Fear of Death/Dying'* indicator proved to be significant (Wilcoxon signed rank test, p=0.029). Also, according to this test, a significant decrease (p=0.021) in '*Neutral Acceptance'* occurred, in coherence with the '*Fear of Death/Dying*' increase: meaning that death is not accepted as a neutral

reality, but as something to be feared. Regarding '*Neutral Acceptance'* the maximum score decreased 8 points, in consonance with the significant decrease revealed by the Wilcoxon test. In fact, twelve participants decreased their neutrality regarding the death theme, as shown in the chart below, in Figure 5.9., even though these variations are more expressive in four of them than in the remaining eight, where variations are smaller, showing values below two.

DAP-R n=19		Pre-Test	Post-Test	Difference	Wilcoxon Signed Rank Test (*p* Value)
Fear of Death	**Mean**	**30.95**	**34.16**	**+3.11**	**0.029**
	S.D	(9.02)	(10.63)	+1.66	
	Min	14	16	2	
	Max	45	49	4	
Death Avoidance	**Mean**	**27.37**	**27.58**	**+0.21**	0.659
	S.D.	(6.46)	(7.07)	-1.63	
	Min	11	13	2	
	Max	35	35	0	
Neutral Acceptance	**Mean**	**10.95**	**9.37**	**-1.58**	**0.021**
	S.D	(5.62)	(3.72)	-1.95	
	Min	5	5	0	
	Max	23	15	-8	
Approach Acceptance	**Mean**	**41.11**	**38.11**	**-3**	0.115
	S.D	(11.83)	(13.76)	+1.93	
	Min	18	13	-5	
	Max	69	70	1	
Escape Acceptance	**Mean**	**20.05**	**19.69**	**-0.36**	0.376
	S.D	(6.50)	(6.31)	-0.19	
	Min	10	10	0	
	Max	33	33	0	

Table 5.12. DAP-R differences between pre and post-test scores at 0.05 significance for Study I

It was important to assess if the observed variations might be the result of small changes in several participants or bigger changes in few, as with the BSI-18 (Derogatis, 2001). The chart below showed that 14 participants increased their score in 'F*ear of Death/Dying*' after the intervention, with seven scoring up to five points higher, from six to 11.

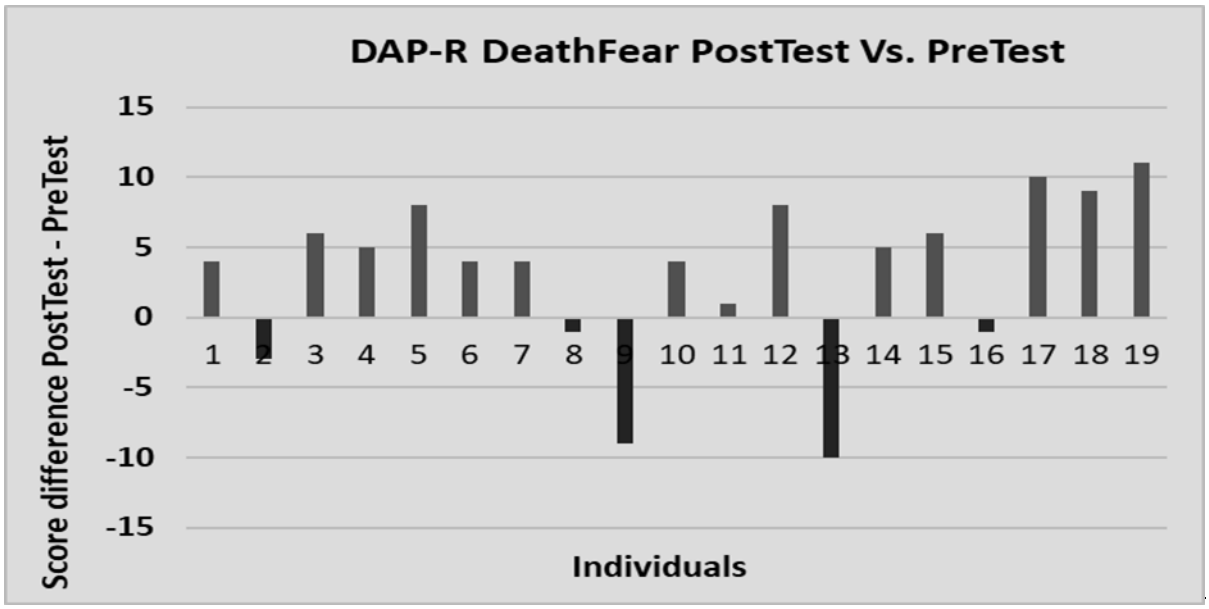


Figure 5.9. Differences between pre and post-test distributions in the Fear of Death component of DAP-R (Wong, Reker and Gesser, 1994) for Study I

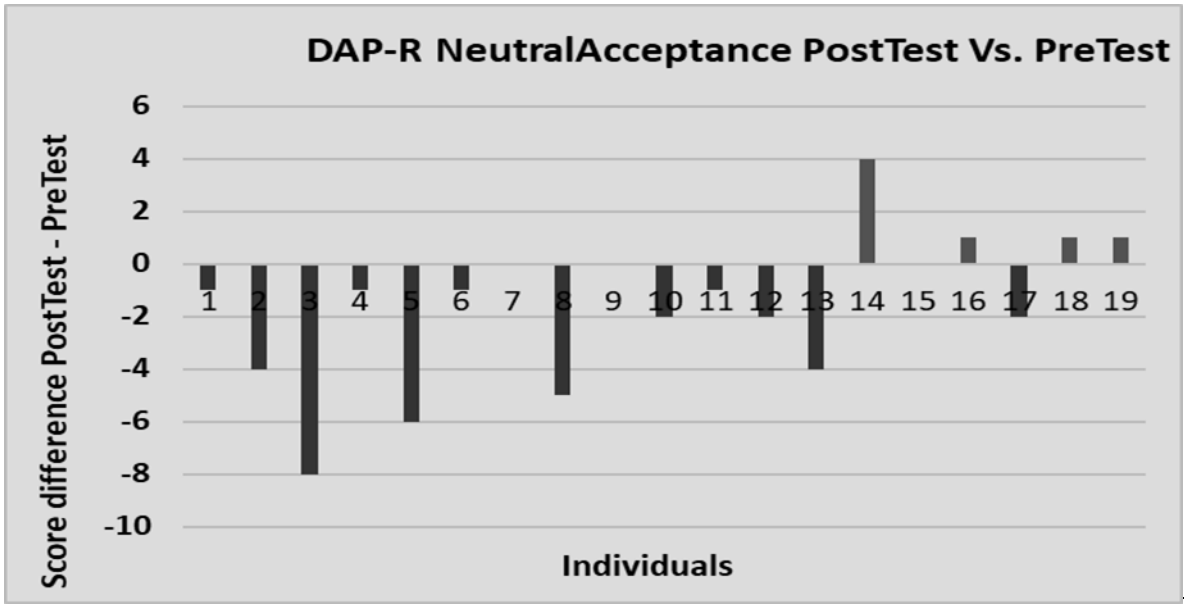


Figure 5.10. Differences between pre and post-test distributions in the Neutral Acceptance component of DAP-R (Wong, Reker and Gesser, 1994) for Study I

Considering these results, the predictions that a decrease in indicators of death fear would be observed, after the hypnosis protocol did not occur (*see* Section 4.2.1.). A measure of death

acceptance ('*Neutral Acceptance*') decreased, instead of increasing as it was hypothesized, as death seems to be less accepted as neutral. This decrease might reveal some level of anxiety, in coherence with the '*Fear of Death/Dying*' increase.

Given the small sample of participants, these changes should be interpreted with caution as they might be probably reflecting the expression of the impact of the protocol in a small number of participants or even in single cases, compromising the possibility of making meaningful inferences. Also, the fact that this is a seven-point Likert Scale representing several, but subtle degrees of intensity between choices, can lead to some unwilful variation between pre and post-test. Because the participants do not have access to the pre-test version, they might be subject to memory issues that might compromise the possibility of accurately signaling post-test differences (*e.g.*: not remembering if they signaled strongly agree or agree in a certain item, amidst 32). These conclusions will be integrated with the rest of the data in the final section of this chapter. For the rest of the charts regarding DAP-R, consult Appendix 21.

5.4.4. SHALOM - Spiritual Health and Life-Orientation Measure Results for Study I

SHALOM measures two components with 20 items each, reflecting the 'lived' experience of how people feel most of the time ('*Spiritual Health*'), and an 'ideal' of how spirituality should be experienced ('*Life Orientation*'). On a scale from 1 (very low) to 5 (very high) in a total of 40 items, the maximum possible score equals 100 (5x20 in each component), and equals 25 per component (5x5 items), comprising four domains of spiritual well-being: '*Personal*', '*Communal*', '*Environmental*' and '*Transcendental*' (*see* Section 4.6.1.3.). These four domains with 5 items each, provide additional information to the two main dimensions, '*Life Orientation'* and '*Spiritual Health'*, in '*Personal*' (items 5, 9, 14, 16, 18), '*Communal*' (items 1, 3, 8, 17, 19), *'Environmental*' (items 4, 7, 10, 12, 20) and '*Transcendental*' (items 2, 6, 11, 13, 15) vectors of spiritual well-being.

From the results between pre and post-test shown in Table 5.13., an increase was observed in '*Spiritual Health*' mean values [68.26 to 71.53], according to Table 5.13, that proved to be statistically significant, according to a Wilcoxon signed-rank test (p=0.035), used to determine if the scores changed as a consequence of the intervention (*see* Appendix 21 for histograms). According to the same table, in the *'Life-Orientation*' component, the observed increase in the mean values [M=86.95 to M=88.11] could not be considered as statistically significant (p=0.285).

The test also includes two questions designed to establish the importance of '*Religion*' and '*Spirituality*'. '*Spirituality*' was, in average, more important than *'Religion'* before the experience [M=4,11 > M=2,05]. In post-test phase, a very small increase in the '*Importance of Religion'* was registered [M=2.05<M=2.11], while a small decrease in the' *Importance of Spirituality'* was observed [M=4.11>M=3.68], with the minimum score declining from 2 to 1. However, these variations were not significant, according to the Wilcoxon Signed Rank Test.

SHALOM n=19		Pre-Test	Post-Test	Difference	Wilcoxon Signed Rank Test (p Value)
Spiritual Health	**Mean**	**68.26**	**71.53**	**+ 3.27**	**0.035**
	S.D	(8.69)	(10.71)	+ 2.04	
	Min	51	51	0	
	Max	86	91	5	
Life Orientation	**Mean**	**86.95**	**88.11**	**+ 1.16**	0.285
	S.D.	(8.30)	(9.66)	+ 1.36	
	Min	70	69	-1	
	Max	100	100	0	
Importance of Religion	**Mean**	**2.05**	**2.11**	**+0.06**	0.763
	S.D	(1.22)	(1.37)	- 0.15	
	Min	1	1	0	
	Max	5	5	0	
Importance of Spirituality	**Mean**	**4.11**	**3.68**	**- 0.43**	0.131
	S.D	(1.10)	(1.38)	+ 0.28	
	Min	2	1	-1	
	Max	5	5	0	

Table 5.13. SHALOM main components differences between pre and post-test scores at 0.05 significance level for Study I

From Table 5.14., it was possible to observe that the increase in the '*Spiritual Health'* component manifested itself through the '*Transcendental*' [M=11.11 to M=13.17] and '*Environmental*' [M=18.47 to M=19.42] dimensions, with a significant increase in the maximum values, according to the Wilcoxon test results.

An increase in the '*Spiritual Health'* component, showed how the participants felt their personal experience changing after the session, regarding environmental (connection and a sense of magic with nature, feelings of peace and harmony with the environment) and transcendental themes (personal relationship, worship, and oneness with the Divine/God). In '*Life-Orientation'*, no significant increases in any subscale were noted, meaning that the participant's ideal future image in terms of spiritual well-being did not change significantly as a result of the experience, according to the test results in Table 5.15.

SHALOM Subscales for Spiritual Health n=19		**Pre-Test**	**Post-Test**	**Difference**	**Wilcoxon Signed Rank Test (*p* Value)**
Personal Domain	**Mean**	**18.31**	**19.21**	**+ 0.91**	0.160
	S.D	(3.30)	(3.27)	- 0.03	
	Min	12	12	0	
	Max	25	25	0	
Communal Domain	**Mean**	**20.37**	**20.05**	**- 0.32**	0.413
	S.D.	(2.89)	(2.39)	- 0.5	
	Min	16	15	-1	
	Max	25	25	0	
Environmental Domain	**Mean**	**18.47**	**19.42**	**+0.95**	**0.015**
	S.D	(3.58)	(3.96)	- 0.38	
	Min	14	13	-1	
	Max	24	25	1	
Transcendental Domain	**Mean**	**11.11**	**13.17**	**+2.06**	**0.025**
	S.D	(4.75)	(5.95)	+ 1.2	
	Min	5	5	0	
	Max	19	24	5	

Table 5.14. Differences between pre and post-test scores in the Spiritual Health Subscales for Study I

SHALOM Subscales for Life Orientation n=19		Pre-Test	Post-Test	Difference	Wilcoxon Signed Rank Test (*p* Value)
Personal Domain	**Mean**	**23.32**	**23.42**	**+ 3.21**	0.843
	S.D	(2.14)	(1.92)	+ 2.04	
	Min	17	19	2	
	Max	25	25	0	
Communal Domain	**Mean**	**24.16**	**24.11**	**+ 1.21**	0.794
	S.D.	(1.26)	(1.10)	+ 1.36	
	Min	21	22	1	
	Max	25	25	0	
Environmental Domain	**Mean**	**22.37**	**22.32**	**+0.06**	0.714
	S.D	(2.73)	(2.98)	- 0.15	
	Min	17	14	-3	
	Max	25	25	0	
Transcendental Domain	**Mean**	**17.11**	**18.26**	**- 0.43**	0.174
	S.D	(7.01)	(7.27)	+ 0.28	
	Min	5	5	0	
	Max	25	25	0	

Table 5.15. Differences between pre and post-test scores in the Life-Orientation Subscales for Study I

With SHALOM (Fisher, 2010), and has it happened with the other tests, the reported differences between pre and post-test were not statistically significant except for '*Spiritual Health'*. Meaning that in average, the sample increased their level of spiritual well-being regarding their present experience in two domains, '*Environmenta*l' and '*Transcendental*', even though it did not change how they see themselves evolving in their spiritual future.

Regarding these results, it was important to determine if the increase in the '*Spiritual Health*' domain was due to small increases in several number of participants, revealing a pattern, or if it reflected larger increases in few individuals. For this purpose, a visual display of the score distribution, below, showed that, as result of the intervention, an increase in 11 participants' scores occurred, with different degrees of impact. For five participants, it reflected an increase of less than five points of difference; for four participants it reflected an increase of six to eight, and

for two, it reflected an increase of more than 12 points, in a total of possible 100. For six participants, however, there was a decrease up to six points of difference.

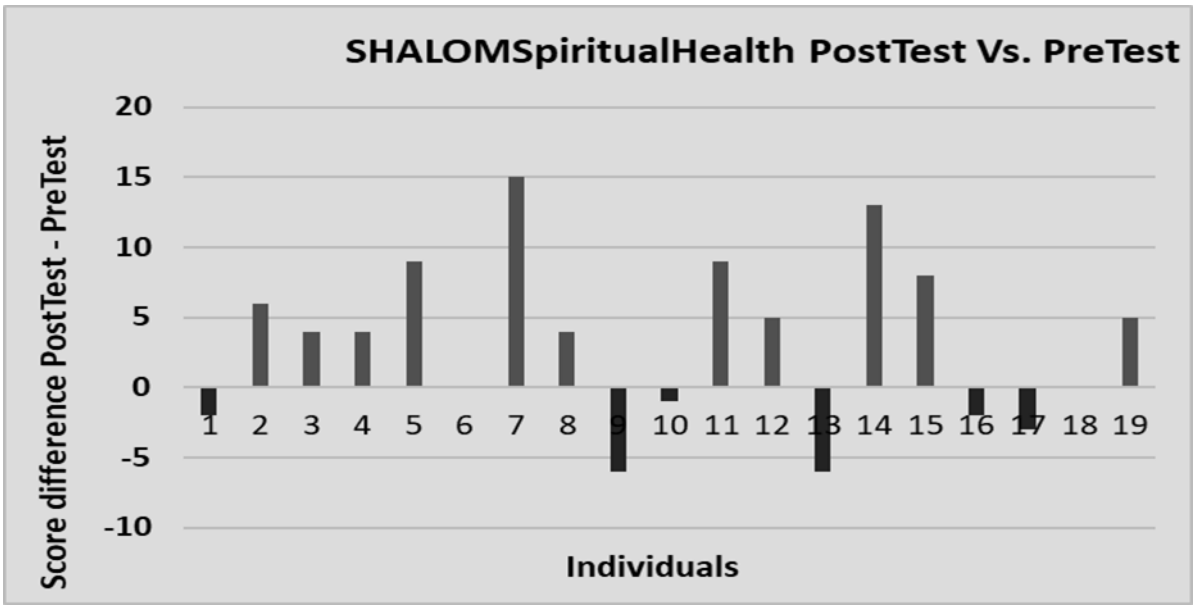


Figure 5.11. Differences between pre and post-test distributions in Spiritual Health dimension of SHALOM (Fisher, 2010) for Study I

A closer look at the domains where the increases were significant, revealed small increases in the *'Environmental'* and '*Transcendental*' domains, according to Figures 5.11. and 5.12., even though for one participant the increase was visibly stronger. It should be noted that these variations reflect average increases of two points in a possible total of 25 per component.

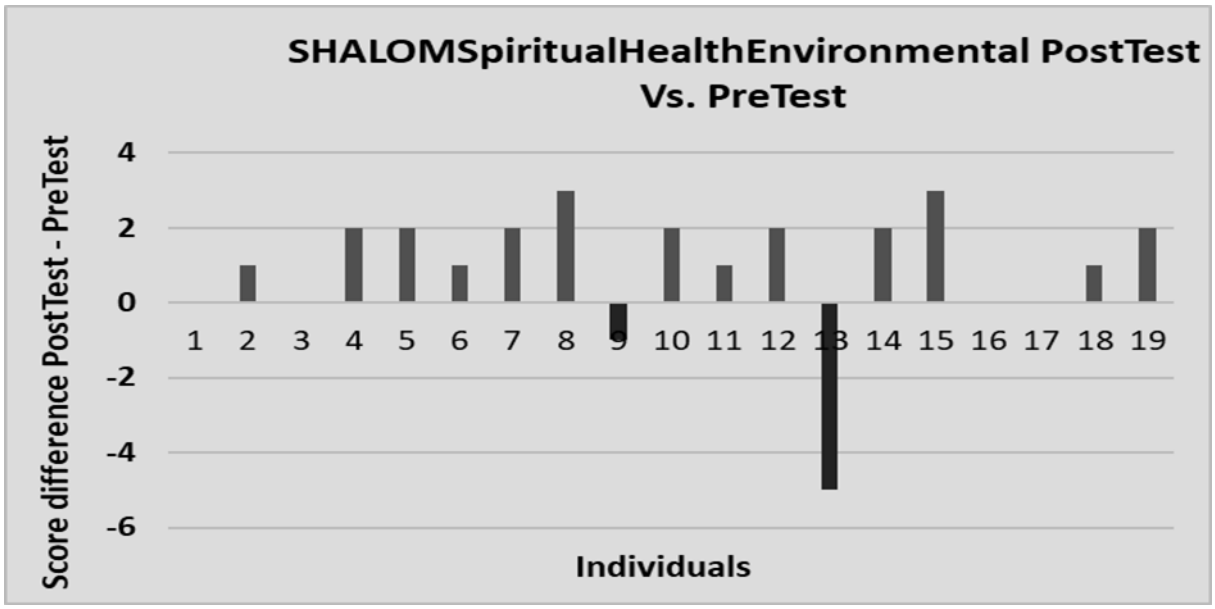


Figure 5.12. Differences between pre and post-test distributions in the Environmental dimension of Spiritual Health of SHALOM (Fisher, 2010) for Study I

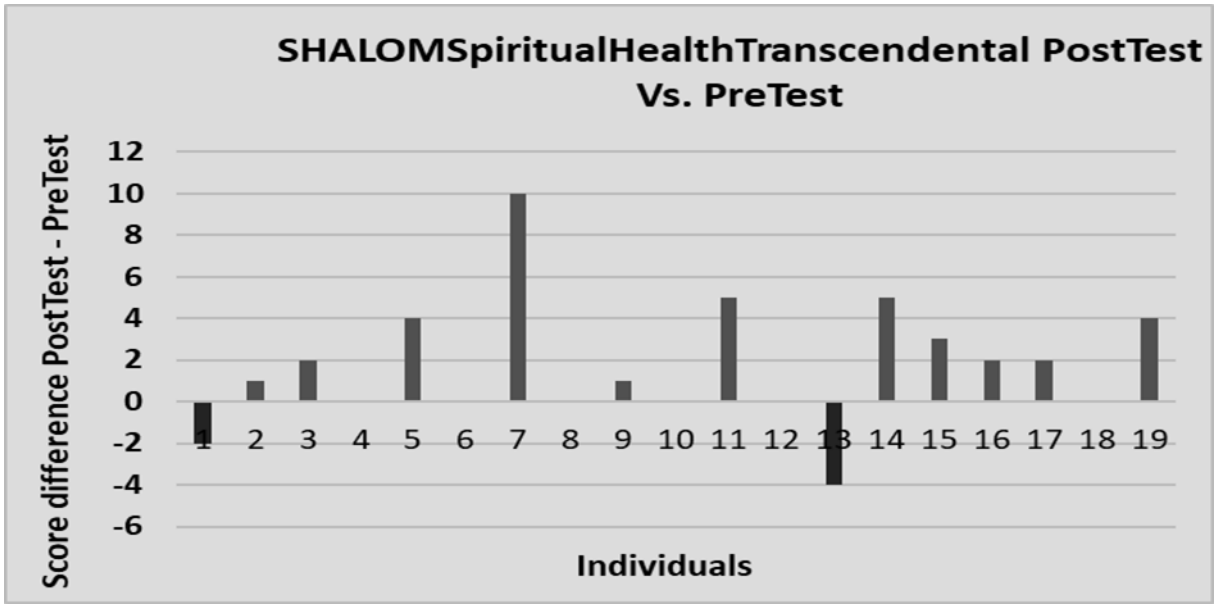


Figure 5.13. Differences between pre and post-test distributions in the Transcendental dimension of Spiritual Health of SHALOM (Fisher, 2010) for Study I

In the *'Life Orientation'* domain small increases also occurred, however non-significant, in nine participants, and with different degrees of impact, according to Figure 5.13. For three

participants, it reflected an increase of more than five points of difference, with one of them scoring 15; for the other six, the increase was smaller, with less than five points. However, for one participant, the decrease represented more than 15 points, in a total of possible 100.

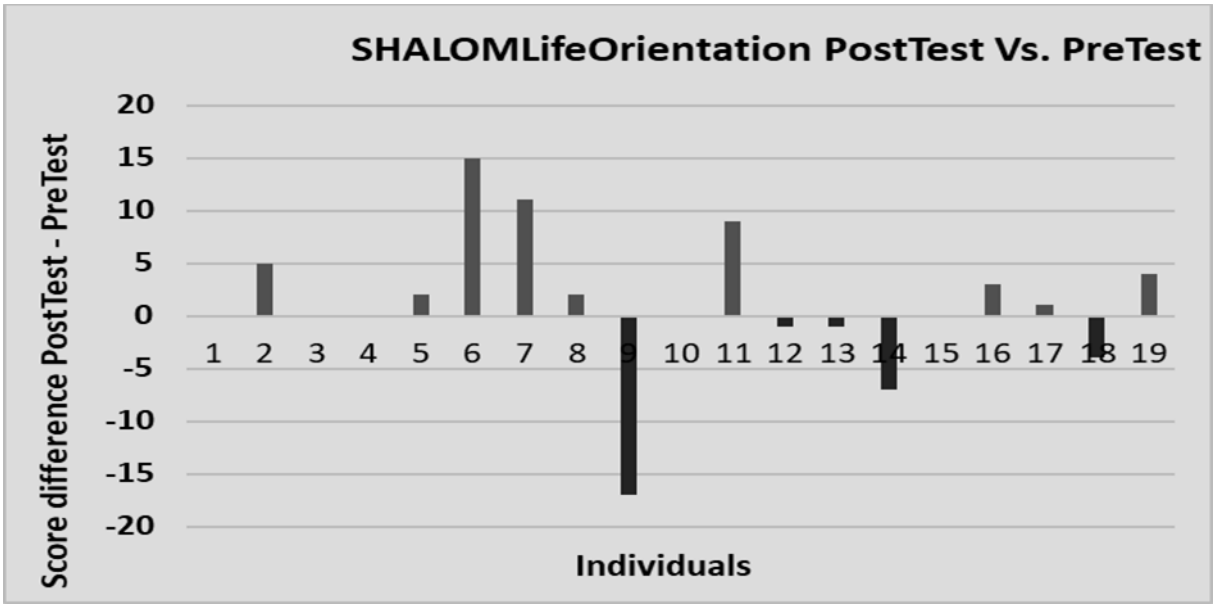


Figure 5.14. Differences between pre and post-test distributions in Life Orientation dimension of SHALOM (Fisher, 2010) for Study I

All considered, and even if the result in the '*Spiritual Health'* domain is statistically significant, according to the initial predictions (*see* Section 4.2.1.), it might not be phenomenologically expressive, in terms of reflecting an absolute effect that should be considered an intervention outcome, expected to happen in similar situations.

In fact, it is not clear if this increase reflects an actual influence of the intervention that might be extrapolated to future situations. In this instrument, the range of the scale varies from 1 to 100 in each main component (25 X4). Therefore, even though significant, the mean difference in '*Spiritual Health'* reflects less than 4 percentual points (+ 3.27), and an increase from 86 to 91is not meaningful absolute terms. In a small sample of participants this variation might easily reflect

the result of a sum of small individual differences, that might be attributed to one of several causes, that will be better addressed in the discussion below.

5.5. Discussion of the overall results in Study I

5.5.1. NDE Scale Results and Implications

The first conclusion drawn from quantitative data collected from a sample of 19 participants, pointed to the fact that the experience was successful, in terms of what the hypnosis protocol aimed for: to induce an event phenomenologically analogous to a spontaneous NDE. From the NDE Scale (Greyson, 1983), it was possible to observe that all volunteers scored above the cut-off point established as a threshold for what could be considered as a NDE. Making it possible to conclude that an analogous event was achieved. In that sense, the hypnosis protocol was successful, since the experience, in terms of content, could not be phenomenologically differentiated from a spontaneous episode, as far as this instrument measures.

As the items included in the scale were originally compiled from a list of 80 typical NDE elements, it means that 100% of the participants reported the same criteria as authentic NDErs, including elements such as OBE[2]s, having contact with a bright light, feeling overwhelming peace and joy, meeting with guides, ancestors, or spiritual entities, all before returning to the body (Greyson, 1983;1990). Most participants (84.2%) experienced a predominantly affective event, matching the tendency observed, in the validation study and in a sample of 87 real NDErs who reported non-cognitive experiences more prevalently (Greyson, 1983; 1985). These results can also be compared to a previous experience, where a similar hypnosis protocol caused an affective response seemingly indistinguishable, in content and intensity, to a true near-death scenario (Machado, Farinha and Simões, 2022).

This overall affective trend matched Pederzoli et al. (2018) findings, observed in 36 participants during hypnotic past-life regressions to the moment of death, where most reports fell into the affective category. This correspondence possibly results from the fact that all participants, in both studies, expected to undergo a 'death' experience or a NDE analogue.

In fact, it seems the NDE unfolds in a different way with people who are not expecting to have one, as it happens mostly in spontaneous episodes, which have been described as predominantly cognitive. A study conducted with veterans who experienced naturally occurring NDEs during combat situations, supported an inclination towards cognitive episodes whenever expectations are not involved (Goza et al., 2014). Thus, leading to the conclusion that lower values in affective, paranormal, and transcendental features *may be attenuated by the traumatic nature of the combat situation, whereas the cognitive features of time slowing down and thoughts speeding up might be life-saving* (Ohkado and Greyson, 2018:76). The hypothetical survival value of having a 'cognitive' NDE when close to death has been discussed before, including the fact that the *accelerated mental processes might facilitate extraordinary rescue efforts in the face of life-threatening danger* (Greyson, 2001: 372).

With our sample, it seems reasonably plausible to attribute the predominantly affective tendency to the fact that the participants were well informed and felt generally relaxed and safe, allowing for gentler aspects to emerge. Even though no one reported the occurrence of a prior episode, all participants went through the Q&A session and were informed about the very low probability of going through an adverse experience. Also, those included in the pilot study assisted to a presentation about NDEs. More experienced participants, recruited outside the student sample, had some previous knowledge about NDEs and this was their main motivation for volunteering. Gabbard and Twemlow (1991) defended that conscious fear of physical death, or a preconscious or subconscious apprehension of some form of catastrophe, could explain some of the NDE features. In this situation, most probably the opposite occurred, since they were all expecting a

safe and generally positive experience and were able to relax and make the most of it, which eventually happened.

5.5.2. Aftereffects Results and Implications

The second conclusion, regarding aftereffects, pointed to the fact that the initial predictions in terms of hypothesis were not overall accurate (*see* Section 4.2.). Globally, the scores obtained from the BSI-18 (Derogatis, 2001) and SHALOM (Fisher, 2010), did not show a pattern of change that, by its undoubtful expressiveness, could be clearly attributed to the experimental protocol. Regarding DAP-R (Wong, Reker and Gesser, 1994), the results went against the initial hypothesis.

Starting with the BSI-18 (Derogatis, 2001), the predictions regarding increases in mental health were not confirmed. But, as predicted, low scores in indicators of psychological distress remained stable after the protocol. However, it should be noted that, in a sample of healthy volunteers, it would be difficult to have baselines values revealing psychological distress, which would be a cause for exclusion. Nevertheless, there were non-significant increases in global mean values that, despite not reflecting an overall trend, showed some individual differences in few participants. Those differences could not be attributed to the protocol.

Regarding SHALOM (Fisher, 2010), there was a statistically significant result in one domain, '*Spiritual Health'*, reflected by changes in '*Environmental*' and '*Transcendental*' components. Confirming, at least partially, the prediction that indicators of spiritual well-being would increase. However, this result should be interpreted with caution. Considering the sample size, it should not be considered an outcome that should be expected to happen in every intervention. In fact, the mean difference in '*Spiritual Health'* between pre and post-test reflected less than 4 percentual points within a possible total of 100. Meaning that, within a small sample, such variation might

not be very expressive in absolute terms, and reflect, instead, the sum of small individual differences.

The first possible source of this increase should be, as expected, a strong influence of the induced NDE in few participants (*see* Figure 5.3.). Especially the '*Transcendental* 'vector, might have been responsible for the increase in one participant's results, who reported a more intense episode (*see* Figure 5.12.). This aspect might have easily influenced the overall result in a small sample. A second possible cause for these variations might have resulted from an effect of memory decline between pre-and post-test phase. As the participants did not have access to their previous results, it might be more difficult to remember which items were signalled before, so that they could score accordingly. Some inaccuracies might result, when the instruments offer more options then 'yes' or 'no' answers and the respondents don't have clear-cut opinions about them. This is an aspect that should be considered in the future choice of instruments and procedures.

Concerning the small absolute difference between pre and post-test phase, might have to do with the fact this supposedly naïve sample (*see* Section.4.3.*)*, exhibited high pre-test scores, revealing a high opinion of themselves regarding their spiritual well-being: the participants were already showing a relevant closeness to spirituality and religion, and high ideals regarding the former. Therefore, the question of a social desirability effect affecting the baseline values might be legitimately put. In fact, especially respondents in the pilot sample, might have felt the need to overrepresent their personality, in terms of characteristics they would regard as desirable for the experience. The high baseline score might reveal that the scale, as most psychometric instruments, is not sensitive to social desirability effects and impression management techniques, compromising the possibility of making accurate observations. SHALOM's (Fisher, 2010) results might have suffered the impact of such strategies, considering that at least 10 participants were students aiming for an extra credit from their participation. Leading to the conclusion that this instrument might be better used with samples that do not envisage any gains from showing

themselves as spiritually savvy. To sum up, there might have been a contribution of several factors to this significant increase in the '*Spiritual Health'* dimension, especially in pre-test phase, making it more difficult to determine that an overall trend towards spiritual well-being resulted from the intervention.

Regarding the last instrument, a significant increase in the '*Fear of Death/Dying'* indicator of the DAP-R (Wong, Reker and Gesser, 1994) was observed, going against the initial hypothesis (*see* Section 4.2.1.). It was hypothesized that measures of death fear would decrease, and death acceptance would increase after the protocol. A measure of death acceptance ('*Neutral Acceptance'*) did in fact decrease, which might reveal some level of anxiety, in coherence with the '*Fear of Death/Dying'* increase. Combining both, it seems that, after the session, death might not have been accepted as a neutral reality but as something to be feared, causing some level of emotional arousal.

These results should not be interpreted at face value, however. As it happened with SHALOM (Fisher, 2010), using DAP-R (Wong, Reker and Gesser, 1994) as a pre and post intervention tool might bring some difficulties in terms of accuracy. The impact of memory decline when using a Likert Scale from 1 to 7, might have compromised the accuracy of the results. Small differences in many participants might contribute to variations in terms of total scores that are not reflecting a real change in a small sample. In sum, and in terms of aftereffects, there is a strong risk that the values are not reflecting an overall trend but are, instead, expressing the impact of the experiment in a low number of participants or even in single cases, compromising the possibility of detecting patterns and making meaningful inferences.

As planned in the previous chapter, a closer look at the participant's qualitative results might help in informing quantitative data and discern the aftereffects' magnitude. The advantage of using qualitative data was stated (*see* Section 4.3.1.), specifically, their purpose in adding information and depth to the main set of quantitative data, especially in new areas of research (Bryman, 2001;

DiCicco-Bloom and Crabtree, 2006). For this reason, and in the following chapter, the contents of open-ended questionnaires, designed to explore aspects not covered by the NDE Scale (Greyson, 1983) and not directly suggested by the script, will be explored.

As Kirsch (1999:99) defended, *while other variables may play important roles in the response to suggestions, it remains to be known whether they affect responses by changing expectations or have a direct impact on them*. Regarding NDEs, beyond core elements, there is a panoply of elements that might influence the results, coming directly from the personal history and current needs of the experiencer. Qualitative analysis should be the ideal tool for exploring, in more depth, idiosyncratic aspects of the experience, as it will be described throughout the next chapter. A thematic analysis of the questionnaires will provide evidence regarding the aftereffects question, that was not fully understood through quantitative data.

But before that, a few comments will be made regarding the sample, as it became clear that the intervention was not very expressive in terms of tangible aftereffects, except for a small number of participants, who reported higher values. The reason why some participants reported more meaningful experiences than others, regarding phenomenological intensity and, probably, the impact in terms of aftereffects, is a factor worth exploring, to assess if an association exists between these aspects. This investigation is also useful, so that future studies could include participants who, in principle, exhibit personality traits that would make them more susceptible to the intervention.

At this stage, it should be acknowledged that it was challenging to recruit people, even among university students, who were motivated to undergo an unusual experience. From our previous experience (Machado, Farinha and Simões, 2022), a good number of potential volunteers usually showed up, with enough curiosity and willingness to try a non-mainstream hypnosis session with certified professionals. However, this was not the case here, and even among those interested in participating, a few of them were not able to enter the process altogether or fully engage into the

experience. Different reasons could be found, ranging from plain edginess in younger participants that prevented a minimal level of involvement, to falling asleep during the relaxation phase with older ones.

As reported in the previous chapter, 10 participants dropped out, nine of them belonging to the second sample, meaning that after two rounds of data collection, 19 cases were considered valid out of 34 volunteers. Despite these limitations, this segment of the study provided the opportunity to understand the importance of the type of participants, as others had done before with hypnotizable samples (Facco et al., 2019; Tressoldi et al., 2014; 2015), and reflect on the possibility of obtaining comparable results from heterogeneous samples in terms of susceptibility, interest, and trust in hypnosis. These exploratory results provided important insights so that the former methodological trajectory can be corrected in the future and include more engaged participants, as it became clear that volunteers who reported a previous interest in NDEs, hypnosis or in NOSCs, had more intense experiences.

From Figure 5.3, it was evident that two participants scored higher than the others. Not only they were stronger responders in terms of their phenomenological results, but also in terms of the encouraging outcome that followed, that they both described through emotive written accounts. Thus, raising interesting questions about the motives for their intense reaction. Justifying an in-depth analysis of their cases, to observe if, in some people with certain personal characteristics, this type of induction would be more effective. Their case studies will be fully described in Chapter 7, after the analysis of qualitative data is performed in the next chapter.

5.6. Chapter Summary for Study I Quantitative Analysis

In this chapter, the results from the first stage of this project, labeled as Study I, were described, including the outcome of the quantitative data collection from a combined sample of 19 participants. Regarding each assessment instrument, the NDE Scale (Greyson, 1983), the BSI-18 (Derogatis, 2001), the DAP-R (Wong, Reker and Gesser, 1994), and SHALOM (Fischer, 2010), the results of the frequency analysis were described and confronted with the initial hypothesis.

The first conclusion pointed to the fact that the experience was successful, confirming the ability of hypnosis to induce an event phenomenologically similar to a non-induced NDE, as far as the NDE Scale (Greyson, 1983) showed. The results also supported conclusions from other studies reinforcing the role of expectations in NDEs: as in episodes where people expect death to happen somehow, most of the reports fell into the affective category, translating into feelings of peace, pleasantness, joy, harmony, and being surrounded by a bright light.

The second conclusion pointed to the indefiniteness of the results regarding aftereffects, making the initial predictions not overall accurate (*see* Section 4.2.1.). Globally, the predictions regarding increases in mental health were not confirmed, as low pre-test scores in indicators of psychological distress, given by the BSI-18 (Derogatis, 2001), remained stable after the intervention: the observed non-significant increases in global mean values reflected individual variations in few participants that could not be attributed to an overall effect of the protocol.

Regarding SHALOM (Fisher, 2010), the prediction that indicators of spiritual well-being would increase revealed itself as partially correct. However, the significant increase in the '*Spiritual Health'* domain should be cautiously interpreted as, in absolute terms, the observed variation might not be reflecting a meaningful pattern. Other causes might have contributed to this increase, including the influence of the induced NDE in few participants who had more intense episodes; the influence of memory decline between pre-and post-test phase, as the participants

might not remember which items they signalled before, so that they could score; accordingly, and the fact that the results might have been influenced by impression management techniques, compromising the possibility of making accurate observations.

Regarding the DAP-R (Wong, Reker and Gesser, 1994), even if there was an increase in the '*Fear of Death/Dying*' indicator which proved to be significant, and a decrease in '*Neutral Acceptance'*, which might reveal some level of anxiety, it is not clear if this result is reflecting the impact of the experience in a small number of participants or even in single cases. Or it might be that memory biases in filling the scale influenced the results, as the probability of remembering exactly what was circled in a Likert scale from 1 to 7, in 36 unusual items, is low. Thus, further inferences could not be made at this point, except for the fact that the protocol did not produce the effects that were initially predicted. There is a strong risk that the values were not reflecting an overall trend in terms of aftereffects but are, instead, expressing the impact of the experiment in a low number of participants, or even in single cases, compromising the possibility of detecting patterns and making meaningful inferences. At this point, the possibility of existing no aftereffects could be considered.

Within the quasi-experimental mix-method research design, described in the previous chapter, a qualitative component was integrated. In the following chapter, an analysis of the participant's qualitative results will help in informing the quantitative data and discern the aftereffects' magnitude. Two research goals will be addressed: the first concerning the possibility of an induced episode reflecting subjectively meaningful elements, and the second, related to the existence of any form of discomfort in association with the subject of death and dying. To explore the contents of two open-ended questionnaires, thematic analysis will be used. The full procedure and results will be described throughout the next chapter.

Chapter Six

Study I: Qualitative Analysis

> *You can read a book of stories about near-death experiences and walk away as skeptical as you were before you picked it up. But when you look into the eyes of an experiencer and from four feet away watch the ebb and flow of authentic tears, your skepticism begins to wash away.*
>
> Michael Sabom (1998:14)

6.1. Background and Overview

In the previous chapter, the quantitative outcome from the first stage of the project was described and discussed. The statistical frequency analysis conclusion, resulting from two combined samples of 19 participants, pointed to the fact that the experience was successful in terms of establishing the adequacy of the hypnosis protocol, to induce an event that could not be phenomenologically differentiated from a spontaneous near-death experience (NDE). From the NDE Scale (Greyson, 1983), it was possible to observe that all volunteers scored above the cut-off point established as a threshold for what is considered a spontaneous NDE. The fact that the subjective experiences followed an affective trend, supported previous conclusions confirming the role of expectations in induced NDEs: whenever the event is somehow anticipated (Machado, Farinha and Simões, 2022).

However, regarding aftereffects, the initial predictions were not confirmed. Globally, the scores obtained from the BSI-18 (Derogatis, 2001) and SHALOM (Fisher, 2010), did not show a pattern of change that, by its undoubtful expressiveness, could be clearly attributed to the protocol. Regarding DAP-R (Wong, Reker and Gesser, 1994), the results went against the initial hypothesis, with an increase in the '*Fear of Death'* indicator and a decrease in '*Neutral Acceptance'*. However, it is possible that this result might have reflected the impact of the experience in a small number of participants or even in single cases.

In any case, what could be extracted is that an event, phenomenologically similar to a spontaneous NDE, does not cause the same typology of aftereffects as a necessary result. Or, at least, the aftereffects might not have been reflected in the instruments that were used to measure them, and something might have been missed. Either because the instruments were not appropriate (*see* Section 5.5.2.), or because the effects were too subtle or even idiosyncratic for the quantitative tools to capture.

And this was the main reason why a quasi-experimental mix-method research design was selected for this study, so that a complementary qualitative approach could be used to bring forth additional data. For this purpose, two new research questions were formulated. The first concerned the possibility of an induced episode reflecting subjectively meaningful aspects, beyond the typical core elements. The element of personal relevance was thought to be an important key to understand psychological processes that sometimes occur after significant events, as a close confrontation with death is. Including those associated with major changes near-death experiencers (NDErs) report. A second research question aimed at finding out if some form of uneasiness or discomfort was present, in association with the subject of death and dying, in the context of a non-ordinary state of consciousness (NOSC). Such states, by having the capacity of bringing unconscious themes to awareness could, theoretically, (re)awaken related pre-existing concerns. To address both questions two open-ended questionnaires were applied to

the same sample of volunteers, one after the experience and the other, two weeks later. To explore its contents, thematic analysis was used as a tool, and from the answers, three themes and five subthemes were analysed. The procedure and inherent conclusions will be described throughout this chapter.

6.2. Procedure

6.2.1. Thematic Analysis as a Pattern Detecting Method

This segment of the study used Thematic Analysis (TA) as a qualitative research tool to explore open-ended answers, as it equips the researcher with the necessary methodological means to find significative patterns within subjective experiences. TA has been defined as *a method for identifying, analyzing, and interpreting patterns of meaning ('themes') within qualitative dat*a (Clarke and Braun, 2006:247).

In practical terms, TA's purpose is to identify codes, *i.e.*, patterns, within a data source, and from the coding process build meaningful categories, that are then translated in themes and subthemes (Clarke and Braun, 2006; Thomas and Harden, 2008). Thematic units work as bridges of significance between the questionnaire or interview data, and the research goals, by clustering pieces of subjective experience into meaningful patterns and labeling them. By acting as a pattern detective during the coding process, the active role of the researcher is reinforced, by becoming able to find units of significance within a text transcript.

Whether a previous theoretical framework already exists or not, meaningful content can be flexibly explored and converted into thematic categories. This is a methodological strength that cannot be understated in less explored areas of research, where unusual aspects frequently arise, and new angles of theoretical exploration beyond established theories and constructs become necessary. Even if, for the sake of consistency, some care should be taken when developing novel

themes derived from the research data (Holloway and Todres, 2003), the advantages outweigh limitations. King (2004), for example, argued that TA's strength comes from giving voice to the similarities and differences within research participants, thus generating unanticipated insights. Nowell et al., (2017:2), argue that TA is not a mere trustworthy tool, but a *qualitative research method that can be widely used across a range of epistemologies and research questions. It is a method for identifying, analyzing, organizing, describing, and reporting themes found within a data set (Braun and Clarke, 2006).*

For its strengths in searching for novel approaches, TA has been preferred in non-mainstream areas of research using qualitative frameworks of analysis, like the study of paranormal experiences (Cox, Cooper and Smith, 2017; Drinkwater et al., 2017; Evenden, Cooper and Mitchell, 2013). By finding themes related to grief processes, basic human needs in relationship and personal growth, Evenden, Cooper and Mitchell (2013) explored the positive effects of mediumistic counselling for grief therapy. Cox, Cooper and Smith, (2017) explored five themes of growth after trauma, belief systems, meaning and authenticity, hope and resilience, and protective barriers to address the effects of mediumship on the bereaved. And Drinkwater et al. (2017) investigated personal accounts of subjective paranormal experiences, by exploring themes such as sensory experiences, 'you are not alone', distortion of reality, personal growth, and socio-cultural factors.

6.2.2. Thematic Analysis in Practice

Within the present study, Braun and Clarke (2006) process was used in a systematic way, however not necessarily linear, as phases intertwined along the process. The 1st phase is about getting familiar with the data, by undergoing a process of information immersion *to the extent that you are familiar with the depth and breadth of the content* (*idem:*187), before the 2nd phase, involving the generation of initial codes. Often, they go together, as the act of reading and interpreting is

already entangled with a pattern detecting activity. Codes, depending on the themes, can be more 'data-driven' or 'theory-driven'. According to Boyatzis (1998:63 *in* Braun and Clarke, 2006), they always *identify a feature of the data (semantic content or latent) that appears interesting to the analyst, and refer to 'the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon'*.

Within Study 1 data set, and after being judiciously read, key concepts were identified within the transcripts, by considering the frequency of key words and ideas connected with the NDE research questions and topics (1st phase). Starting from the participants' answers, preliminary codes were developed in two different ways, using top-down and bottom-up approaches (2nd phase).

The 3rd phase is about searching for topics, by organising and combining the relevant coded data extracts into all-encompassing themes and, eventually, subthemes. The 4th phase is about reassessing and refining selected themes and going through more subtle levels of analysis where the researcher checks if they do work and if information is being missed, so that a coherent narrative can be built. Within this set of data, three thematic areas were found, named, and thoroughly reviewed, in a logical procedure that will be described in separate sections below (3rd and 4th phases).

The 5th phase is about defining and naming themes and subthemes and checking if they are telling the story they are supposed to tell. The 6th and last phase is about writing a report that should provide enough evidence on the themes and subthemes and answer the research question they were meant to address. All data coming from the TA complemented, and added to the quantitative information, which is one of the advantages of the mixed-method approach (Johnson and Onwuegbuzie, 2004). A useful amount of unexpected data was added to this previously unexplored area. In the sections below, each theme and subtheme will be named,

described, and illustrated with examples (5th and 6th phase). The answers from the open-ended questionnaires can be consulted in Appendix 11.

6.2.3. Preliminary Procedural Remarks

Before going further, two notes should be made regarding the open-ended questionnaires analysis procedure. The first one clarifying that, along this process of generating codes, no distinction was made between the first and second questionnaire, as they were analyzed simultaneously. Not all participants answered both questionnaires and, concerning those who did, sometimes the answers were too unspecific regarding time, to be clearly classified as having been reported before or after the two-week time-period between tests. Therefore, it did not seem useful to make such a distinction in analyzing them, as the themes shared common aspects and the time interval was not relevant for their occurrence. Hence, the self-report questionnaires were treated as if only one was applied. In future studies, a third phase should be included, after a longer time lapse, with more precise questions, addressing contents and effects very clearly, to distinctively assess for longer lasting effects and separate them from the phenomenological experience.

The second note regards the advice that was given to the participants, when filling the self-report questionnaire in post-test phase. They were instructed to address it after the NDE Scale (Greyson, 1983), so that they could avoid repetition. In this segment of the instructions, the importance of their contributions was reinforced. Also, the importance of reporting unusual, transcendental, or paranormal elements was firmly encouraged, to help them in overcoming any fear of judgement or criticism. An element of foreseeable tiredness, after the experiment, might have led the participants to be, in their majority, superficial in their comments or in avoiding them altogether. Such aspects should be considered when giving these instructions in the future,

even if most of them were very elaborate regarding classical core elements, adding subjective impressions and considerations and, in some cases, novel and unexpected information.

6.3. Method for the Qualitative Section of the Quasi-experimental Study

6.3.1. Participants

The same sample of 19 volunteers from the pilot and the main study conducted at the UoN, described in detail in Chapter IV (*see* Section 4.4.), was used for qualitative analysis. The completion of the two-open ended questionnaire was not a necessary condition to consider their participation valid, as long as the quantitative instruments were filled and returned within a two-week period. The possibility of having no information to fill in was also considered admissible, as well as just having partial information to complete one of them. Ten participants from the pilot sample (101, 102, 103, 104, 105, 106, 107, 108, 109, 110), and nine participants from the main study returned at least one of the open-ended questionnaires (201, 202, 203, 204, 205, 206, 207, 208 and 209). Therefore, their participation of the entire sample was considered valid.

6.3.2. Research Goals and Materials: Open-Ended Questionnaires

From previous work (Machado, Farinha and Simões, 2022), it was known that a hypnotically induced NDE causes no discomfort, and draws on non-suggested aspects, related to each participant's inner world and subjective understanding of the event. Therefore, the first research goal for qualitative analysis (*see* Section 4.2.) aimed at exploring if and how an induced event

could open the possibility of experiencing elements beyond the phenomenology suggested by the script, related to personality, life-story, and expectations. The second research goal (*idem*) was directed at finding out if the participants underwent any discomfort, immediately and directly related to the topic of death and dying, to assure that no safety issues were left unnoticed. The option for open-ended questions aimed at collecting more detailed data on how participants lived, interpreted, and were affected by the experience, beyond the psychometric instruments reach. Spontaneous NDEs commonly reflect individual idiosyncrasies, and the same effect was expected to happen with an induced event. This considered, in the first questionnaire, to be completed immediately after the application of the hypnosis protocol, two questions concerning the experience were asked. In the second questionnaire, to be completed within two weeks, the participants were inquired about the personal relevance of the experience. This time interval was meant to assess any effects that might have arisen in the meantime, after they had the opportunity to reflect upon the experience. The questions are reproduced in the table below:

		Open-Ended Questions
1	**Questionnaire #1**	Describe any elements that you found relevant regarding the contents of your experience.
2	**Questionnaire #1**	Did you experience any discomfort or any other feelings that you found relevant?
3	**Questionnaire #2**	Describe the most relevant thing, if any, of having participated in this study.

Table 6.1.: Open-Ended Questions for Qualitative Analysis in Study I

6.4. Findings

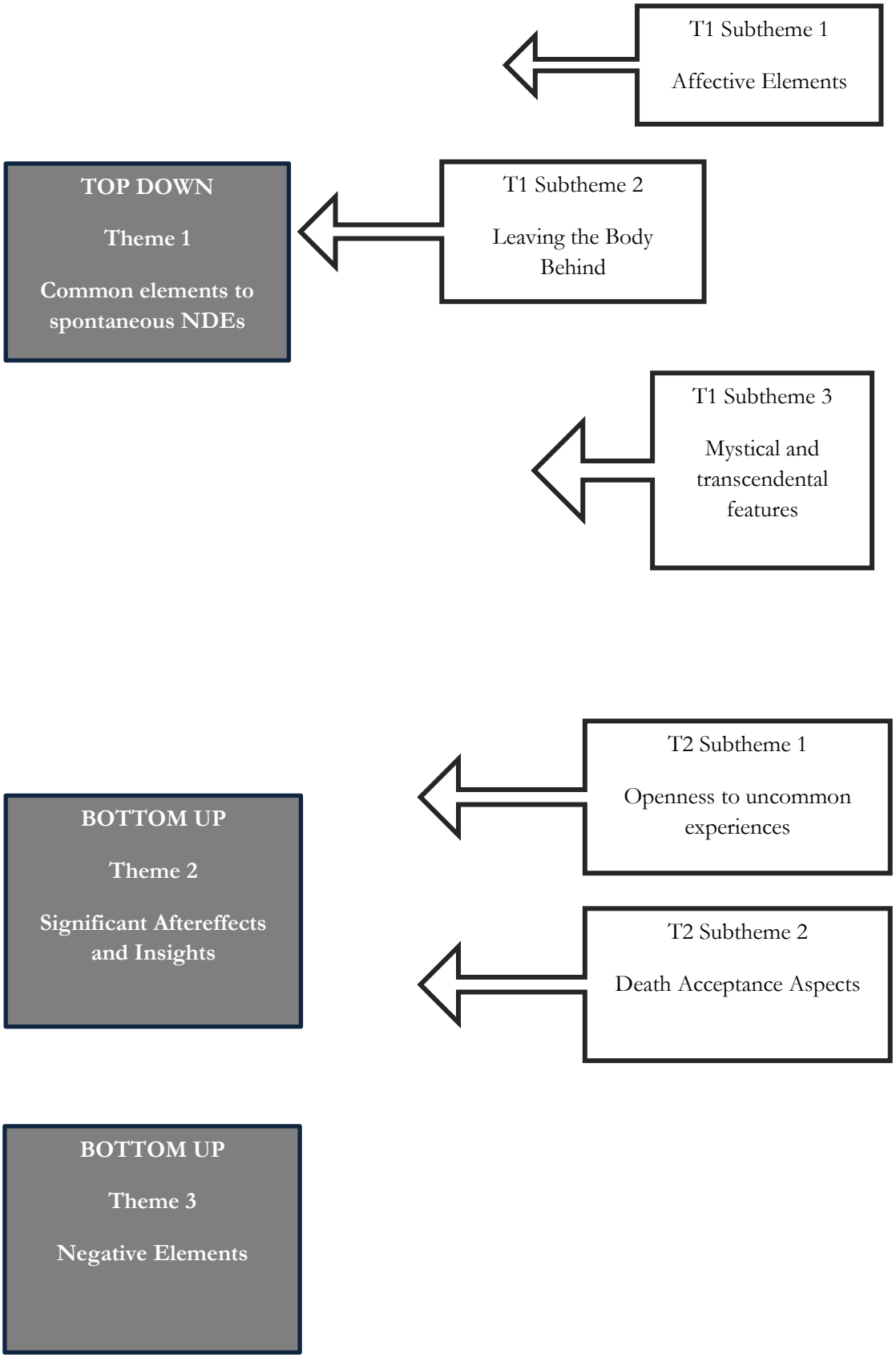
Following the procedure described above, three thematic areas were found, named, and thoroughly reviewed, providing for insights that, on the one hand supported the quantitative findings, and on the other, added novel and complementing information. Firstly, a top-down approach was used as a frame of reference, departing from the NDE classical core elements, to support the quantitative results regarding phenomenology. By using this strategy, several key concepts were identified in the transcripts, matching the classical NDE core elements, directly or indirectly.

Thus, the first theme 1) **'Common Elements of Spontaneous NDEs'** was generated, as well as three subthemes, corresponding to the classical core elements or ideas, that came to be reflected in the NDE Scale (Greyson, 1983): a) '*Affective elements'*; b) *'Feelings of Separating from the Physical Body'* and c) *'Mystical and Transcendental Features'*.

Secondly, a bottom-up atheoretical approach was used to explore novel and unexpected information, beyond what the psychometric instruments allowed. With this strategy, no theoretical framework was used, and the second and third themes were developed in an inductive way, by clustering similar aspects of the experience into two novel categories:

2) '**Significant Aftereffects and Insights'** and 3) '**Negative Elements'.** Regarding the second theme, two subthemes were generated, based upon their prevalence in the participants' interpretation and impact of the experience: a) '**Openness to Uncommon Experiences** and b) **'Death Acceptance Aspects'**.

Regarding the negative elements, no subthemes were found. In sum, the first theme supported and corroborated the quantitative data, and the second and third themes provided for novel information. Below, a scheme from the TA analysis is included and in the next sections, each theme and subtheme will be described and illustrated with examples.



Scheme 6.1.: Themes and Subthemes for the Qualitative Analysis of the Open-Ended Questionnaires

6.4.1. Common Elements to Spontaneous NDEs

The strongest theme coming from the participants' responses matched, directly or indirectly, the classical elements of spontaneous NDEs. Some of the words matched the phraseology used in the NDE Scale (Greyson, 1983) and in the hypnosis script (*see* Section 4.5.1.), that incorporated several suggestions meant to induce an experience phenomenologically similar to a NDE. For example, keywords such as *peace*, *light*, or expressions like *floating above the body* or *dead relative*, functioned as valid and reliable codes. So, if someone would refer to a *tunnel-like passage*, a code would be generated. But if the person described how a passageway felt like, that would also be also considered a code. For example, the following statement contains precise words, like *peace* and *tunnel:*

> *I felt very at peace in the tunnel light.*
>
> (Participant 104)

This other statement does not contain precise words regarding peace, but the participant felt that a kind of transcendental contact was made:

> *Dreamlike, really relaxing. Presence of beings, but they were not physical.*
> *Very similar to not recognizing a face in a dream.*
>
> (Participant 207)

Within this theme, some codes were more prevalent than others, and their prevalence led to the generation of three distinct subthemes. In Appendix 12, a table matching a few descriptions from the participants with the NDE classical core elements from the NDE Scale (Greyson, 1983), was included.

6.4.1.1. Positive Feelings and Affective Elements – 1st subtheme

The most prevalent key ideas and concepts were related to the overall positive affect caused by the experience, manifested as feelings of relaxation, peace, and calmness. Sometimes they were in direct connection with the experience of core elements, such as seeing a bright light, or with some specific landscape or figure carrying a strong emotional impact. In some cases, such feelings followed, or were followed by less positive emotions, connected with the sudden transition suggested by the script, from relaxation to a near-death stage. This transition marked the moment when the participants realized something was about to happen, usually when the word '*death'* was first pronounced. However, the final remaining feeling was unanimously positive, and the process was felt as entirely benign in the end, independently of any emotional variations during their journey:

> *Inner critic was present at the beginning and slowly faded away. Once past the tunnel part, I lost awareness of being here at the University. Feelings of aliveness and harmony. Disappointment about not being able to stay in that place and having to return. (…) I felt calm, empowered, peaceful and confident.*
>
> (Participant 206)

> *The experience was very pleasant relaxing and enjoyable. (…) I was not in any way disturbed by it. During the NDE I felt relaxed.*
>
> (Participant 208)

Most descriptions hinted at the affective trend of the experience, as the following excerpts illustrate:

I feel a profound joy and love, my heart is so full. I felt a deep sense of peace and love through me, around me and as a part of me. I found I could easily reach a state of relaxation. As I listened to the researcher's voice, my body became heavy and relaxed. I saw a small intense white light. I could feel my heart racing and grow loader in my chest. At the same time the light gradually grew wider and brighter until I was submerged in the light. I could feel my heart slow and then I lost all sense of it beating. I was not afraid and felt peaceful in this place.

(Participant 107)

I was calm and warm, I had a strong feeling of being guided and protected, feeling of love. (…) I had a strong understanding of myself, self-love, reassured. (…). I felt completely relaxed and calm, safe and informed. It was a very interesting and empowering experience.

(Participant 201)

In one case, the peaceful feeling came from the fact that an underlying anxiety left:

I feel like underlying anxiety has moved through.

(Participant 209)

This first subtheme revealed that the experience, for most participants, was profound and positively emotional. However, it should be kept in mind that the script contained several suggestions that hinted, precisely, on the predominantly affective tone that the experience followed. And here, 15 participants described feelings of '*peace'* and «*pleasantness'*, six reporting a sense of *harmony* or *unity* with the Universe, and four of them commenting about *joy* and the presence of a brilliant light.

6.4.1.2. Leaving the Body Behind- 2nd subtheme

Following the affective aspects of the experience, the mostly reported element was the feeling that the physical body was left behind, or somehow lost importance. This sense of separation from the body, commonly designated as an OBE, and one of the core elements of the classical NDE, was narrated by eight participants.

> *I was amazed at the ease with which I left my body and had the immediate knowledge of how to move willingly and in any direction. I had the feeling of being very deep and very high simultaneously.*
>
> (Participant 201)

Some participants associated this feeling of separation from their physical sheath to feelings and emotions that could be psychologically equated to episodes of depersonalization or derealization:

> *When I was lifting, I could feel my heart pounding. Each beat felt uncomfortable and loud. I had no sense of body in the other realm, yet I was aware of my form.*
>
> (Participant 107)

> *During the NDE I (…) felt myself dissolving/expanding, as if it was dissolving into the universe/cosmos and becoming part of it.*
>
> (Participant 208)

Even though this feeling of separation from the body or the material world was mainly reported in association with the beginning of the experience, it was also described in connection to the

moment when the instructions to return were given, causing several emotions and further insights regarding the process of returning:

> *When asked to rejoin with my body, it was putting on a glove.*
>
> (Participant 105)

> *It was not easy to come back to the body.*
>
> (Participant 110)

> *Highlighted or brought attention to belief in the soul or spirit as separate from the physical body*
>
> (Participant 207)

With OBEs, as it happened with the affective elements, the narratives mostly followed the protocol suggestions, and the process of leaving and reentering the body naturally ensued. The protocol instructions were very precise in getting the participants' out and back to their bodies, but it did not add any other details on 'how' it should happen. As with the positive affective tone, the suggestion was there, as a framework, but the precise contents were brought by the participants' inner experience:

> *I was not 'I' anymore, there was a fluidity to the space, the way I move, the streams of consciousness. It was awesome and infinite, yet it felt contained somehow. I felt calm, reassured, safe, humble. There are veils of color, but no sound. (…) Totality. I was met by two light beings, giant forms – Angel? Alien? – very beautiful with warm light, who were guiding me along towards the light. I was completely ready and willing to surrender*
>
> (Participant 201)

6.4.1.3. Transcendental Elements and Uncommon Inner Experiences – 3rd subtheme

The predominance of mystical-like features, translated into paranormal and transcendental elements, generated by the third subtheme. Features like entering mystical realms, encountering dead relatives, spiritual entities, or otherworldly landscapes, manifested themselves effortlessly. From the point the OBE happened, the suggested framework became more liable to being filled with personal details and subjective impressions which formed a meaningful reality. Suggesting that a familiar presence could be felt at a certain moment, allowed for an infinity of possibilities regarding the nature and type of that same presence, as it happens in spontaneous episodes. Here, some people reported seeing a deceased relative, others a spiritual entity they were already connected with, through their everyday devotional practice, or via their personal convictions. This was the case with a participant who followed a Zen practice for many years:

> *The most relevant element for me was the sense of an encounter with my 1st Zen teacher, a woman who has been dead for circa 20 years. I always had a good sense of gratitude to her, but also a sense that I had to live up to her expectations of me. Now I experienced to my surprise, a sense of her gratitude to me, something that has the potential to help me towards a profound resolution of a, sometimes, problematic relationship. Also, there was a presence of my ancestors from whom I always felt very different and distanced – a sense of their acceptance of who I am, again surprised me. It surprised me that the meaningful content of this experience has been relational, nor merely 'inner travel gazing.*
>
> (Participant 202)

Detailed transcendental features reveal themselves in spontaneous NDEs, but also in the hypnotic experience, beyond what was being directly or indirectly suggested, as each individual inner life filled in the blank spaces of possibilities:

I saw incredible landscapes and then other images. I was surrounded by friends and family. All of them much older.

(Participant 106)

Totality. I was met by two light beings, giant forms – Angel? Alien? – very beautiful with warm light, who were guiding me along towards the light. I was completely ready and willing to surrender

(Participant 201)

There was a strong smell of a pleasant perfume/perfumed incense that lasted for a few minutes.

(Participant 204)

Beyond a certain point of immersion, as it happens in spontaneous NDEs, new elements with subjective relevance arose, concerning personal life-stories, individual tastes and preferences, troubling issues claiming for resolution, but also reassuring messages from a possible future. In one narrative, images of past and future events became available in different scenarios from the one suggested by the script. It is interesting to note that while the script was being communicated, a different subjective experience was taking place for each participant, not related to the suggested scenario:

Was in my personal library, books were episodes of my life; books of what to come, pages were blank; The welcoming presence were my deceased relatives: The birthday segment: was a birthday of what is to come; a future birthday surrounded by my wife and children, nieces and nephews, voice that called me back; was my mother's.

(Participant 105)

Regarding life-stories, for participant 107, it was not just a scarred, black hand that made its appearance. For her, such a hand felt reassuring because it belonged to a beloved grandfather, departed long before an age where she was able to form conscious memories. This hand would not have been understood as such, in anyone's else experience:

> *I felt a hand take mine, I am lifted up and was greeted by my Nan and Grandad. I knew I could be strong, I felt a sense of grace from them, a pride in me, and then a shared love. I was shown a scene ofmy grandad in his garden. I was with him, he watches me pull up flowers and I feel his love for me as he picks me up. (…) I want to stay but am gently pulled from them by my hand and then the other. We clasp hands and I am in my body. I feel light and knowledge, my journey is good.*
>
> (Participant 107)

The importance of these transcendental aspects should be underlined, as in all reports, the aspects worthy of being highlighted, defied normal everyday experience, linear cause-effect, and time-space relationships. The presence of dead relatives or unknown entities, along with feelings and physical sensations, like the smell of incense, or being weightless or floating on air, were features that the participants reported when asked about any elements they found relevant regarding the contents of the experience.

The script suggested the idea of peacefully leaving the body after a moment when bodily survival was threatened by a natural accident but was not specific on what would happen afterwards. All suggestions were purposefully abstract, to allow for the experience to be as subjectively meaningful as possible. As expected, and again confirming previous expectations, meaningful elements exclusive to each participant, related to personality, life-story, expectations, and intentions for the experience, manifested themselves in the same way as in spontaneous NDEs. It is only natural that such elements appeared in a very different way than they do in everyday reality. They came along filled with symbolic relevance and mystical significance, as they related

to the possibility of something else existing beyond the point where the body, hypothetically, might not be alive anymore. This is the underlying preposition of spontaneous NDEs, where the transcendental experience unfolds naturally and, also, of the hypnosis script, that was meant to induce a similar event, starting with the preposition that a lifeless body was left behind.

6.4.2. Aftereffects and Insights beyond Spontaneous NDE Core Elements

The third theme to emerge from the bottom-up exploration resulted from personal reflections about the meaning and effects of the experience, rather than the classical phenomenology of a NDE. The importance of exploring unexpected elements was associated with the experimental nature of this study. The novelty came from what were considered aftereffects and personal insights, or messages received during the experience, which had a considerable impact upon the current worldview of the participants. Using TA, within the aftereffects and insight's theme, two patterns emerged that were coded into two subthemes: the first was labeled '*Death Acceptance'*, since for most participants, a different and more heartening view about the nature of death and dying was experienced; the second was labeled as *'Openness to Uncommon Experiences'*, coming from reports of higher degrees of openness towards less mainstream areas of research and experience.

6.4.2.1. Death Acceptance Aspects

One of the unique characteristics of NDEs is to function as a pathway to eliminate anxiety and death fear. Therefore, it was expected that an induced experience would at least mitigate, any such fears. One of the effects that was observed in some participants, regarded the understanding of the potential of an induced experience, in helping people to deal with the subject of death and

dying. Some of the comments below do not reflect a personal impact but showed up as answers to the second open-ended questionnaire, where they were asked to describe the most relevant thing, if any, of having participated in the study.

> *Getting the opportunity to experience what such a guided hypnosis session was like, especially in the context of NDEs, can help those close to death to come to terms with their condition.*
>
> (Participant 103)

> *I enjoyed the opportunity to think about and reflect on the participant of death. I found the process o be very interesting and wondered whether it would be interesting to do more guided meditations. The subject of death would then perhaps help people to come to terms with this subject.*
>
> (Participant 208)

In one situation, the participant expressed the wish to work with people who were dying:

> *I'd like to explore the out-of-body experience and being 'a friend in death'.*
>
> (Participant 201)

For some of them, the experience helped them going through personal situations, regarding the departure of close relations and similar challenging situations:

A friend of mine passed away earlier this year. Whilst I was in the tunnel, I found myself happy that he had had that experience of peace and love when he died.

(Participant 104)

I found to know I was watched over by loved ones very comforting to feel they will be there when my time has come a blessing and a joy to know.

(Participant 107)

Answering the questions on this form makes me think deeply about life, life after death, its meaning, purpose (if any) and my place in it. This coupled with the fact that I have attended several funerals this year made me think actually about life and death. Taking part in the study has further highlighted this. However, I still sit on the fence as to whether there is life for the individual after death which sometimes conflicts with what I intellectually and emotionally feel about death.

(Participant 204)

(…) *Gave me comfort, following an emotional personal situation.*

(Participant 207)

6.4.2.2. Openness to Uncommon Experiences

The induced experience showed unexpected psychological effects, in terms of widening the participants' worldview, to encompass non-mainstream areas of psychology that were never considered before. As above, some of the comments came as answers to the second open-ended questionnaire, where they were asked to describe the most relevant aspects of having participated in the study.

Reflecting back on life, past decisions and things that have happened. (…) Realized I may have to try and allow myself to become more open-minded to these types of studies and practice as it may influence whether I actually get to experience it to know it actually works.

(Participant 102)

I am more open to broader ideas in Psychology.

(Participant 105)

This new openness to such less conventional areas, included the understanding of the use of hypnosis as a powerful psychological tool to be used in clinical settings, opening unexpected therapeutic possibilities:

Relaxation, self-reflection. Realizing the many different levels of hypnosis. (Participant 106)

A new understanding of hypnosis, how it happens, what it feels like. (Participant 108)

Transpersonal and humanistic based psychotherapies encourage the exploration of existential issues, a strategy than can be especially useful with people facing life-threatening health conditions or grief situations, whether they are patients, caregivers, or health professionals. The fact that some participants had a positive psychological experience, enhanced the potentially integrative role of transpersonal hypnosis as a bridge connecting spirituality and well-being:

It motivated me to practice more of guided meditation.

(Participant 110)

> *While I am not a believer in reincarnation, even though I am a committed Buddhist- the content of my experience has reinforced for me that these experiences allow our conscious minds a chance to express themselves in a sophisticated and meaningful symbolic language. My sense of resolution with my ancestors is not, for me, a communication from beyond the grave, but a reflection of my ongoing spiritual maturation (…).*
>
> (Participant 202)

A few comments on these two subthemes will be approached in the discussion below, in terms of what the literature affirms about aftereffects. And the aspect related to the advantages of transpersonal based interventions to effectively deal with existential themes, will be discussed in the last chapter, when all data are reunited and can be reflected upon.

6.4.3. Elements of Discomfort

The third organizing theme was also data driven, and aimed at exploring any possible immediate negative side-effects, eventually caused by the method of induction, or some undetected degree of sensitivity to the theme of death and dying. Even though the experience offered no anticipated risks to the participants, a topic that was thoroughly explored in the methodology chapter (*see* Section 4.5.2.), the innovative character of the study imposed a cautious observation of their inner experience. Besides the groundwork that was made before the protocol was applied, the script contained many relaxation cues, that are usually enough to reassure the participants' regarding their safety. However, some participants felt a slight transitory discomfort, probably more related to some suspiciousness towards an unfamiliar situation, than to the subject of death and dying, or to the contents of the script:

Slight discomfort due to the situation being out of my control. (Participant 102)

Yes, I felt a sudden experience of shock and surprise and some fear when the near-death element was mentioned, as it was very sudden, rapid transition from a very calm holiday beach setting to somewhere suddenly threatening and dangerous.

(Participant 103)

No discomfort, perhaps a little scared when I could feel I was going to a different place.

(Participant 108)

Most participants were very young and unfamiliar with hypnosis, or with any other NOSC, as they understood them. To the majority, even the process of relaxing and letting go caused some suspiciousness, until the moment they felt they were safe and could fully immerse into the experience and even enjoy it:

Tightness in my body at the beginning, but I could relax after guidance. I felt calm, empowered, peaceful and confident.

(Participant 206)

No discomfort, feeling of being reassured. Still a little confused/processing the experience.

(Participant 207)

More experienced participants (107, 201 or 204) did not report any discomfort, as they had previous experience with other NOSCs.

When I was lifting, I could feel my heart pounding. Each beat felt uncomfortable and loud. I had no sense of body in the other realm, yet I was aware of my form. I heard a loud bang and saw a box fall. I felt a deep sense of peace and love through me, around me and as a part of me.

(Participant 107)[27]

Yes, when going into this, a sector of my past came up in my mind (a past trauma) and made me feel super itchy and I just could not focus because I was uncomfortable about a part of my past.

(Participant 109)

All participants had the opportunity, during debriefing, to report any discomfort, which happened with participant 109, who reported reliving a past trauma in the experience. Any discomfort that could not be resolved immediately after the experience, should be a matter of further attention by the researchers. No experience of that sort was reported and, as in previous experiences (Machado, Farinha and Simões, 2022), the outcome was regarded as positive in terms of any undesirable emotions that could be related to the process of being hypnotized and/or guided through an induced NDE. In the end, all participants returned safely from the experience and integrated its contents without any reported adverse consequences.

6.5. The Case of Participants 107 and 201

As concluded in the previous chapter (*see* Section 5.4.1.), the experience had different degrees of intensity, as the scores in the NDE Scale (Greyson, 1983) ranged from a minimum of 7 (the cut-off point), to a maximum of 28

[27] The loud bang corresponded to the noise an object made as it fell from a table in the experiment room, even though she was undisturbed by it (*see* Appendix 11 for the transcript).

.For two participants, 107 and 201, the experience was stronger, as they both scored highest in the group: 28, and 25, respectively, out of a maximum of 32. Their core experiences were the deepest within the group, as the qualitative analysis results confirmed. The overwhelming transcendental tone, and the emotional impact it caused was of such intensity, that led them to spontaneously send detailed narratives (*see* Appendixes 11 and 13 for transcripts) They both reported rich, vivid, and meaningful experiences, in terms of contents, but also the impact they felt afterwards, in the form of insights that helped them make sense and integrate several aspects of their life, and even envisage the experience as therapeutic. From their quantitative and qualitative results, along with informal conversations during the study, four things became clear:

a) They had relatively intense experiences, according to the NDE Scale (Greyson, 1983);

b) The contents were imbued with paranormal and transcendental features, resembling classical reports of mystical experiences (Underhill, 1912);

c) They were already familiar with NOSCs and so-called 'spiritual themes';

d) They had some knowledge about NDEs and had set precise intentions regarding the outcome of the session, related to healing, since they knew that, sometimes, NDEs mysteriously resolves health concerns.

In pre and post-experiment conversations, they were very clear on the fact they set a firm intention of improving their physical and psychological situation after traumatic episodes that left severe sequels. As they were already experienced in NOSCs, they were also much aware that, in some cases, people who undergo spontaneous episodes heal from pre-existing conditions. This was what they hoped for, as they were having difficulties in regaining their health and well-being using mainstream approaches. This experience represented one more step for them in their healing path. The results were altogether impressive, leading to the decision to adjust the

methodology of the study, and perform an in-depth analysis of their experience in the form of two case studies. This new approach facilitated a deeper investigation of the mystical nature of their experience, and its possible relation to its life-changing impact. Also, the question of the personal characteristics of these two participants was addressed, in the sense that, eventually, this could be a facilitating factor of their stronger experiences. This exploration will be the theme for the next chapter.

6.6. Overall Conclusions

6.6.1. Regarding the Thematic Analysis' Outcome

By using TA and following Braun and Clarke's (2006) model, the answers to two open-ended questionnaires and three questions were explored, and meaningful subjective patterns were detected, beyond what the quantitative data revealed (*see* Section 5.6). The participants' narratives provided data to answer the following open-ended questions (*see* Section 6.3.2-):

a) if and how an induced NDE could open the possibility of experiencing subjective elements beyond what was suggested by the script; and

> OEQ 1: *Describe any elements that you found relevant regarding the contents of your experience.*
>
> OEQ 3: *Describe the most relevant thing, if any, of having participated in this study.*

b) if the participants underwent any uneasiness directly related to the topic of death and dying.

> OEQ 2: *Did you experience any discomfort or any other feelings that you found relevant?*

From the participants' transcripts, three thematic categories were developed using top-down and bottom-up approaches. This two-way exploration provided findings that, on the one hand supported the quantitative outcomes, and on the other, contributed with novel information. The top-down approach revealed the first theme, *'Common Elements of Spontaneous NDEs',* which supported the importance of typical core features in the unfolding of the narrative. The bottom-up atheoretical approach revealed the second and third themes, and was used to explore novel and unexpected information, in an inductive way, by clustering similar aspects into two themes, *'Significant Aftereffects and Insights'* and *'Negative Elements'*.

But even if a part of the hypnotic experience coincided with the all-encompassing nature of NDEs core elements, as intended, unplanned elements appeared, beyond the suggestions that were given. Thus, meaningful stories were synergistically built, where insights, messages, and personal reflections manifested. Seemingly, the guidelines suggested through the script served as a prompt for tailor-made psychological processes to organize themselves, spontaneously and without discomfort.

The answer to the first and third research questions was therefore positive, and negative to the second: there was no uneasiness or discomfort related to the topic of death and dying triggered by the hypnosis session, which was overall positive and went beyond the script suggestions, causing significant aftereffects in a few participants that went unnoticed in the quantitative analysis, as summarized below.

6.6.1.1. Theme 1 - Common Elements of Spontaneous NDEs

The top-down approach revealed the predominance of classical NDE elements, as reported in the participants' answers to the open-ended questions. Even though they were advised to fill the self-report questionnaire after the NDE Scale (Greyson, 1983) to avoid repetition, most felt the

need to stress out how they experienced those core elements. Their descriptions used words that matched both items in the NDE Scale (Greyson, 1983) and the hypnotic suggestions used to induce the experience.

The stronger comments pointed to the fact that a hypnotically induced episode followed a predominantly positive '*Affective'* vector, the first subtheme branching from the *'Common Elements'* tree. The fact that most reports enhanced this positive emotional experience, strengthened the quantitative analysis conclusion: an affective type of episode typically follows a non-spontaneous event (Greyson, 1983, 1995, 1990). As discussed in the previous chapter (*see* Section 5.5.2), this trend matched Pederzoli et al. (2018), Goza et al., (2014) and Ohkado and Greyson (2018) findings, supporting an inclination towards affective episodes whenever expectations are involved. According to Pederzoli et al. (2018) conclusions, when subjects are hypnotically regressed to a moment of death in alleged past lives, they mostly report affective episodes. A *contrario,* Goza et al. (2014) and Ohkado and Greyson (2018), in studies conducted with people who went through unexpected spontaneous NDEs during combat situations, showed an inclination towards cognitive episodes that might enhance life-saving reactions (Greyson, 2001). The value of relaxing, letting go and enjoying the experience would be detrimental to survival. In the present experiment, the affective equivalence to Pederzoli er al. (2018) study, comes from the fact that all these experiences were induced by hypnosis in informed volunteers, who were somehow expecting to have an NDE analogue in a safe environment. Thus, facilitating a more pleasurable experience.

The most reported paranormal feature according to Greyson's four experiential components (1983), was the '*OBE'*. Hence, the second subtheme was built from the feeling that the body was left behind or somehow lost importance, either in the beginning (leaving) or the end of the process (returning). For some participants this feeling generated a temporary discomfort that was quickly resolved and did not interfere, or prevent, the unfolding of the experience. Moreover, the

experience of being outside the body and away from ordinary experience, set the stage for the **third subtheme** (*'Transcendental Elements and Uncommon Inner Experiences'*). The events that unfolded were only possible, in some way, because this separation from the body happened, facilitating the manifestation of parallel inner scripts and, with that, relevant reflections, insights and aftereffects.

As Whiteman (1961) argued, the direct experience of other worlds, that is part of how he defined mysticism, occurs mainly in OBEs. With their non-logical, unusual, and evocative aspects, OBEs might have facilitated the transcendental and mystical tone of the experience, which had a considerable influence in some participants. As Irwin (2015) affirmed, extra corporeal perceptions allow for a *paranormal self* to manifest, within a subtler and more expansive information sphere that is no longer limited by physical constraints. In fact, most narratives were marked by symbolic and awe-inspiring elements, including personal messages and insights addressing specific needs, and contributing to the relevance and impact of the event and subsequent aftereffects.

6.6.1.2. Theme 2 - Aftereffects and insights beyond the core elements framework of analysis

From this basic core experience, the second organizing theme, '*Aftereffects and Insights beyond the Core Elements'* framework of analysis, developed from a bottom-up approach. And with it, the usefulness of the mixed-method approach, to perform a deeper and wider analysis of the questions at hand, was confirmed. Where the quantitative results analysis was inconclusive, or went against the initial predictions, an atheoretical exploration of the open-ended questions added useful data in terms of effects, that were too subtle to be captured by the instruments. Tapping into the participants' subjective experience using TA, balanced shortcomings from

standardized data collection and expanded the research subject (Onwuegbuzie and Leech, 2005). In fact, evidence about subtle impacts, which was previously missed, was now brought forward.

Witt this second organizing theme, the prediction that an induced NDE could positively affect spiritual aspects, reduce the fear of death and dying, and increase its acceptance was supported. Several participants, from the moment a separation from the body occurred narrated stories, beyond the script, describing personal messages and insights with physical or psychological impact. Most came as guidelines for the future, coming from entities or deceased people, or through interpretations that the participants made themselves. Some took seriously the suggestions that came from the experience, and some changes in their worldviews ensued, matching what happens in spontaneous NDEs (Greyson, 2010; Holden Kinsey and Moore, 2014). This psychological shift was mostly reflected through two subthemes, '*Openness to Uncommon Experiences'* and *'Death Acceptance Aspects'*, adding information to the quantitative analysis which was unsatisfying regarding spirituality, and pointed to the increase of death fear and reduction in death acceptance, against the initial predictions.

Regarding the '*Openness to Uncommon Experiences'* subtheme the experience pointed to the need to learn and invest more interest towards uncommon areas, including the acceptance of broader ideas in Psychology, different aspects of hypnosis, meditation and spiritual practices, and other ways of understanding and facing life and death These aspects are clearly related with the impact of the experience in a certain ideal 'spiritual' worldview, which was not entirely clear from the quantitative data (*see* Section 5.5.2.). Thus, this newfound interest could be now associated with the '*Spiritual Health'* dimension, clearing any doubts that might have existed regarding the 'spiritual' impact of the experience coming from SHALOM's (Fisher, 2010) results.

Concerning the *'Death Acceptance Aspects'* subtheme, in some participants the outcome pointed to a more peaceful attitude towards death and dying, which seemed to go against the increase that was noted in the '*Fear of Death/Dying'* and decrease in the '*Death Acceptance'* components of DAP-

R (Wong, Reker and Gesser, 1994). Thus, the fact that some participants described an experience of peace and love related to the process of experiencing near-death, reinforced the adequacy of the hypothesis pointing to a decrease in the fear of death component in most situations, in opposition to the increase revealed by the quantitative data that might have been due to other causes, besides the experience (*see* Section 5.5.2.).

6.6.1.3. Theme 3 - Elements of Discomfort

After what was said, it is natural that no lasting *'Discomfort or Negative Feelings* remained within the two weeks that mediated the self-reports, as the third theme revealed. The overall outcome was regarded as positive, without any distressing side-effects related either to the method of induction, or to some unacknowledged sensitivity to the subject of death and dying, as documented in a similar experience (Machado, Farinha and Simões, 2022). The experience of being outside the body caused some transitory uneasiness in some participants, due to their lack of previous experience with induced NOSCs. Once again, the absence of any reports of lasting discomfort seemed to go against the increase in the 'Anxiety' component of the BSI-18 (Derogatis, 2001), which might have reflected an expression of an outlier effect, due to an isolated case, or cases, within a small sample (*see* Section 5.5.2.)

6.6.1.4. Concluding Remarks regarding Aftereffects

Concluding this section, it should be stressed out, that even though some narratives accounted for interesting results, caution should be exerted when analysing the results, since the reported gains regarding aftereffects might be exclusive to the small number of participants who reported them, compromising generalizations.

Overall, what impressed them most, were the typical elements of the classical NDE. Thus, confirming, qualitatively, the phenomenological equivalence of an induced experience, and the importance of core elements, despite the NDEs origin. One of them corresponded to the generalized feeling that the body was left behind, matching the NDE Scale (Greyson, 1983) results. This experience, of being out-of-the-body, set the stage for *'Transcendental Elements and Uncommon Experiences'* to take place, a theme which strongly influenced a few participants, as the quantitative findings also revealed (*see* Section 5.4.1.).

But, in terms of aftereffects, even though the usefulness of using a mixed-method approach to perform a deeper analysis was confirmed, the results were not as strong as expected. Even if for some participants, the experience increased their openness to transcendental experiences, by wanting to learn more about so-called 'spiritual' areas and showing more peaceful attitudes towards death and dying, the results were overall modest.

In Study I, a robust impact of the experience in terms of aftereffects was not demonstrated for all volunteers, even if the experiences' intensity and life-transforming impact, along with phenomenology, seems to be the hallmark of 'true' NDEs. From the results, in a few participants, a stronger impact seemed to be closely related to the transcendental nature of the experience. For participants 107, 201, 207 and 209 (*see* Appendix 11), important effects manifested, in the form of insights that helped them make sense and integrate several aspects of life, and even envisage the experience as therapeutic. Specially for participants 107 and 201, the emotional and transcendental impact was of such intensity, that led them to send detailed narratives (*see* Appendix 13).

This information supported the decision to make methodological adjustments and perform an in-depth analysis in the form of two case studies. This new approach allowed for a more accurate investigation of the effects, from a longer-term perspective and, also of the transcendental nature of the event and its possible relation to its life-changing impact. Also, the question of the

personal characteristics of these two participants was addressed, in the sense that personality traits could eventually facilitate deeper experiences. This will be the theme for the next chapter, where the stronger impact of the experience, and how and why this impact manifested itself on a small number of participants will be explored. Hopefully, shedding some light on this aspect of why the overall aftereffects did not follow the predictions. But it also might be because the tool, hypnosis, carries limitations as a vehicle of induction, compromising the 'realness' of the experience. This is a question of utmost importance.

6.6.2. Regarding Hypnosis and its ability to induce Near-Death-Like-Experiences

The question at hand concerns the nature of the outcome of an induced NDE grounded on hypnotic suggestions and the possibility of capturing some of its *realness*, through phenomenology and aftereffects. Indeed, the script contained several instructions designed to induce a deep state of relaxation and peace, enhance the participants' attention and reduce their peripheral awareness so that they would become more amenable to suggestions (Elkins et al., 2015; Facco et al, 2019; Tellegen and Atkinson, 1974), and let themselves be led into experiencing the core structure of a NDE. This is an example of those instructions, made during the relaxation phase:

> *A feeling of well-being surrounds you at this moment ... Just rest ... remain totally relaxed, calm, keeping your body and mind very peaceful ... just relax ...Relax ... You are entering a deep level of physical and mental relaxation… go deeper and deeper into this quietness of body and mind... There is nothing more to do right now… But to stay totally peaceful, calm, and relaxed…*
>
> **(Hypnosis Script)**

Other suggestions, after the relaxation phase, guided the participants through the NDE scenario:

You are now approaching the indescribable light you have glimpsed before… You feel growing inside you very intense emotions of profound peace, well-being, love as you are getting nearer… And you feel this deep benevolent and reassuring embrace like nothing you have ever felt before… You are feeling softly cradled by this compassionate and loving light. **(Hypnosis Script)**

As expected, their responses mirrored the suggestions, in terms of achieving a state of positive affect, and experience the core elements framework, and for some participants, as seen, it went beyond what was being suggested, producing intense experiences and aftereffects. Several explanations can be advanced, even though the phenomenology was felt as being the same.

One of them is hypothesizing that an induced experience, with hypnosis, does not carry the same overabundance of aftereffects, either because it does not cause the same depth or intensity, or is altogether a totally different event. This is an aspect that will be returned to in the final discussion chapter. Other, is that the open-ended questions might have been asked in the wrong timing, immediately after, and then, two weeks after the induction. This timeframe provided a very narrow snapshot of the impact of the experience, that might need more time to integrate itself in the participant's worldview. In Doblin's (1991) follow-up of the *Good Friday Experience* that investigated the mystical effects of having a substance-induced psychedelic experience, long-term follow-up interviews showed that several decades of integration strengthened the original six-month effects reported by the trial group. Showing that that the unique value of the positive changes in attitudes and behavior resulting from the experience, was better assessed after 25 years passed by.

This leads to the conclusion that the potential therapeutic value of the experience should not be dismissed because the impact, in terms of aftereffects, seemed initially modest, and further investigation with larger samples and longitudinal studies should increase the knowledge about the method's potential, beyond the participant's characteristics. A vast field of possibilities exists regarding the use of transpersonal hypnosis for psychotherapy, deserving to be explored with

rigorous scientific enquiry. However, the exercise that was made using TA, even if not conducive to the results that were initially predicted, offered useful clues on how the therapeutic potential of NOSCs can be approached with qualitative methods.

But, before moving forward, and with some important findings at hand, a few considerations should be made regarding the type of experience the participants had. We know that it did not generate discomfort, and we also know that subjective aspects enriched the experience, beyond what was being suggested. With hypnosis, as with spontaneous NDEs, an induced event seems to have stimulated a tailor-made psychological experience with subjective contents, beyond the script's suggestions.

From an aftereffect's perspective, it seems safe to say that the experience, was not a mere outcome from the script, and that the possibility of experiencing elements beyond the typical phenomenology that was being suggested is real. Relaxation was the first phase in the hypnotic protocol and, the necessary stepping-stone in the direction of more complex experiences (Yapko, 2015). But, at some point, the experience outgrew the relaxation cues and the suggested core elements. If it is true that the hypnotic induction may serve as a stepping-stone for the individual experience to unfold, any meaning or relevance seems to emerge from the capacity such experiences have of addressing personal issues of vital importance. Dell (2017) affirmed that the essence of hypnosis lies in the spontaneous ancient self-activation of a specific, biologically rooted, mode of neural functioning. Beyond that subjective permission to move from an ordinary state of awareness, other elements influenced the experience, including the NDE suggestions, and several other variables. In the hypnotic experience, cognitive, emotional, behavioral, spiritual, relational, and physical aspects are activated (Yapko, 2003), by suggestions being passed on. In fact, each detail of the participants' narratives brought personal significance to the suggested framework. The appearance of a spiritual entity might be at some point hinted, but the fact that a

holy figure from a forgotten family home altar made an unexpected appearance, provided a different meaning to the experience, much stronger than any suggestion could possibly offer.

This is something that commonly happens with hypnosis: as Williamson (2019) correctly pointed out, by the use and acceptance of suggestions, the clinician and the patient construct a hypnotic reality. The result turns out to be a novel psychological building, allowing the participant to observe some aspects of life, from a different and more integrated perspective. This is what Thalbourne (2010) appropriately calls *transliminality*, or the degree to which a psychological threshold can be crossed. And this fact alone is, sometimes, life changing. But with these induced experiences, did the NDE threshold got crossed, as it seems to happen in spontaneous events? For now, and considering the results so far, is there substantiated evidence to support the equivalence between spontaneous and induced events? Exactly what kind of similitude can be achieved with hypnosis? Or, on the contrary, because specific suggestions were part of the equation, the possibility of assessing an eventual similitude is compromised? And how much individual variables influence the experience? There is no clear answer yet, and this subject will be addressed in detail in the final discussion chapter, Section 9.4.2.: 'Hypnosis as an unreliable diagnostic criterion'. But before that, the case study analysis will be performed, so that the role of individual variables, despite the effectiveness of hypnosis as a tool, can be discussed. In the concluding part of the next chapter (Section 7.5.3.), a few reflections regarding the use of TA, the procedure that was chosen to analyze the qualitative data, will be made, that are applicable to both chapters.

6.7. Chapter Summary

In this chapter, the qualitative analysis performed on open-ended questionnaires aimed at answering two research questions: one, about the possibility of an induced episode reflecting

subjectively meaningful elements, beyond the framework of the NDE Scale (Greyson, 1983). The other, aimed at finding out if some form of discomfort was associated with the experience, either due to the technique, hypnosis, or to any unacknowledged sensitivity to the subject of death and dying. To address three questions, two open-ended questionnaires were applied, within a two-week interval. All 19 participants returned, at least, one of them. To explore the contents, TA was used as a tool, following Braun and Clarke's (2006) 6-phase procedure, and from the coding categories, three main themes and five subthemes were revealed. These themes, on the one hand supported the quantitative findings, and on the other, complemented them.

Using a top-down approach, several key concepts were identified, matching the classical NDE core elements, and generating the first theme: '*Common Elements of Spontaneous NDEs'*. From this theme, three subthemes emerged, corresponding to the most prevalent ideas: *'Affective Elements'*, '*Feelings of Separating from the Physical Body'* and '*Mystical and Transcendental Features'*. This first theme and derivate subthemes strongly supported the importance of core elements in the unfolding of the subjective experience, reinforcing the conclusion that hypnosis is adequate to induce an experience that mimics a spontaneous NDE. The second and third themes were developed using a bottom-up approach, by clustering similar aspects of the experience into two novel categories: *'Significant Aftereffects and Insights'* and *'Negative Elements'*.

From the '*Significant Aftereffects and Insights*' theme, two main subthemes were generated, *'Openness to Uncommon Experiences'* and *'Death Acceptance Aspects'*, which added to quantitative data, and supported the prediction that a NDE induced with hypnosis could positively affect spirituality measures, reduce the fear of death and dying, and increase its acceptance. The answer to the possibility of an induced episode reflecting subjectively meaningful elements was affirmative: the self-report questionnaires revealed that the inner experiences incorporated spontaneous variations, that went beyond the hypnotic suggestions. And that, for a few participants, the

impact of the experience was stronger, as they seem to have built idiosyncratic transcendental narratives beyond what was being suggested.

The third theme, *'Negative Elements'*, revealed that the overall outcome was regarded as positive, without any distressing side-effects, as documented in previous experiences (Machado and Simões *in press*). Even though qualitative results only addressed subjective interpretations and the aftereffects aspect was not clearly demonstrated, the potential therapeutic value of the experience for each participant should not be understated, and further investigation with longitudinal studies and more refined instruments should be conducted.

Notwithstanding, an important question still needs to be addressed regarding hypnosis and the quality of hypnotically induced NDEs. This study developed from the premise that hypnosis could be used as a valid tool to induce a NDLE, phenomenologically similar to a spontaneous episode. This premise was demonstrated quantitatively and qualitatively. But the question that remains, is if an induced experience grounded on hypnotic suggestions, is or is not comparable to a spontaneous episode, especially because in terms of aftereffects the results were not as strong as expected. This is a complex question that will be addressed in the final discussion chapter.

But before that, it is necessary to determine why, for two participants, the experience was especially intense, in terms of its depth and overlap of mystical features and aftereffects. Their reports imposed the need to make a few adjustments on the study methodology., since additional questions arose. Why did this intensity manifest itself with these two participants, and was it related to the mystical nature of the experience? Can the transcendental aspects of an experience be responsible for more expressive aftereffects? The next chapter was developed in an attempt to answer such questions, in the form of two case studies built from the exploration of in-depth interviews with participants 107 and 201.

Chapter VII

Two Case Studies: Introducing Fairydust and Pixie-K

In general, one can say that the phases of the NDE develop in a way which resembles the stages of the mystic way.

Judith Cressy (1996:369)

7.1. Background and Overview

In the previous chapter, as part of the quasi-experimental mix-method research design, a qualitative analysis was performed to complement the quantitative analysis (*see* Sections 5.5. and 6.6.), pointing to the fact that an event phenomenologically similar to a near-death-experience (NDE) could be induced with hypnosis according to the NDE Scale (Greyson, 1983). Regarding aftereffects, the quantitative analysis showed small variations, without a clear pattern of change However, there was the possibility that the psychometric tools that were used, within a small sample, might not have reflected subtle impacts.

Therefore, open-ended questions, aiming to observe the presence of subjectively meaningful elements and/or uneasiness or discomfort were included, and thematic analysis (TA) was used to scrutinize the answers. Three themes and five subthemes were revealed (*see* Scheme 6.1. in Section 6.4.), confirming the quantitative findings, by indicating that a hypnotically induced episode shared most features with a spontaneous NDE. Key concepts, matching the classical NDE core elements were identified, and three subthemes branched from the first theme,

'*Common Elements of Spontaneous NDEs*': '*Affective Elements'*, '*Feelings of Separating from the Physical Body'* and '*Mystical and Transcendental Features'*. The second and third themes pointed to the existence of '*Significant Aftereffects and Insights'* and the absence of *'Negative Elements'* revealing that no distressing side effects could be attributed to an induced NDE. Regarding the second theme, two subthemes related to aftereffects were generated, *'Openness to Uncommon Experiences'* and *'Death Acceptance'*, supporting the prediction that an induced NDE would positively affect spirituality measures, reduce death fear, and increase its acceptance.

It also revealed that, for two participants, the impact of the experience was so powerful, that they felt the need to send detailed written reports. The unexpected depth of the material imposed the need to adjust the qualitative analysis plan and collect more data. From their previous results, along with informal conversations during the study, a few aspects became clear regarding participants 107 and 201:

a) They had relatively intense experiences, according to the NDE Scale (Greyson, 1983);

b) Their contents were imbued with paranormal and transcendental features, resembling classical reports of mystical experiences (Underhill, 1912);

c) They were already familiar with non-ordinary states of consciousness (NOSCs) and so-called 'spiritual themes';

d) They had some knowledge about NDEs and had set precise intentions regarding the outcome of the session, which was related to healing since they knew that, sometimes, NDEs mysteriously resolve health concerns.

A decision was made to conduct in-depth interviews where their individual situation could be explored in the form of two case studies to find out why their experience was so intense and, also,

explore the aftereffects dynamics that, at this point, seemed to be closely related to the mystical nature of their experience and, probably, some personality aspects. From the literature review (*see* Section 2.8.), a comparison between NDEs and mystical experiences was made (Pahnke, 1969; Pennachio; 1986; 1988), and the concept of spiritual maturity (*see* Section 2.11) that distinguishes *the spiritually mature from those with less evolved forms of faith* (Genia, 1997:345) was presented. In this chapter, two new research questions are therefore formulated, regarding the possible mystical nature of the experiences and personality traits of the two participants:

a) Is it possible that, according to the participants perception, the same phenomenology of mystical experiences could result from a hypnotically induced NDE?

b) Is it possible that a personality trait, related to the participants' level of spiritual maturity, might have been present, predisposing them to have a mystical-like experience, as a result of the induced NDE?

To answer these questions, in-depth interviews were conducted, and the resulting material is analysed with TA (*see* Section 6.2.). From this analysis, two themes will be thoroughly explored, related to the mystical tone of the episodes and the spiritual maturity of the participants. This thematic exploration is the main subject of this chapter.

7.2. Participants

The two interviewees were participants in Study I conducted at the UoN (*see* Section 4.3.2.) who were, as all others, de-identified to ensure anonymity. However, for the sake of clarity, and henceforth, they are designated by a pseudonym: research participant 107, from the pilot-study

pool of students, was pseudonymized as **Fairydust**, and participant 201, recruited from the sample outside the University population, as **Pixie-K.**

7.2.1 Faiydust (Participant 107)

7.2.1.1. Fairydust's Background, Experience and Aftereffects

By the time of the experience Fairydust was a 47-year-old woman, and a graduate Psychology student who volunteered for the pilot study in December, 2018. A former physical and sports therapist, she suffered a severe spine infection in 2016, affecting her peripheric nervous system and her ability to use upper and lower limbs. By the time of the experiment, she had recovered the use of her arms, albeit using a wheelchair, as she was still unable to walk. During the interview, she talked about the hope she felt in recovering, in sharp contrast with the medical prognostics, predicting she would not be able to walk again: her spine was severely damaged, and she should not expect a full recovery. She had been using mind-body healing techniques, including meditation and self-guided visualizations, where she imagined herself in full health, as she firmly believed a holistic approach to treatment helped her in regaining the use of her arms. It was her firm intention to keep on using different therapeutic modalities to improve her odds of recovering, despite medical prognostics. She believed such techniques helped with her psychological health and, specially, her hope for a full recovery: each morning, upon waking up, she had the impression she could walk and was astonished at noticing she could not.

She thought that volunteering for the study might promote her recovery, as she had heard stories of near-death-experiencers (NDErs) who healed from pre-existing physical conditions. On the day scheduled for the experiment she was the only volunteer, and the protocol was applied without adaptations, apart from remaining seated in the wheelchair. Afterwards, she gave a very enthusiastic description of her inner journey, emphasising the fact she was joined by her late

grandparents. This intense encounter left her flooded with joyful emotions and hopeful messages for the future. Later, she provided a spontaneous description through email, as she found out she could easily go back to the soothing feelings and strong encouragement their presence generated, as if they were watching over and promising she would get better (*see* Appendix 13). Two weeks after the session, she filled the psychometric instruments in the same way as other participants (*see* Section 4.7). A summary of her quantitative results is outlined below, and a table with a full description can be consulted in Appendix 15.

7.2.1.2. Fairydust's Quantitative Results Summary

Following the full completion of the NDE Scale (Greyson, 1983), Fairydust scored 28 out of a maximum of 32, showing the highest result within Study I, far above the mean score of M=14,11. Her maximum scores *per* subscale ranged from a minimum of 6 in the cognitive subscale, to the maximum score of 8 in the affective subscale, following the sample's affective trend. In the BSI-18 Brief Symptom Inventory 18 (Derogatis, 2001), any previous symptomatology was irrelevant or inexistent, as her scores remained unchanged between pre and post-test. From the DAP-R Death Attitude Profile-Revised (Wong, Reker and Gesser, 1994) results, it was noticeable that if the pre-test '*Fear of Death/Dying*' dimension was not significant, it became inexistent in post-test. Regarding '*Approach Acceptance'*, she moved from being undecided to agreeing or strongly agreeing with the following statements: *death is an entrance to a place of ultimate satisfaction; death is a union with God and eternal bliss; death brings a promise of a new and glorious life* and *One thing that gives me comfort in facing death is my belief in the afterlife.* This indicates that a positive outlook on death developed since the experience, as she moved from being uncertain, to gaining some knowledge, and even optimism, about how things should be after dying. With SHALOM (Fisher, 2010), an increase in the 'ideal' and 'lived' dimensions of the '*Transcendental*' domain were observed, where all other domains remained stable. This modification could be associated with

the fact that she went through a marked transcendental experience, according to classical NDE parameters. The importance of spirituality remained the same, at the maximum score of 5, and the importance of religion increased from the minimum of 1 to 2.

7.2.2 Pixie-K (Participant 201)

7.2.2.1. Pixie-K's Background, Experience and Aftereffects

By the time of the experience, Pixie-K, was a 41-year-old woman who volunteered for the main study. She worked as a hospice carer, and had an interest in subjects related to death, dying, and spirituality in general. She felt privileged to have assisted to more than one person dying and would like to work as a 'Death Doula', as she found her presence to be soothing both to dying and grieving people. She participated in a session with two other volunteers, and in the end, she showed a strong enthusiasm on the outcome, for its transcendental quality. She declared her amazement at how empowered she felt, describing a very intense physical journey, starting from the moment she 'left' her body and travelled across different dimensions. She felt she was swimming in a sea of energy, as in deep water, feeling at the same time watched over and protected by '*Light energies'*, entities, '*like giant forms, very powerful – almost like beacons',* who were guiding her towards the Light, leaving her with a deep sense of peace and connection with universal energies Later, upon the intensity of the event and the impact she felt in her life, she provided a spontaneous description through email (*see* Appendix 13), where she confessed, she hid from the experimenters a narcolepsy diagnosis made *circa* 2011, for fear of elimination. At this point, there was no ethical or scientific reason to exclude her data: the condition was not reported before, nor was serious or uncontrolled, and her pre-test assessment did not reveal other excluding criteria.

PS*: I have Type 1 Narcolepsy and I think this may be significant because I spend a lot of time being conscious in dreamstate.* **Report**

By the time she volunteered, and for the last three years, she had been out of an 11-year abusive relationship, that left many wounds she was still dealing with, mainly in her body, where she felt there was still a lot of unreleased trauma that mind-based psychotherapy did not address, and all the attached emotions. Her intention for the experience was to heal from abuse-related trauma. Two weeks after the session, she filled the psychometric instruments (*see* Section 4.7). A summary of the quantitative results is outlined below, and a table with a full description can be consulted in Appendix 13, as well as the painting she did after the experience.

7.2.2.2. Pixie-K's Quantitative Results Summary

Following the full completion of the NDE Scale (Greyson, 1983), Pixie-K scored 25 out of a maximum of 32, showing the second highest result, well above the sample's mean score (M=14,11). Her maximum scores per subscale ranged from a minimum of 5 in the paranormal and cognitive subscales, to the maximum score of 8 in the affective subscale, following the group's trend. Concerning the BSI-18 Brief Symptom Inventory 18 (Derogatis, 2001), her '*Somatic'* and '*Mood*' scores remained generally unchanged. However, she had a strong increase in the '*Anxiety'* indicator. In post-test phase she reported feeling *a little nervous or shaky inside* (*item* 3); *extremely scared for no reason* (*item* 9); having *extreme spells of terror and panic* (*item* 12,) and f*eeling extremely fearful* (*item* 18). This was probably related to the panic attack she reported on the second week following the experiment. From the DAP-R Death Attitude Profile-Revised (Wong, Reker and Gesser, 1994) results, there were some slight changes (± 0.5), not allowing for significative interpretations. The fact is that Pixie-K already had a very close and stable relationship with

death, without any traces of denial nor fear. Any small variations between pre and post-test were probably due to slight variations in circling the items, reflecting spontaneity more than a well thought change due to the experiment. With SHALOM (Fisher, 2010), there were some minimal but interesting changes in the '*Transcendental*' domain of the 'lived' experience ('*Spiritual Health*'), when all other domains remained stable. The '*Importance of Spirituality'* and '*Importance of Religion'* remained the same, at the maximum and minimum scores, respectively.

7.3. Method for Two Case Studies

7.3.1. The Option for Case Studies as a Data Organizing Tool

Adding on the qualitative results from the previous chapter, the decision to collect further data in the form of two case studies was made. A case study, using qualitative research methods, can be defined as *an in-depth study of a single phenomenon whose boundaries and content can be made conceptually and empirically clear* (Orum, 1992:1). By using this method, the aim was to collect and explore as much data as possible and build a more comprehensive understanding of background, contents, and effects of the induced NDE. As Flyvbjerg (2006:226) asserted, *the choice of method should clearly depend on the problem under study and its circumstances*. And now, the main concern at this stage, was about what could be learned about single cases (Stake, 2005), specifically, about the mystical nature of their experiences and their personality structure of the subjects, in terms of what could be called spiritual maturity.

Hopefully, the data gathering potential from these two cases, on a non-mainstream research subject, would provide prototypical value for similar situations in future studies. In the field of anomalistics, involving non-replicable or non-reproducible extraordinary experiences, it is not

even possible to imagine research without single-case studies, as Meyer and Schetsche (2020) acknowledged.

In less explored areas of research, case studies are especially relevant to investigate and collect data about unique phenomena, and even form new theories: *to the extent that the results of a single case study investigation are potentially applicable to other cases it can acquire a theory production function* (Lehman and Vogel, 1984 in Meyer and Schetsche, 2020:12). This is the case of Stevenson's children reincarnation studies (1983), Haraldsson's (2008) cases of adults with recurring past-life memories, or Facco et al. (2018a) case of a modern mystic who acquired exceptional knowledge with non-ordinary mind activity. All authors used case studies as a data collection methodology to explore new areas of research with non-reproducible experiences. With hypnotic NDEs, even if an experience can be induced, its contents and potential benefits are subjective, and therefore, information on single cases is unarguably invaluable in terms of the experience that can be gained for future situations.

7.3.2. Materials: Semi-structured Interviews

Semi-structured interviews have been considered as the most effective data collecting method to acquire data for qualitative research, using case studies. as a research methodology (Naz, Gulab and Aslam, 2022). According to Bryman (2001), a semi-structured interview typically refers to a context in which the interviewer has a series of questions in the form of a schedule, but where some flexibility is present. Questions are open-ended, their sequence can be altered, and other queries can be added, to expand on the contents of the replies. They are sometimes designated as in-depth interviews, to encompass the possibility of including more informal styles of questioning. However, an interview guide containing pre-formulated questions or topics is always prepared in advance, to focus the interview along a desired line of action (DiCicco-Bloom and

Crabtree, 2006). According to Naz, Gulab and Aslam (2022:42), *a well-developed semi-structured interview guide becomes an authentic and valid source of data collection*. This was the case, and open-ended questions were formulated following suggestions based upon a cognitive-behavioural model of interviewing (Cormier, Nurius and Orborne, 2009), albeit adapted to non-clinical settings, according to the schedule in Appendix 14.

This schedule was meant to know more about the perceptions of two participants around two new research questions that developed from the previous chapter's results (*see* Section 6.6.), aiming at finding out more about the supposedly transcendental aspects of the experience, and their impact upon their worldview. Also, the collection of more detailed information regarding background and personality was set as a goal, to explore the possibility of life experiences and personality traits conditioning the intensity as well as the type of NDLE, they had. Therefore, the interview schedule encompassed topics regarding personal background, range of concerns before and after the experiment, relationship with so-called spiritual issues, identification of outcomes and aftereffects, and unresolved issues that might have been addressed through the hypnosis protocol (*see* Interview Schedule *in* Appendix 14). From their answers, spontaneous questions, beyond the pre-arranged loose script were formulated and included in the interview.

7.3.3. Procedure

After the decision was made regarding the inclusion of in-depth interviews, Fairydust and Pixie-K were contacted via email and agreed on having their cases analysed in detail. As they were participants from Study I, approved by the Research Ethics Committee (*see* Appendix 1), both had undergone the screening process described in Section 4.3.2.2..The conditions stated in the Information Sheet and Informed Consent (*see* Appendixes 3 and 4) were still valid during this phase of data collection, including the guarantee that all results would remain anonymous and

unidentifiable, and would only be used for research purposes. However, as in-depth interviews were not specifically included in those documents, a new form restating consent was included to comply with ethical requirements (*see* Appendix 17). But, beyond ethics, reaffirming consent is important, so that the participants do not feel obliged to continue (Allmark at al., 2009). Since privacy issues and other non-specific ethical concerns could arise in this situation, the ethical guidelines of the British Psychological Society, Ordem dos Psicólogos Portugueses (for Portugal) and the General Data Protection Regulation (GDPR)[28] were considered when engaging with the participants.

At the beginning of each interview, the interviewer had an informal conversation with both participants with the goal of re-establishing rapport and adapt the interview schedule to new developments. Also, the purpose of this phase of data collection was elucidated, and they consented on having their cases studied in detail, also confirming their availability for any follow-up procedures, including other interviews. The possibility of being interviewed was considered as an opportunity to share the benefits of the experience and further cooperate with the research Also, consent for recording the interviews on digital audio for transcription was given. Both agreed on being identified by a pseudonym to guarantee anonymity.

A time convenient for interviewer and interviewees was scheduled for the interview to take place. Face-to-face meetings took place at friendly coffee shops, located inside the University of Northampton's (UoN) facilities, selected with the participants' approval. Even though this was a public location, the probability of interruptions was low, and no privacy issues were involved, as no one could listen to the conversation. To facilitate focusing on the participants discourse, the interviews were recorded on audio, with the goal of being later transcribed *verbatim* and stored in a memory stick. Each interview lasted about an hour and a half on average, regarding which they

[28] *See* Footnotes 18, 19 and 20 in Chapter Four.

were informed that some excerpts might be used for citation purposes. The possibility of withdrawing at any moment was restated.

7.3.4. Thematic Analysis as a Pattern Detecting Method

The spontaneous reports sent by email and the interview transcripts were used as data sources for building the case studies. For content exploration, Thematic Analysis (TA) as a pattern detecting method was used as before (Clarke and Braun, 2006), with the open-ended questionnaires (*see* Section 6.3.). Again, because of its methodological flexibility, TA seemed the best tool to approach the written material and find shared patterns of meaning within subjective experiences, so that new research questions could be answered:

1) Is it possible that, according to the participants perception, the same phenomenology of mystical experiences could result from a hypnotically induced NDE?

2) Is it possible that a personality trait, related to the participants' level of spiritual maturity, might have been present, predisposing them to have a mystical-like experience, as a result of the hypnotically induced NDE?

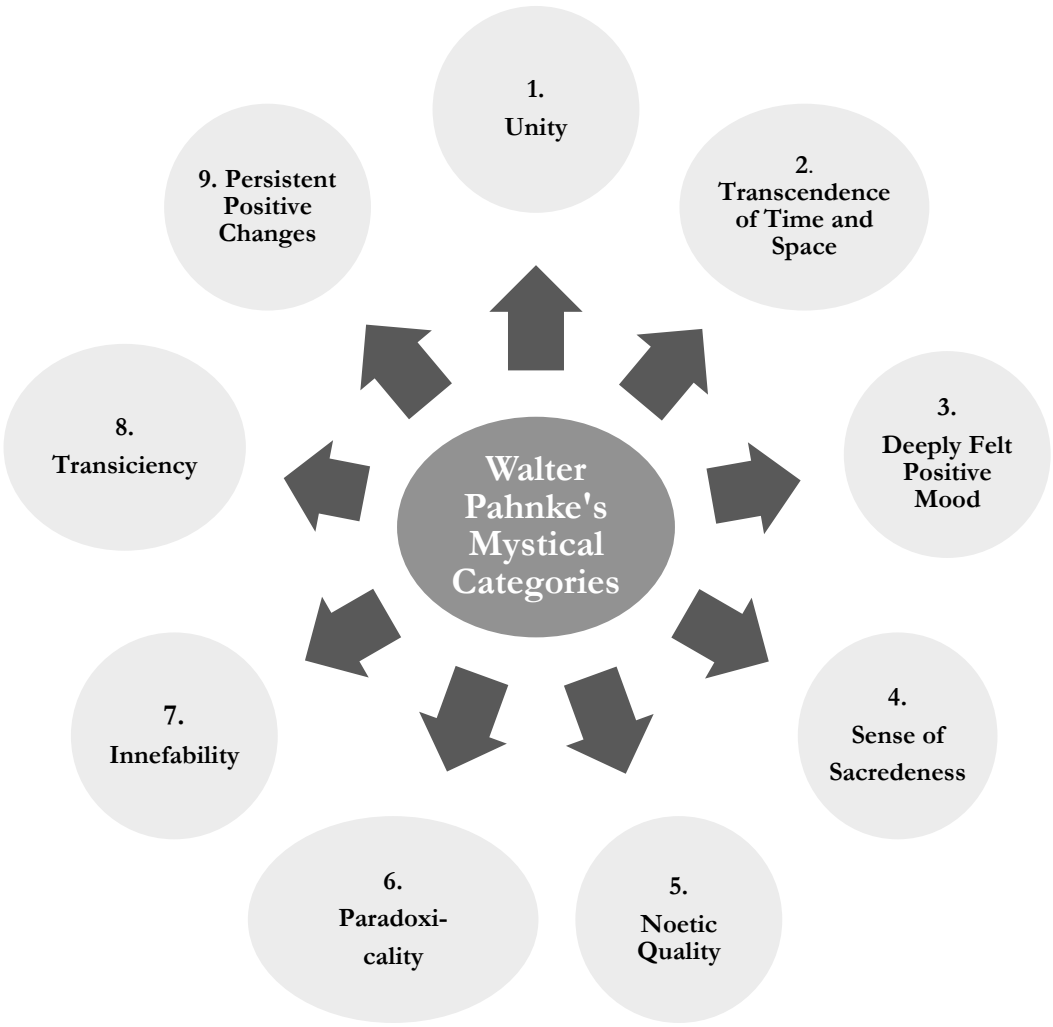
As explained in Section 6.3., TA's purpose aims at the identification of meaningful patterns within data sources, to build categories that will be labeled as themes and subthemes (Clarke and Braun, 2006; Thomas and Harden, 2008), which will connect the interview data with the research goals. Considering the above questions, the main goal was the identification of codes related, on the one hand, to *mystical experiences* and, on the other, to indicators of *spiritual maturity* that could be eventually translated into themes and subthemes (Thomas and Harden, 2008), according to

Braun and Clarke's (2006) process (*see* Section 6.3.). After the transcription from audio recording, the interviews were re-read to find, inductively, meaningful units of text and capture key concepts, related to the research topics (1st phase). The selection of interview excerpts happened either by a direct mention to related words, or in an indirect manner, via an idea or allusion to certain aspects of the experience, or personality of the interviewee. This selection was grounded on the knowledge that was gained from the theoretical exploration of '*mystical experiences'* and '*spiritual maturity'* in the literature review chapter (*see* Sections 2.8. and 2.11.). Starting from the participants' answers, preliminary codes were developed using a top-down approach, and simultaneously combining all the relevant coded data extracts into all-encompassing themes (2nd phase).

For the exploration of the first theme, '*mystical experiences'*, and departing from the concept of *scientific mysticism* that, according to Whiteman (1961), has been loosely defined as the direct observation of everything non-physical, all words and sentences pointing to elements with a transcendental nature (shared meaning), were considered theoretically relevant. For example, a participant might mention the word '*unity*', and it would be highlighted as a key concept, or the same idea could be extracted from a full sentence with the same conceptual meaning, *e.g.*: '*I felt my body dissolving in the light and, all of a sudden, we were the same'*.

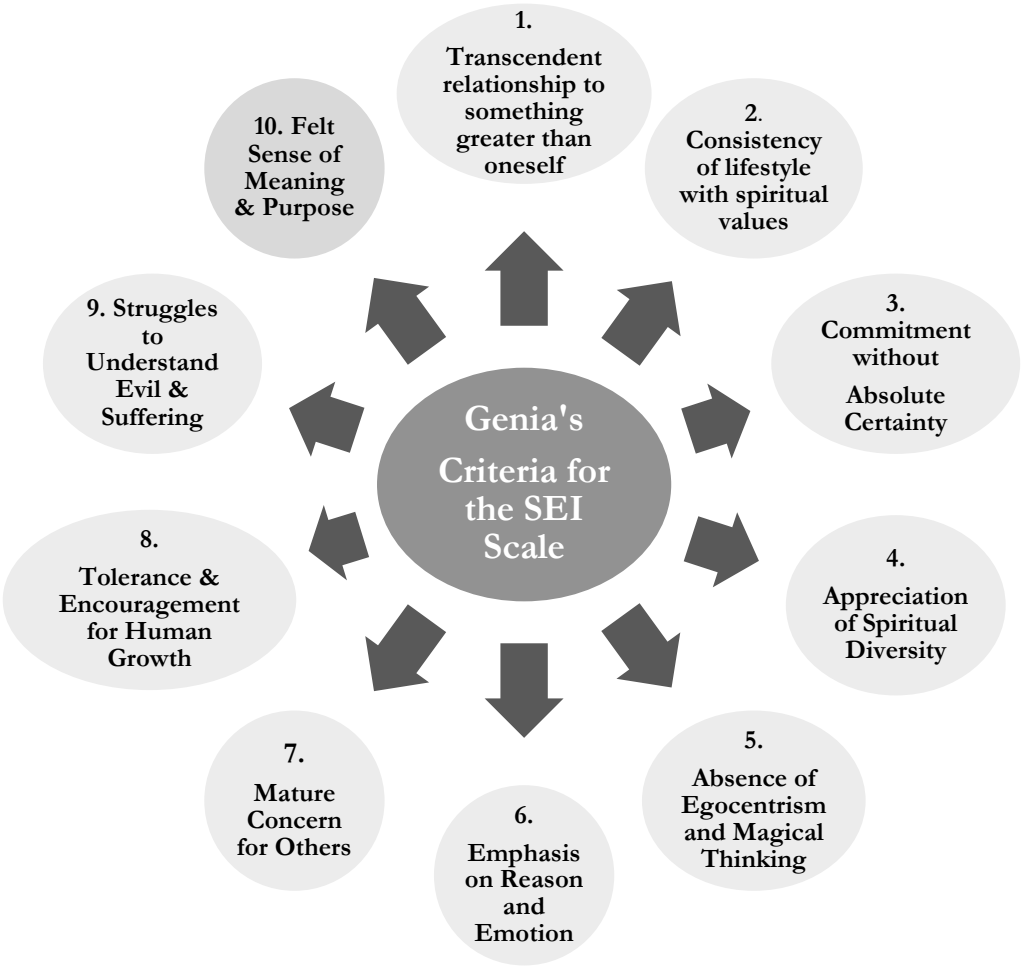
For the exploration of the second theme, '*spiritual maturity'*, the same strategy was used. Even though this is a poorly explored area with many conceptual gaps, inspiration from the SEI Scale items (Genia, 1991) was used for the selection of key words that could be used as thematic codes (e.g., belief, truth, faith, spiritual). Also, specific words related to spiritual practices (*e.g. Reiki* or *meditation*) were highlighted, as well as sentences pointing to certain aspects of personality that might be related to a so-called spiritualized background. A certain degree of familiarity to spiritual themes (*e.g. we are all a bit psychic in my family*), or some inner qualities or virtues that could be associated with a previous work of self-development were considered relevant for analysis (e.g. *I*

forgave what happened to me and accept this as part or the path I chose for my soul journey). By following this procedure, two thematic areas were explored, reviewed, and refined, and from those, nineteen subthemes branched (3rd and 4th phases), in a logical procedure. Regarding the mystical theme, several structural patterns emerged, by collating the quotations. And '*mystical subthemes'* were deductively retrieved and re-assembled from the main mystical theme using the same top-down approach, by matching similar keywords or expressions with a pre-existing theoretical model. The retrieved cluster of subthemes were organized according to Walter Pahnke's (1969) nine categories of mystical experiences (*see* Section 2.8.). For current purposes, an organizing scheme is provided below, but examples for each category, following the conceptual description provided by the author (*idem*), were included in Appendix 26. The full exploration of this rich material goes beyond the scope of this thesis.



Scheme 7.1.: Subthemes for Mystical Elements according to Walter Pahnke's (1969) Classification

Regarding the '*spiritual maturity'* theme, once the quotations were properly identified and collated, the theme branched into smaller units of significance, corresponding to a pre-existing theoretical structure. In this case, and under the main theme of '*spiritual maturity'*, the criteria for the development of SEI, the Spiritual Experience Index (Genia, 1991; 1997) were used as a framework of reference, a theoretical compass for the TA (*see* Section 2.11.). As in the previous theme, an organizing scheme is provided below, but examples for each category, following the conceptual description provided by the author (*idem*), were included in Appendix 27, for the same reason: the exploration of this sub-thematic units goes beyond the scope of this investigation.



Scheme 7.2.: Subthemes for Spiritual Maturity according to Genia's (1991; 1997) Criteria

The 5th phase was about checking the themes and subthemes accuracy and coherence, in terms of making a correspondence between the theoretical foundations and the reality of the data. The last phase, the 6th phase involved writing a report that should provide enough evidence on the themes and subthemes and, finally, answer the research questions they were meant to address. The result of this phase is shown below, where both themes will be described and illustrated with examples. But before, an update on the participant's status by the time the interview was conducted, two years after the intervention was made.

7.4. Results Section

7.4.1. Update on the Participant's Situation

The interviews took place two years after the session and a few changes occurred in the participants' lives which, according to them, were connected with the experience, and should be referred here.

a) Fairydust

When Fairdydust came for the interview, she was not using the wheelchair anymore, as she was able to walk with the aid of crutches: she had partially recovered the use of her legs. and believed the induced NDE was a fundamental part of this recovery:

> *Kind of, I did the work with you that changed me massively, I think. I felt so comforted by that experience, I felt powerful support behind me. It was like I knew my Nana and Grandad were there with me and I was so certain that gave me an extra strength. I'm right, I know I am doing this.*
>
> **Interview**

The positive feelings, insights, and messages of hope she received during the experience, in her opinion, released the negative emotions she had been withholding, directing her will-power towards full recovery. This, allied to the realness of the experience, left her grounded upon a psychological terrain that, she felt, opened the way for her physical recovery:

> *Yeah, a lifting, an absolute lifting. I think it was also accessing parts of myself I hadn't accessed before. It opened a gate for me. (…) That experience opened that gate for me again and allowed me to start doing things that I wasn't doing before, it gave me that power to do that. (…)*

And I knew, from that moment on, I needed to open that other part of myself up and start being selfish but in a really healing way, in a positive way in a kind way to myself, with a kind of compassion I hadn't had before. I feel I was still very angry with my situation. (…) And, on that moment, I let go of that anger, so I could do the other stuff. (…) then that part of me that was just blocked.

Interview

The doctors, according to her, could not make logical sense of her improvement, given herdspine's condition. By the time this text is being written (2022), she has gained full recovery of her legs. In fact, she was already able to run, as she did before the injury:

They (the doctors) *can't, they just said the nerves must have reconnected somehow, but they don't understand the mechanisms that have connected my brain and the signals. Because I knew there was signal potential in my legs, but the damage was in the spine, so the brain was sending the signals, but they weren't getting through, so they don't know what has changed. But you know 'Hey, you're moving your legs and you're walking now but there's no explanation at all'. That's where they need to be exploring. I need to say to people that there is so much to physical healing than physiotherapy. Because for me, I think I am a walking advert to exploring other parts of your mind. So, I'm going forward, and I would like to do more with that.* **Interview**

b) Pixie-K

For Pixie-K, the NDLE helped her in healing from the physical and emotional trauma she had developed from domestic violence she endured for 11 years. She felt safe, calm, peaceful and empowered, by the understanding, reassuring and self-loving feelings that came to her, which lasted for two weeks, until she had a panic attack. This was one in a long history of panic attacks she thinks had nothing to do with the experience, and were not happening anymore by the time of the interview:

Pixie-K – *I was gripped in a panic attack: I called my friend who came over and we sat together in meditation. I was so grateful for the fact I was able to reconnect with the feelings I had following the study, and I feel strongly that I will continue to be able to access this source of tranquility. It was very present initially after the study and I believe that with regular practice, it would be possible to maintain that positivity long term. The feeling of being self-assured is a very powerful one.*

Sofia – *(…) Had it something to do with the experience, you think?*

Pixie-K – *I don't know what triggered it, I really don't know…*

Sofia – *Do you usually have them, or ever had one before?*

Pixie-K – *I used to, I don't do so much now, painting really helped me with that. That was part of my healing process as well. And I just don't have them anymore.*

Interview

Pixie-K, in her interview, shared more details about her narcolepsy, which she thinks was present for most of her adult life, although undiagnosed. A psychiatrist prescribed methylphenidate (a central nervous system stimulant used to treat attention deficit hyperactivity disorder) and sertraline (a substance belonging to the serotonin reuptake inhibitor class of drugs). But most of the time, she was not willing to comply with recommendations regarding medication, nor to avoid strong emotions to prevent an episode, which she found very limiting. Medication left her feeling *forcefully awake,* not altogether present, and somehow blocked and *robbed or her essence.* According to her, she had not taken medication within the previous month, which would implicate her exclusion. The consequences of her episodes had always been manageable, as she remained able to keep her behavior within what she thinks were acceptable limits. Therefore, after the interview, the decision to keep her as a participant was confirmed.

The most worrying thing I've done was going outside, and as soon as I got out into the garden I woke up and realized that I was naked in my garden, but I didn't go anywhere.

Interview

7.4.2. Theme 1- Mystical Elements

Fairydust and Pixie-K had provided transcendental reports of their experiences, filled with elements belonging to unknown dimensions of existence, and of their impact on their physical and emotional recovery from
trauma.

Those elements were highly suggestive of mystical experiences, which justified a deeper exploration with semi-structured interviews, to explore the possibilities of induced NDEs in providing the same mystical quality of spontaneous episodes (Pennachio, 1986; 1988). Some of these mystical features will be highlighted in this section, following the procedure outlined above, and according with the theoretical criteria for mystical experiences (*see* Section 2.8). For Fairydust, her experience translated into a hyper-realistic transcendental contact with her grandparents, both deceased a long time ago. This contact was made possible after the moment she felt her body was left behind. For Pixie-K, the experience was described as embryonic, as she felt transported to a timeless ocean of energy, that felt conscious and alive. While she was able to swim at her will, she felt she was being watched by alien or angelic energies, allowing her to heal herself from trauma wounds.

> *When I was lifting, I could feel my heart pounding. Each beat felt uncomfortable and loud. I had no sense of body in the other realm, yet I was aware of my form. I then felt a large hand hold mine, I got the impression my hand was small like a child's, and the hand that held mine had dark scars and calluses. This hand took me to "another" place, where I met my Nan and Grandad. I recognised them as their younger selves.*
>
> **Fairydust's Interview**

I felt like a lot of watery elements, the way I was moving and stuff like this, it was quite fluid and then… how awesome everything was, is… But it made me feel it was almost, it made me wonder, because it felt kind of embryonic that experience that I had.

Pixie-K's Interview

The hyperrealism of the experience, for them, left no room for doubts regarding its truthfulness, even if it defied logical explanations and language categories. Fairydust was able to feel she was meeting her dead grandparents, and Pixie-K, could easily feel connected with benevolent spiritual energies and what she called her true essence:

This was very odd, so my grandad was older, a lot older, you know, an old man, and she was very young, in her twenties, which seemed very strange. But the feeling, kind of they still felt the same to me, that soul connection was the same, the love feeling I was always got from them was exactly the same. So, I knew it was them, instantly, probably if they dressed up as aliens.

Fairydust's Interview

Felling of fluidity – very energetic and moving as if in deep water, submerged. Lots of colour, like veils that I was moving through – very strong universal connection, very familiar to me. I was calm and warm, I had a strong feeling of being guided and protected, feeling of love. Very aware of Light energies – like giant forms, very powerful – almost like beacons/signposts – definitely in some kind of tunnel.

Pixie-K's Report

They both felt they were outside the usual dimensions of space and time:

So, to me it felt like quite a long time, but I don't know whether it was, but it wasn't a quick 'Hi! Bye!', it was ageless, but maybe not very long in actual time, but I felt though that just went on forever, it's just really weird feeling.

Fairydust's Interview

I think, you know, I felt that the ease with which I could get out of here, and get my head into a different space, was really important to me. (…) *Yes, that's that thing that you find out that it just is, and it's not a place, it's just where you are all of the time, and it's not a destination… Yeah, you don't have to wait to be there, and it doesn't take a special trick. And as I said before, because of the narcolepsy, it's like, yes, the way that I describe it, is like living in a place between places.*

Pixie-K's Interview

It was possible, for Fairydust, to feel her grandparents' deep love for her, and intense feelings of peace and harmony coming from this reunion. For Pixie-K, her feelings, even if paradoxical, were very different from what she had been experiencing before:

I was then back in the "other" place, with both of my grandparents and felt suffused in such a strong vivid feeling of their presence. I felt their reassurance, love, and a peace so intensely, I didn't want to leave them. I felt a deep sense of peace and love through me, around me and as a part of me.

Fairydust's Interview

So, yeah, there was so much intertwined with it, and when I came to do the NDE… I was kind of experiencing the massive aftereffects of dealing with anxiety. (…) Afterwards I was feeling more settled.I really wanted to connect with you again, because I would be willing to explore more to be so out of your body and also so grounded. And a lot of the fear was took from me, at that point in time.

Pixie-K's Interview

They were both able to feel their bodies were left behind, as in an OBE, but the experience of seeing reality from another perspective lasted beyond the moment of return:

> *I felt their reassurance, love, and a peace so intensely, I didn't want to leave them. However, the large hand pulled me gently back into my body where I awoke to the researchers and the lab room. It was a shock to be back to the real world, back in my body, but I found I didn't mind as the intense feelings I had experienced were still with me.*
>
> **Fairydust's Report**

> *The ease with which I found I could get out of my body doing that meditation, was really valuable, I think, along with pretty much everything else, because I understand it is just a point of view and there is just this stream and the flow, and it really helped me understand more about energy…*
>
> **Pixie-K's Interview**

The experience was so positively overwhelming that the thought of not coming back and stay immersed in a source of unparalleled love and peace was, at some point, considered. Despite being tempted to stay, Fairydust felt a strong encouragement to return and continue her healing process, and Pixie-K reminded herself of the daughter she wanted to come back to:

> *It was such a beautiful, beautiful feeling, I just wanted to stay there forever with him, and he was 'Ok, no, you have to go, you should be fine, but I'm with you anyway'. He knew I needed to feel that intensity, I think, to give me strength…*
>
> **Fairydust's Interview**

> *I could hear Sofia and Mário but there was no other I could recall. Totality. I was met by two light beings, giantforms – Angel? Alien? – very beautiful with warm light, who were guiding me along towards the light. I was completely ready and willing to surrender. My thought was, 'I could stay, it*

would be fine', then immediately thought of my daughter, then Sofia's voice very clear 'I am bringing you back'.

Pixie-K's Report

For both, the messages they received had a telepathic nature and were transmitted through intense emotions rather than words. The content was unquestionable, as well as its sense of truthfulness:

I knew they were talking to me even though they didn't speak, I felt they were saying I was going to be fine and to trust those around me. I felt this was said in images and feelings rather than words and each image was given with flashes of loving emotion.

Fairydust's Report

(…) but it was not like we are talking now, he was talking, but there was no doubt in my mind, so I remember not wanting to leave.

Pixie-K's Interview

This truthfulness also came in the form of changes they felt in their psychological structure and worldview. Both felt a strong encouragement to continue their healing journey with renewed courage and bravery. Fairydust received a clear guarantee her healing would succeed, which eventually happened. Pixie-K believed her anxiety caused by an abusive relationship was entirely cleared:

Fairydust - *I sensed this rather than saw them as an image.*

Sofia: *What was his message?*

Fairydust - *That I would be ok, I would be ok… and I had to keep faith and he was with me. It wasn't in words, it was in emotion.*

Sofia: *Your grandmothers also came with a message?*

Fairydust - *Yes. I think it was a reassurance, she was happy and, again, it was the same as my grandad, 'You will be fine, you will ...'. She almost said, 'you are needed there, don't worry, don't worry, don't be too impatient, you are nearly there'. But it was more a reassuring, a nurturing, more than my grandad's kind of 'You will be fine' (speaking in a matter-of-fact tone), it was a lot softer and gentle.*

Fairydust's Interview

(…) *It manifested properly in my life, it actually did, I think that I am still benefiting from it now, and even though… I imagine it would not perhaps be as strong, because I was not actually in peril, but I think it's the same thing. Essentially, where I travel to, you don't have a body, it really makes no difference whether you're snatched and put into that place or you travel to that place. But, yes, I really felt a massive, profound, massive effect. But it wasn't anything new either …*

Pixie-K's Interview

For Fairydust, the authenticity of the experience also came from factchecking, with her mother, some odd elements she was not able to make sense of. A few vivid details, that seemed meaningless to her were, after all, imbued with significance she could not apprehend without further information. Fairydust declared being previously unaware of the fact that her grandfather had black scars covering his hands, from the bruises he suffered as a coal miner. As she was also unaware her grandmother had been the prized leader of a women's rugby team in her youth. By understanding what they were, came a stronger feeling of legitimacy regarding the experience,

that was already grounded on the positive emotions and psychological transformation that resulted:

> *Three days after the experiment I asked my mum about specific details I remembered about my nan and grandad. Firstly, I described the outfit my nan was wearing, a blue and white stripped sports top, and explained I did not understand why she would be wearing such an item of clothing. When she was alive, I remember her wearing much more traditional clothing such as flowery dresses. My mum informed me that my nan was a sports captain of the women's cricket and football club for the company she worked at called (…). She said there was a photo of this in one of the photo albums she had in the attic wearing a top like the one I had described. I then asked her whether I had been shown this as a child at any time and she replied no, as they were tucked away in the attic. I queried again about whether they had talked about this when my nan was alive and mum said it was not something my nan talked about, she was more interested in the present. (…) The last thing I talked about was the hand which led me to and from them. I must admit I was particularly puzzled and confused by this part because the hand was quite scary to look at, but I had felt enormous love and reassurance by it. I described a gnarled hand which black scars. My mum got very teary at this point and said it was my grandads' hand. I asked her how she knew this, and she explained that my grandad had been a coal miner all his life and the reason the scars were black were because coal dust would get into the wounds whilst they were healing. This meant her dads hands were arthritic and covered in black scars. I considered I knew about my grandad's profession but as he died when I was two, I had not thought about what that meant to his hands. I find this part particularly difficult to explain.*
>
> **Fairydust's Report**

This confirmation, in real life, had the same psychological impact that veridical perceptions have in spontaneous NDEs, when NDErs acquire knowledge of a previous fact, that is later confirmed by a third party (Parnia et al, 2014; Van Lommel et al., 2001). This theme will be further approached in the discussion section.

Concluding this section, it is safe to say that by using TA, the mystical theme unfolded from words and expressions used to describe the subjective experiences of both participants, taking place in a non-material dimension beyond the physical realm, after feeling as they had left the body behind. The transcendental nature of induced NDEs had already been supported by the previous chapters' conclusions (*see* Section 6.7.). However, their narratives reinforced them, by pointing to intense transcendental experiences defying non-ordinary reality, logical thinking, cause-effect laws, and linear time and space notions, as reported in the literature classifications of mystical episodes (Hayes, 1997; James, 1902; Stace, 1969; Underhill, 1912/2020; 1914).

Within the experience, and bereft of their physical body, their identity and sense of reality came from positive feelings and emotions, and not from thought, judgement, or logical reasoning. And even though they had no mental frame of reference to explain what they went through, its veracity was undoubtful, for the hyperreal quality of the experience, much as it happens in non-induced NDEs. Greyson (2000: 334) pointed out that NDErs who suffered from hallucinations prior to their NDEs, described their otherworld experiences as '*more real' than the world of waking hallucinations*. In such subjective states, it is said that awareness, by itself, *contains reality and the notions of an external reality and a separate self are perceived as delusions*. (De Castro, 2017: 34). For them, their experience was beyond any doubt.

Fairydust had no doubts about her grandparent's aliveness in another dimension, as Pixie-K had no doubts about what she called her strong inner 'essence', confirming previous ideas she held about life, death, and energy. They were not confused by the apparent lack of logic of their journey, or by the fact that time and space lost relevance. In fact, even though paradoxical (Stace, 1960), mystical experiences are not confusing or disturbing, because people pass *from a less into a more, as from a smallness into a vastness, and at the same time as from an unrest to a rest. We feel them as reconciling, unifying states* (James, 1902:416). New knowledge was gained, even though in a non-rational, non-perceptual manner, but through revelations or feelings, however self-contradictory

or paradoxical, causing some level of transformation, which is at the core of the mystical experience, that some authors compared with spontaneous NDEs (Greyson, 2006; 2007c; 2014; 2014a). In Appendix 26, more detailed information on how induced NDEs can be compared to mystical experiences, according to Pahnke's (1969) nine categories was provided, supporting the following conclusion: induced NDEs seem to share the same experiential features as mystical experiences (Greyson, 2007c; Pahnke, 1969), leading to the conclusion Pennachio (1986) reached regarding spontaneous events. He concluded that NDEs had the same kind of self-transformative effects and psychological restorative function as mystical experiences, thus facilitating unexpected, profound, and crucial renewal and transformation (*idem*, 1988). This topic will be approached in more detail in the discussion section below.

7.4.3. Theme 2- Spiritual Maturity

Fairydust and Pixie-K were already familiar with NDEs and other spiritual themes and practices, including the use of NOSCs. Not only because of the healing journey they had embarked on, but also because they had, since early childhood, manifested uncommon abilities regarding non-ordinary experiences, that stayed with them as they matured. Their interviews confirmed they were not newcomers in spiritual explorations, that they blended well within their everyday reality. Such experiences had positive consequences in their lives, so they were especially motivated and hoped for a good result. It was evident that some sort of spiritual savviness seemed to differentiate them from other participants, and that this was an aspect worth exploring in depth. The interviews confirmed the importance of personality aspects that were highly suggestive of something looking like 'spiritual savviness'. However uncharted this theme is, in terms of theoretical constructs it was empirically possible to detect words and expressions that could

somehow develop ideas explored in the literature review under the concept of *spiritual maturity* (Genia, 1991; 1997), that found translation through an assessment scale (*see* section 2.11.)

The criteria used for building SEI, the Spiritual Experience Index (*idem*) were devoid of any religious or moral connotation, even though they were theoretically supported by religious research. Indeed, they seemed to be connected with immutable ethical principles derived from Natural Law (Huxley 1945/2009) and could be easily used as a neutral theoretical framework to organize the interview material. A recent psychometric review confirmed an underlying structure and corroborated SEI's (Genia, 1991) validity and reliability as a spirituality measure for *persons holding diverse spiritual beliefs* (Eyer et al, 2018:334). Thus, the qualitative exploration led towards a theme coined *spiritual maturity*, considered as a theoretically viable construct offering promising avenues of research. Within this framework, their *spiritual maturity* showed up from their background, previous experiences, and their discourse around them. Some of these elements will be highlighted in this section, following the procedure outlined in Section 7.3., and through examples reflecting the influence of this personality aspect. For Fairydust, her family background included a considerable amount of what could be seen as extraordinary events, that might have provided her with enough openness towards new experiences. She claimed that, along her maternal lineage, there was a predisposition to have so-called psychic abilities:

> *I know my Great Grandma she used to do psychic readings and my Nan was psychic to. Not that she would do anything with it, but she would know if my Grandad had a collapse on him in the mine and she knew about it, and she knew before it happened.* (…) *My Mum has the same thing, she is not as open though, she is quite frightened by it, because she says she only sees bad things, she only sees when people die, or bad things happen. So, she doesn't want to explore it. She doesn't see the good part.*
>
> **Fairydust's Interview**

Both claimed to have contact with what they felt as 'spirits' since childhood. Such contacts felt normal, and they considered them 'normal'. Fairydust thought this was something that other people might have, and Pixie-K was supported by her mother, who helped her growing up not thinking of herself as insane:

> *I, however, from the age of… as far as I can remember, and probably even way before that, I have always seen people and I have always been able to predict the future. I did that quite a lot. I used to talk to people at bus stops that weren't there. Lots of invisible friends yes, and my mum would not explore them with me because she was uncomfortable. As I got older, I just thought it was normal. I just thought everyone did it, you know, until I went to school and found people thought I was a bit odd and stopped talking about them, I think.*
>
> **Fairydust's Interview**

> *As a child yes, my mum would say I would always speak about 'My Man'. At about three I think, I would say, 'Mummy look, My Man's here, My Man's come'. I have always been aware of a man with me, always, but nor overly, just like a companion really. And at some point, it was like a whole tribe of people* (…) *They just thought 'this is Katie being weird', she would never really go into it, to be quite honest, she accepted whatever I would say and would not be freaked out with it.*
>
> **Pixie-K's Interview**

These abilities did not disappear, but they reacted differently to them as they matured and discovered that their 'gifts' were uncommon. Fairydust felt, at some point, she should hide from prejudice, and Pixie-K struggled during her teenage years, a time when she felt isolated and alone:

> *I'm happier now in myself but I still see people. But I went through a very… kind in my thirties, where I felt as though you were condemned for it, and people were very, I don't know, quite nasty, if they thought you were, you know, drivelling with ghosts or things like these you know… I learned not*

to talk about it, shut it off a little bit, but now I learned to celebrate every aspect of myself, and I don't mind, I think they are there to help …

Fairydust's Interview

I didn't, again, because it was always there, it was so familiar, I didn't ever question it, ever, sometimes I felt it really powerfully and couldn't make sense of it, that was the most worrying thing I felt, 'I can't make sense of this energy that I can feel'. That was the thing that used to disturb me more, feeling the energy in the first place, you know.

Pixie-K's Interview

Both are now at peace with this aspect of themselves, having embraced it fully: For Pixie-K, it was more difficult to exist in ordinary reality, with all its demands, than in her usual non-ordinary states. For her, the narcolepsy facilitated her non-ordinary experiences: by being outside her body with so much ease, she felt she could have contact with different planes of existence.

Just another gift, I don't worry about it now, but I did struggle in my twenty-thirties.

Fairydust's Interview

No, I think that this is where I reside, generally, and I think it is just a lot more difficult to make sense of things here than with things elsewhere… I am more comfortable with the other side because everything is more complete, there are no expectations, and you can just be, it's a whole different journey. Here you have to fit into this mould or into this job or reach for this goal, or whatever, but I don't want to fit into that, I'm not that sort of person (…)

Pixie-K's Interview

(…) *but I think that element of narcolepsy is the thing there… I guess you could explain it away as an hallucination which is what they say when you have narcolepsy, but I think that more than explaining it that way, it is actually more like a channel opening.*

Pixie-K's Interview

Both described having non-ordinary experiences in the dream state. Pixie-K described something happened to her in the past in a dream-like experience, when she was much younger, around 17 years-old, much alike a 'spiritual surgery', where negative emotions were removed from her body, turning her into a positive and optimistic person:

The other aspect is that I have dreams, I have very vivid dreams, where I predict the Future.

Fairydust's Interview

I could best describe it as a doctor, or more than one, they were so many in my room, it was like a full-experiment thing, they asked for consent and everything. I consented to it. (…) it was important, it was like pulses of energy and on the next day I felt better, cleansed…

Pixie-K's Interview

Pixie-K became a very proficient lucid dreamer, when she feels she is working in a different plane of existence where she sees herself using her hands a lot, and being so active to the point of waking up exhausted:

(…) *and now when I dream, I sometimes wake up exhausted, like I have work to do. I go places and I work. I can't describe it, sometimes I have things on my fingers and I have to check, I've got stuff to do, it's really weird, and I have to remember to remove whatever I have in my hands before I wake up.*

Pixie-K's Interview

They also claimed having precognitive gifts, manifested in the ability to prevent accidents or intuitively knowing that tragic events had happened. For Fairydust, she thought she was able to prevent her husband's involvement in several car accidents, that eventually ended up happening, but without him being affected. According to her, some friends benefited from this ability, by not questioning her premonitions and acting accordingly:

> (…) *So, that was Tim's first awakening to me being able to do it. And after that we had lots and lots of occasions. So, I used to see if he had an accident in a car. Numerous occasions I would take the keys and say 'No, you're not going today'.*
>
> **Fairydust's Interview**

Pixie-K also sees some usefulness in having unusual experiences, like pre-cognitive perceptions, for their preemptive role, and she is used to follow her insights, for their life-saving qualities:

> **Pixie-K -** (…) *Honestly, I can feel it before, and it doesn't feel very nice. And this time I wouldn't get into a vehicle, I didn't want to, but then I was thinking I would never get home bla, bla, bla, and I got into the vehicle, there was this massive car accident, two people in the hospital, one person on a stretcher you know… I ended up sitting forward and knew we were going to have a crash, sat forward, and when the metal went through, if I had not been sitting in there it would have killed me…*
>
> **Sofia–** *You knew where you should sit?*
>
> **Pixie-K–** *Yeah, and all this mangled vehicle had this safe little hole and that's where I was …*
>
> **Interviewer –** *You knew you had to bend and cover you head?*
>
> **Pixie-K –** *Absolutely. Stuff like that happened quite a lot.*
>
> **Pixie-K's Interview**

Fairydust, with this attitude of accepting non-ordinary 'messages' as signs not to be discarded, felt blessed for this access to other sources of knowledge, which nature she does not feel compelled to understand, but bound to respect. Some events seem to her unavoidable, as her accident was, for which she did not receive such messages. She was never scared, confused, or overwhelmed, since she has been able to understand her experience as part of her life purpose, which would be to help people in a similar condition to benefit from a more holistic approach to healthcare:

> *I know I've got two areas where I want to share my story and I want to show people that medicine is not just physical. There's a huge amount of recovery that's psychological and spiritual, more spiritual than psychological, actually... Because my transformation with my health, doctors don't understand it. If you look at my x-rays and my scans, my spine is ravished, there shouldn't be any signals going through, I shouldn't be walking, I shouldn't be moving my legs at all. Yet, they see me doing the things I'm doing…*
>
> **Fairydust's Interview**

By matching the quotations above with grounding criteria, it was possible to conclude that both participants *had the internal resources that allowed them to develop a mature spiritual commitment* (Genia, 1990: 338). In fact, the criteria were present long before the experiment, as they demonstrated to be well committed to their spiritual development since their younger years, because their life story pushed them into a path of being in a constant relationship with transcendent aspects of life.

Their maturity probably came from a precocious need to adapt to and overcome challenges regarding their forced relationship with transcendental aspects of life. However, this connection developed in a healthy way, and they did not show signs of pathology or non-adaptative behaviour. Even Pixie-K found a way to deal with her narcolepsy diagnosis without significative

disturbance, even though she was very critical of the current medical approach towards her condition.

Even if spiritual struggles can be present in many ways (Exline, 2013) and be the focus of clinical attention (Prusak, 2016), for them the relational aspect of spirituality has been a beneficial source of emotional support, especially when they battled with challenges. They did not show, throughout the interview, any evidence of having struggled with any aspect of their spiritual lives, or wished things would have been different, apart from having been somewhat afraid of criticism. Their spiritual stance towards life is not pathological in anyway. In fact, it corresponds to what Jung proposed regarding the process of inner work towards psychological wholeness, or individuation, by using the transcendent function, *because it makes the transition from one psychic condition to another by means of the mutual confrontation of opposites* (Dehing, 1993). With an observing side of their personality as a reconciling entity, able to explore dreams, visions, symbols, and patterns beyond conventional worldviews and systems, the encounter with something greater than themselves became possible. In Appendix 27, a correspondence was made between citations from their reports and interviews, and the criteria used for the development of SEI (Genia; 1991; 1997). Supporting the conclusion that a personality trait related to the participants' level of spiritual maturity, might have predisposed them to have a mystical-like experience, as a result of the hypnotically induced NDE. The exploration of this sub-thematic unit goes beyond the scope of this investigation. However, the topic will also be approached in more detail in the discussion section below.

7.5. Overall Conclusions

Following on the conclusions coming from the quantitative segment of this study, the hypnosis protocol was considered adequate to induce an event phenomenologically similar to a NDE,

where the participants were able to experience its core elements (*see* Section 5.6). The fact that a hypnotically induced episode shared most features with spontaneous NDEs was confirmed following the exploration of open-ended questionnaires, using TA as a methodological tool. The qualitative analysis also corroborated the fact that an induced episode followed an affective trend and was filled with significative transcendental elements (*see* Section 6.5.).

But for two participants, pseudonymized as Fairydust and Pixie-K. the impact of the experience was deeper than for other volunteers, in terms of transcendental phenomenology and aftereffects. They both reported stronger episodes, according to the NDE Scale (Greyson, 1983), resembling anecdotal reports of mystical experiences, suggesting that this intensity might have changed their relationship with sacred aspects of life: according to SHALOM (Fisher, 2010), an increase in the *'Ideal'* and '*Lived'* dimensions of the *'Transcendental Domain'* was observed in both. This experience might even have contributed, in Fairydust's case, for the development of a more positive outlook on death, according to the DAP-R (Wong, Reker and Gesser, 1994) results, which Pixie-K-already possessed. They were already experienced in so-called spiritual themes, revealing some sort of savviness that might have facilitated the occurrence of more intense experiences. And, because both were pursuing a healing journey, they had set clear therapeutic intentions for the session. Together, all these elements justified the decision to investigate their cases in some depth. By using semi-structured interviews, the goal now was to collect as much data as possible to answer two new research questions, built upon the conclusions extracted from the previous chapter:

> a) Is it possible that, according to the participants perception, the same phenomenology of mystical experiences could result from a hypnotically induced NDE?
>
> b) Is it possible that a personality trait, related to the participants' level of spiritual maturity, might have been present, predisposing them to have a mystical-like experience, as a result of the hypnotically induced NDE?

Spontaneous written accounts and oral interview transcripts were used as data sources for the case studies and, through them, their personal background, previous experiences, the experience's contents and aftereffects were explored in detail. The semi-structured format of the interviews was flexible enough to gather a relevant amount of data about unanticipated aspects (*see* Appendix 14). The methodological option for TA (Braun and Clarke, 2006) revealed itself to be correct, as it was possible to identify, within the data set, keywords and expressions related, on the one hand, to mystical experiences and, on the other, to indicators of spiritual maturity (Thomas and Harden, 2008).

7.5.1. Regarding induced NDEs as sources of mystical experiences

Mystical states are said to be ineffable as conceptual speech is built upon logic and not upon feeling or intuition, which are predominant in these states. However, Fairydust and Pixie-K found their way in narrating their inner journeys (Yaden et al., 2015), characterized by the 'four marks of mysticism', as James (1902) called them: a) *ineffability* and b) *transiency*, c) *passivity*, and d) *noetic quality*, all translated into a non-permanent state of insight into depths of truth, illumination, and significance. This aspect gained special relevance with Fairydust's physical healing, that she believed came through the loving connection with her dead relatives, who manifested themselves in such a way that left her with no place for doubting.

Very explicit mystical features are normally comprised in accounts of people, who not only believed they were temporarily dead, but that their experience was more real than reality, as it happens with veridical perceptions (Greyson, 2010b; Parnia et al, 2001, 2014; Ring and Cooper 1997; Sabom, 1982; Sartori, Badham and Fenwick, 2006; Van Lommel, 2001). Regarding these, Ring and Lawrence (1993) affirmed that NDErs sometimes describe unusual objects beyond the

range of their normal physical perception, from an out-of-the-body perspective, and that later are reported to exist.

Fairydust's experience was not classical, in the sense that it did not translate into a real perception of an existing object, but through the acquisition of information, by non-ordinary perception, she declared not having before. Through the confirmation of the odd details shown by her grandparents, her experience could be compared to veridical perceptions, as they have been reported in spontaneous NDEs (Holden, 2017), even if compelling evidence about them is still lacking (Augustine, 2007; Parnia et al., 2014). So, this is not to say that this mysterious event proves the authenticity of her experience, that might be explained by natural causes, like repressed memories coming to awareness (for a debate: Clancy and McNally, 2005/2006). Instead, it is meant to reinforce the strength of the transformation process that followed her experience. The uncovering of memories is, often, the ultimate goal of hypnosis, and it cannot be excluded that it might have happened in this situation (Landry, Appourchaux and Raz, 2014).

More patterns of significance emerged from the mystical theme using TA, and a correspondence was made with Walter Pahnke's (1969) nine universal elements of mystical experiences: '*unity'*, '*transcendence of time and space', 'deeply felt positive mood', 'sense of sacredness', 'noetic quality', 'paradoxicality', 'ineffability', 'transiency'* and *'persisting positive changes in attitudes and behaviour'*, were found in both cases. They were, one by one, treated as subthemes and illustrated with examples from the two participants cases. Even if for Fairydust the non-sensuous experience of unity of all things, said to be the hallmark of mysticism (Hayes, 1997; Hood, 2013), was not totally and explicitly present, the dissolution in her dead grandfather's embrace could be considered as a mark of introvert mysticism: as Stace (1960:79), puts it, the discovery that the One *as being an inner subjectivity in all things, (…) nothing is really dead'.*

From the analysis of the mystical subthemes (Appendix 26), it was possible to conclude that, by following a certain pattern attributed to mystical events (Pahnke, 1969), induced NDEs could

facilitate the same quality of experience as spontaneous events. Pahnke's (1969) typology was originally built to classify psychedelic induced mystical experiences, but Pennachio (1986) had already made a correspondence with the outcome of NDEs. In this sense, induced NDEs seem to be no different from spontaneous events, as they might also be an adequate vehicle to facilitate the same type of mystical effects. *As NDErs are transformed when united with the Light, so are mystics* (Cressy, 1996: 380). In fact, there is no reason to think that one experience is less mystical than the other, depending on the nature or origin of the trigger: the effects should not be considered of a lesser quality because the NDE was not 'the real thing'. For Pennachio (1988), NDEs could be responsible for awakening self-renewal and transformation capabilities. For him, what he calls an altered state of consciousness, *carries the potential for transformation because it erodes culturally induced ego control, thereby eliminating the restrictions imposed on ego and the psyche* (*idem*:163-164).

It seems that NDEs, whether induced or spontaneous, as probably many other NOSCs, carry the ability to cause profound transformations. In fact, this result can probably be attributed to the aptitude of induced NDEs to facilitate states of awareness that, by loosening the grip of psychological defenses, catapult subjects to a new level of understanding, preparing the ground where seeds of emotional growth can flourish. It was the case with these two subjects, because as transient as the episodes were, an afterglow remained. The intensity, depth, and overwhelming emotional quality of their experience left a persistent psychological trail that could be returned to at will, as well as in the form of important memories with life-changing impact. This possibility of renewing the feelings they had also convinced them of their truthfulness, as well as the changes they perceived in the way they viewed the world, others, and themselves which cascaded into physical improvements.

It seemed that something was irrevocably transformed after the session, in a way that addressed their needs at that time, coinciding with the healing intention set for the session. For Fairydust, the healing came in the form of recovering the use of her legs, that she attributed to the courage

and strength she gained from her grandparents' message. For Pixie-K, reconnecting to her 'true essence' (*sic*), not only gave her a renewed sense of self-esteem and courage but allowed her to leave behind any traces of fear or anxiety. In her own words, she became able to heal from the consequences of an abusive relationship. Healing can be conceived, here, as the concept *of recovery or repair from dysfunction and / or injury* (Gilbert and Gilbert, 2011:112). This unexpected outcome raises several questions about the possible mediation of psychological processes in activating physical mechanisms of recovery, sometimes equated with spiritual or faith healing, and the intervention of a benevolent connectedness within the mystical experience. In spontaneous NDEs, people often return *from ecstasy healed of any illness and stronger and more energetic than before* (Cressy, 1996: 375). The exploration of the spontaneous healing theme is beyond the scope of this chapter, even of this thesis, and sometimes even outside the limits of scientific possibilities, but it is an interesting and unexpected turn of events that could be considered in future studies. Concluding this section, we can say that the case studies made it possible to observe that as induced NDEs are no different from spontaneous events in terms of phenomenology, they also seem to be an adequate vehicle to facilitate the same mystical quality (Cressy, 1996). In the final discussion chapter, this theme will be returned to.

7.5.2. Regarding spiritual maturity as a facilitating variable in induced NDEs

Even if these two cases pointed to the conclusion that hypnotically induced NDEs might facilitate mystical experiences, the truth is that not all situations should be treated as similar. Even in non-induced events, *most NDErs have not attained the heights of spiritual consciousness. Consequently, while many have had profound mystical experiences, none is a perfected saint* (Cressy, 1996: 372). Assuming this is so, there is no reason to suspect that a different result should be expected from induced

NDEs: some participants should have more intense and meaningful experiences than others. Hence, the fact that two participants, within a sample of 19 volunteers, had stronger mystical experience, led to formulating questions regarding the possible existence of predisposing traits. Especially because they were more at ease with spiritual themes and NOSCs than other participants. Additionally, because they were aware of the healing potential of spontaneous NDEs, they had set clear intentions for the session. Such features differentiated them from the rest of the sample.

In psychedelic research, the well-known *set and setting hypothesis* holds that the individual effects of such substances are dependent upon *set* (personality, preparation, expectation, and intention of the experiencer) and *setting* (the physical, social, and cultural environment). Such concepts have been largely discussed in this specific field since the 1960's, as a contribution to the question on why the effects varied so much, even though considerations about *extra-drug variables have been an integral part of the use of psychotropics since the prehistory of medicine* (Harthogsen, 2017:2).

The same discussion could be extended to other contexts, not related to substances, but to the NOSC field in general, where variables beyond the vehicle of induction are also relevant. Rosegrant (1976) investigated the impact of set and setting on religious experience in nature; Fromm et al. (1978) attempted to explore such variables with the phenomena of self-hypnosis; and, more recently, Lemercier and Terhune (2017) validated the power of hypnotic suggestion to act as a *set* regulator and modulate the psychedelics response, to enhance its therapeutic efficacy by *helping to increase the likelihood of positive responses, including mystical-type experiences* (*idem*:1)

Therefore, beyond the controlled setting for the hypnosis session, as equal as possible for all participants, there should also be personal variables explaining the variation. With these two participants, their strong relationship with spiritual issues seemed to be a differentiating factor, and a *set* variable worth exploring. The results of the interviews did not disappoint and opened the way to establishing a theoretical link between their 'spiritual savviness' and more intense

experiences. Starting from an empirical investigation of words and expressions that expressed several ideas from the literature review (*see* Section 2.11.), TA revealed elements that were highly suggestive of some level of savviness. In this context, and because there was already some research regarding a corresponding personality trait, the theme was labelled *spiritual maturity* (Genia, 1990, 1991, 1997).

It was then possible to detect a cluster of evidence, revealing a predisposition to deal with spiritual issues, that has probably facilitated their ability to be receptive and easily engage in the hypnosis process. Such predisposition existed since early childhood, that later developed to some sort of said 'psychic abilities', manifested through dreamwork and admonitory premonitions. Both grew up in a welcoming environment regarding paranormal 'gifts' and did not experience prejudice within their family. Eventually, they learned to fully embrace this aspect of themselves and, enjoy it even. However, they showed different degrees of adaptation, and Pixie-K has struggled to be at peace in ordinary reality because of her narcolepsy. Her condition, diagnosed in adulthood, was probably another strong facilitator of the experience, as it trained her in leaving the body, the first step of an NDE, according to Ring's model (1980;1984). These precocious signs, in both, matured into a more evolved form of dealing with an uncommon psychological structure and encompass their spiritual 'gifts' as part of their identity: they both learned to look at the world from a bird's eye perspective, especially concerning precognitive perceptions, that they felt should be respected and followed without questioning. Along their lives, and due to many non-ordinary experiences, they learned to trust what could be called a 'Higher Intelligence', which led them to formulate a healing intention for the session and believe in a possible outcome. These indicators led to the development of the spiritual maturity theme, and from here, several thematic clusters were formed, re-organized and labeled, according to a pre-existing theoretical structure, corresponding to the criteria for the development of the Spiritual Experience Index, SEI (Genia, 1991), and its revised version, SEI-R (Genia, 1997).

In the literature review chapter (*see* Section 2.11 and 2.12.), the question of how the concept of spirituality in psychology has evolved was discussed: from its initial enmeshment with religion, until being considered as a useful personality dimension, when it comes to studying well-being, health outcomes, and new interventions (Koenig, 2012; Koenig, McCullough, and Larson, 2000; Piedmont, 2001; Piedmont et al., 2009). However, closely associated personality constructs, like *spiritual openness* or *spiritual maturity* are lacking, in terms of theoretical foundations and investigation (Eyer et al., 2018). The existing *spiritual maturity* assessment tool, SEI (Genia, 1991) suffers from the same lack of rigueur, since it was built years before a conceptual distinction was made between religiosity and spirituality. However, the grounding criteria on which the instrument was built were devoid of any religious connotation and are applicable both to religious and spiritual themes (Genia, 1991). Thus, they provided for an adequate framework for the TA, that supported the conclusion that Fairydust and Pixie-K were functioning at a mature psychospiritual level. The fifth and highest stage of the proposed developmental model absorbed by SEI (Genia, 1991), called *transcendent faith*, describes those individuals who are well-integrated and autonomous in terms of their spirituality, and are not likely to enter therapy with religious concerns. The two participants demonstrated a healthy blending regarding several aspects of their experiences, profusely illustrated across this chapter and in Appendix 27, with their deep commitment towards a transcendental reality. Both showed signs of higher levels of faith development meaning that, at this stage, they moved and acted according to principles of perennial philosophy, used as a life compass (Genia, 1990). And this, according to Underhill (1912/2020) is the mechanism of the mystic, which is not passive in type but active, *possessed like other man of powers of feeling, thought and will, it is essential that his love and his determination, even more than his thought, should be set upon Transcendent Reality. (…) Of this must be born the will to attain communion with that Absolute Object* (*idem*: 54).

At this stage of spiritual development, a closer relationship with the transcendent is also facilitated. In the case of their induced NDE experience, this involvement manifested through their intention for the session, that probably functioned as a psychological gateway, facilitating the passage from an ordinary to a NOSC. By going beyond the threshold or ordinary reality, they were able to obtain a *characteristic outlook* (Underhill, 1912/2020:55) on reality, tainted by the mystic's lens.

From the TA, the conclusion cannot be another than that their level of spiritual maturity and their general attitude towards transcendental matters, adding to their previous experience, facilitated the mystical tone of the event. Both seemed to be in a constant state of readiness, probably even at a psychophysiological level, especially in the case of Pixie-K with her narcolepsy diagnosis. This permanent relationship with the transcendental element might have put them in an advantageous state compared to other participants, not only in terms of having an experience, but also in interpreting and integrating it in their life context. The positive results they declared regarding their health and well-being status, supported the results of a number of studies investigating the relationship between spiritual well-being and the improvement of psychological functioning and disease adjustment (Chandler, 2012; Klein at al., 2016; Koenig, 2008; 2010, Lancaster and Palframan, 2009).

The conclusion points to the existence of a positive link between the ability of hypnotically induced NDEs to facilitate mystical experiences, in the same way as true NDEs (Pennachio, 1986; 1988) in a certain type of participants, with certain personality traits, that seem to influence the experience. In case, spiritual maturity personality traits that, in turn, seem to generate a favourable attitude towards transcendental themes. This last aspect deserves further exploration, in the sense that it might exist a specific group of people who could benefit more from such experiences and their transformative effects. This led to the idea of adding another step to this research study, by collecting further data from a sample of self-designated spiritually mature participants from a convenience sample of individuals recruited from so-called spiritual groups.

Such participants would possess, in principle, traits of spiritual maturity that would, hypothetically, facilitate deeper experiences using hypnotically induced NDEs. This investigation, that will be labelled as Study II, will be the theme of the following chapter. But before that, a reflection about the use of TA is in order, before advancing to the next chapter.

7.5.3. A Few Reflections around the use of Thematic Analysis as a qualitative tool

This new section was included after the Viva exam to address some concerns that the examination panel legitimately raised, regarding what might be considered a less than optimal use of Thematic Analysis (TA). *The authors should discuss how they attempted to avoid bias in their analytic process*", was a comment that gave birth to a recent Braun and Clarke's (2021) set of guidelines regarding quality when using TA (Braun and Clarke 2006). This is what this discussion is about, as it takes under consideration the fact that a common problem that is sometimes pointed out in this type of analysis, is the possible projection of a desired outcome onto the collected data that, in the end, would constitute not much more than the end-product of a self-fulfilling prophecy grounded on the researcher's wishful thinking.

As stated in the end of Section 6.6.2., the following reflection aims at discussing the qualitative results emerging from Study I, including the open-ended questions and interviews qualitative thematic analysis. Braun and Clarke (2019; 2021), in fact, came to prefer the term reflexive thematic analysis to mirror how their procedural reasoning has evolved, to help in keeping researcher's subjectivity in balance. The reflexivity part, *emphasises the importance of the researcher's subjectivity as analytic resource, and their reflexive engagement with theory, data and interpretation* (Braun and Clarke, 2021: 330).In this sense, some analytical reflection on the researcher's role in creating the themes is deemed necessary when using TA, where projecting onto the data in order to create perfect themes is always a possibility, instead of realistically assessing if the themes are really

capturing elements that were not, in our case, echoed by the quantitative measures (*see* Section 6.6.1.2.). Some key issues to consider are the degree to which (i) the themes reflected the structure of the open-ended questionnaires and interview and can be evidenced transparently in the presented data; or whether participants were filling in the blanks (social desirability) when answering to the open-ended questions, by using phrases supplied in the induction, recruitment advertisement or Participant Information Sheet (ii) and if the thematic structure includes elements that were surprising to the researcher, contradicting expectations, or simply unexpected. Answering these questions depends on the method we used, deductive in the case of the top-down analysis, and inductive, in the case of the bottom-up analysis, which is more common. However, both methods constitute a legitimate approach to data analysis according to Braun and Clarke (2021:331): *it can be used for a more deductive or more inductive analytic process (recognising this can be a continuum, rather than dichotomy).*

Starting from the first question (i), on how the themes are true to what was being conveyed by the participants, the questions that might be raised concern their correspondence with a pre-existing theoretical framework, especially in the case studies, that were deducted from the data set, using top-down analysis, departing from models of what a typical NDE is, and from 'mystical experiences' and 'spiritual maturity' categories. With quantitative analysis, a pre-existing theoretical model often leads to the formulation of hypothesis, that can be confirmed or contradicted by the data. Here, even if the theoretical framework (Greyson, 1983; Pahnke, 1969; Genia, 1991), provided the ground upon which a top-down analysis was performed, we think that, when confronted with the evidence, where quotes were provided in each case, it was relatively clear, from the iterative process we followed (*see* Section 6.2.) that:

(i) the coding process flowed organically from the answers that were given to the questions that were being asked (open-ended questionnaires or interviews) and (ii) were naturally generated from the dataset, and not projected or forced into existence to fit a previous model.

It might be somehow obvious that considering the fact that NDEs are a mainstream subject nowadays, at least amidst a spiritually inclined public, and that the script referred well-known core elements, Theme 1 regarding *Common Elements of Spontaneous NDEs* (*see* section 6.6.1.1.) did not come up as a surprise. Indeed, there was a level of expectation that the participants would have a NDLE, considering that the induction was designed to facilitate it. And Theme 1 in Study 1 (*see* section 6.4.1.) confirmed the quantitative results demonstrating that a phenomenologically similar experience could be facilitated with hypnosis. This type of outcome was probable regarding NDE core elements, but not inevitable, considering the question that was asked about experiencing subjective elements (*see* Section 6.6.1.). The question was open enough to encompass answers that reflected suggested core elements, but also everything else that pertained to the participants realm of inner experiences and possibilities, however unexpected.

It is important to mention that it would always be difficult to separate, within the phenomenological outcome what was spontaneous from what was suggested. This question has other implications regarding the effectiveness of the tool, hypnosis, that will be addressed in the final chapter. Nonetheless, the best way to know if the experience was not entirely derived from information the participants already possessed or social desirability, would be to ask them for novel information. Which was done and eventually generated Theme 2, where it became clear that the answers were reflecting what was being suggested, as well as providing for novel contributions.

But, beyond what might have been projected by the participants, there is also the question of what might have been projected by the researcher, especially when pre-existing theoretical frameworks were specifically selected. Here, the concerns that might arise respect the choice of theoretical models, and how it respected the process of TA (Braun and Clarke, 2006) without subverting its purpose, in order to create a desired outcome. If the choice of the NDE Scale items was quite unescapable, the choice of the theoretical framework in the case studies analysis might be more controversial, even if the questions guiding the interviews aimed at finding out more about the

mystical contents and level of spiritual maturity of the participants. It was assumed, from the literature review, that NDEs could be spiritual and/or mystical experiences with a transformative effect, and that the identification of personality constructs related to spirituality might be relevant in terms of facilitating an induced episode (*see* sections 2.8 and 2.11). Therefore, the TA, and conceptualization of the case studies themes and subthemes, organized itself around two central concepts, mystical experiences and spiritual maturity, that were, in turn, structured by pre-existing guiding theories.

It might be argued that the theories were handpicked to fit the data, but the fact was that they were considered before the data collection, and even before the case study analysis was made possible by the unexpected results two participants provided: regarding Pahnke's (1969) 'categories of mystical experience', they had already been proven useful with 'true' NDEs and their self-transformative effect (Penacchio, 1986; 1988). These theories included a certain number of features, of what could be a mystical experience and a spiritually mature individual, and it was a conscious decision to assess if the data reflected them, even if this might be a less than common option. It would have been possible to use mystical models inspired from James (1902), Stace (1969) or Underhill (1912/2020), but as the interviews were so rich, Pahnke's model seemed interesting, however challenging. Regarding the concept of 'spiritual maturity', it was conceived as a useful construct in terms of an aspect that could be eventually taken into consideration *when studying induced NDEs, as some people might be better subjects than others, depending on the type of relationship they have with spiritual issues (*page 89). The volitive aspects of undergoing a process of spiritual maturation, proved itself relevant when the two cases studies, who had an evident relationship with the sacred aspects of life, were those who also had stronger experiences. This was when a decision to pick up on the construct of 'spiritual maturity' was made. NDEs are a spiritual experience, and it might be that hypnotically induced events, with a spiritual tone, could gain from a pre-existing personality structure. Much in the same way that other hypnotic experiences can be maximized by the presence of traits linked to a fluid

structure of consciousness such as *openness to experience* and *attention absorption* (Braffman and Kirsh, 1999; McRae, 1994; Tellegen and Atkinson, 1974).

It is true that other constructs could have been explored alternatively, indirectly related to spirituality, as the construct of self-transcendence, described as a transient mental state of *decreased self-salience and increased feelings of connectedness* (Yaden et al., 2017a), that is present in a continuum of experiences, including mystical-type, and that was adequately captured in the self-transcendence subscale of the Temperament and Character Inventory (TCI; Cloninger, Svrakic, & Przybeck, 1993). It is also true that other theories might have been used regarding mysticism also (*see* Hood*,* 2013), but the fact remains that what was we were looking for were subjective traits regarding spirituality, instead of indicators of an experience. Leading us to the choice of the criteria used for building the SEI Scale (Genia, 1991).

Nonetheless, the fact was that a coding process faithfully grounded on the interview material was undertaken, and it is up to the reader the freely determine the degree to which the thematic structure adequately maps onto the data. This can be achieved even considering that the participants were not living in a NDE uninformed void that would necessarily project itself unto the experience, and the research was grounded on certain theoretical premisses (including a script with suggested core elements). Even so, it does not mean the outcome was projected from pre-existing conceptual models. The proof here is in the pudding, and if the ingredients were previously listed, because pre-selected theoretical models with pre-established common patterns of meaning (Greyson, 1983; Pahnke, 1969; Genia, 1991) were considered before the data collection, there was no certainty whatsoever about the possibility of retrieving those same ingredients in the empirical material. Even if, in the case of core elements, there was the expectation that they might be present. The fact that theoretical premises do exist prevents neutrality, but that does not mean that bias is present and strongly influencing the result. Especially if the theoretical assumptions informing the analysis are

clearly stated, and the procedure is clearly outlined, to make sure that the themes are generated from the coding process and not the other way around.

Concluding this paragraph, it is our strong conviction that the themes reflected both the structure and the contents of the open-ended questionnaires and interview, and one more way to demonstrate it, is though the fact that the themes also included unforeseen elements, as an outcome of the bottom-up, inductive approach, that departed from the database and reflexively generated non-obvious themes, based on the fact that Theme 2 regarding '*Aftereffects and Insights beyond the Core Elements Framework of Analysis'*, was not expected, in the sense that it brought novel material that went partially against the quantitative analysis conclusions (*see* section 6.61.2.).

The use of TA, in Chapters 6 and 7, was both a theoretically informed process, mainly descriptive when using a top-down inductive approach through the lens of a pre-existing theoretical framework, and an interpretative activity, when using a bottom-up deductive approach, to create a novel, unexpected theme, without any immediate descriptive framework. In each case, a coherent narrative was hopefully built as an outcome of a transparent coding process, grounded on themes with a shared self-explanatory meaning. The fact that novel information did come up, contradicts any belief that the outcome might have been somehow projected, even if the evidence, given the low numbers of participants, was not as strong as we might have desired, especially with the case studies. With them, a bottom-up, inductive approach could have been also used, as in the analysis of the open-ended questionnaires (*see* Section 6.4.2.), to leave space for unexpected information to reveal itself, and this a valid critic that might be considered in future studies. We hope that, with this reflection, we were able to provide a clear account on the reasoning behind the use of TA and that, in the end, we feel we were able to honour the values and principles guiding our application of the method. But it is up to the reader, in the end, to decide how credible the analysis was, considering the evidence and the framework of analysis that was used.

7.6. Chapter's Summary

Following the quantitative and qualitative analysis from Study I (*see* Sections 5.6. and 6.7.), it was possible to conclude that the hypnosis protocol was adequate to induce an event phenomenologically similar to a spontaneous NDE. But for two participants, pseudonymized as Fairydust and Pixie-K., the impact of the experience was more intense in terms of transcendental phenomenology and aftereffects, according to the NDE Scale (Greyson, 1983). Thus, leading to the decision of conducting semi-structured interviews to investigate their individual cases, and answer two research questions, built upon the conclusions extracted from the previous chapter:

> a) Is it possible that, according to the participants perception, the same phenomenology of mystical experiences could result from a hypnotically induced NDE?
>
> b) Is it possible that a personality trait, related to the participants' level of spiritual maturity, might have been present, predisposing them to have a mystical-like experience, as a result of the induced NDE?

Thematic Analysis (Braun and Clarke, 2006) was used to explore the contents of spontaneous written accounts and interview transcripts, by the identification of keywords and expressions related, on the one hand, to mystical experiences and, on the other, to indicators of spiritual maturity.

Their subjective experiences pointed to transcendental inner experiences defying non-ordinary reality, taking place in a non-material, higher dimension, as reported in the literature classifications of mystical episodes (Hayes, 1997; James, 1902; Stace, 1969; Underhill, 1912/2020; 1914). Even though logic and physical laws could not be used to explain what they subjectively went through, its veracity was undoubtful, for the hyperreal quality of the experience and the

positive feelings it generated. As it happens in non-induced NDEs (De Castro, 2017; Greyson, 2000). Not only James' (1902) 'four marks of mysticism' were detected in their narratives (ineffability, transiency, passivity, and noetic quality), but Fairydust's account included previously unknown information that could be compared to reports of people who believed they had veridical perceptions while temporarily dead (Holden, 2017; Ring and Lawrence, 1993). Even if her subsequent fact-checking does not prove the authenticity of her experience, the mere uncovering of repressed memories with healing potential is, many times, the ultimate goal of hypnosis (Landry, Appourchaux and Raz, 2014) and depth psychology (Diamond, 1999; 2018). A correspondence of their experience was also made with Walter Pahnke's (1969) nine universal core features of mystical experiences that were, one by one, treated as subthemes and illustrated with examples. From the overall analysis, it was possible to conclude that, by following a certain pattern attributed to mystical experiences (Pahnke, 1969), induced NDEs might exhibit the same qualities of spontaneous events in terms of facilitating them, at least in some situations.

The existence of some sort of predisposing trait was put forward, as they were well-informed about spiritual themes and NOSCs and had also set a healing intention for the session. Using TA, a cluster of evidence revealed a stable predisposition to deal with spiritual issues since childhood, opening the way to establishing a theoretical link between their 'spiritual savviness' and an intense experience. Such predisposition later developed into some sort of said 'psychic abilities', which might have facilitated their ability to easily engage in the hypnosis and successfully integrate the experience within their worldview. In this context, and because there was already some research (Genia, 1990, 1991, 1997), the theme for a possible personality variable was labelled *spiritual maturity*. From this *spiritual maturity* theme, several subclusters were formed, re-organized and labeled, according to a pre-existing theoretical structure, corresponding to the criteria for the development of the Spiritual Experience Index (Genia, 1991, 1997). A correspondence made, between those underlying criteria and their discourse, reinforced the conclusion that Fairydust

and Pixie-K were functioning at a 'mature psychospiritual level', the fifth and highest stage of Genia's (1990). developmental model called '*transcendent faith'*. Demonstrating that they were well-integrated and autonomous in terms of their spiritual development, and able to foster a close and committed relationship with a transcendental reality. In the case of their induced NDE experience, this involvement manifested through their intention for the session, that probably facilitated the passage from an ordinary to a NOSC, where they were able not only to have an experience, but also interpret and integrate it in their life context and benefit from it in terms of their health (Chandler, 2012; Klein at al., 2016; Koenig, 2008; 2010¸ Lancaster and Palframan, 2009).

It seems, from the TA, that the conclusion cannot be other than that the evidence points to an interesting positive link between the ability of hypnotically induced NDEs to facilitate mystical experiences, in the same way as true NDEs (Pennachio, 1986; 1988) in spiritually mature participants. The relevance of this last aspect led to the possibility of adding another step to this research study, by collecting further data from a sample of self-designated spiritually mature participants. Who would, hypothetically, have deeper experiences using hypnotically induced NDEs. This investigation, that will be labelled as Study II, will be the theme of the following chapter.

Chapter Eight

Study II: Experiments conducted at Garden of Light Fraternity and Alma Soma

> *Exposure to otherworldly dimensions and scenes beyond the individual's frame of reference, sometimes includes revelations of greater truths. Seldom personal in content. Usually experienced by those who are ready for a 'mind-stretching' challenge, or individuals more apt to utilize, to some degree, these truths.*
>
> P.M.H. Atwater (1996:235

8.1. Background and Overview

In Chapter Five and based on the quantitative results of two combined samples of 19 participants, it was possible to conclude that the hypnosis protocol could be used to induce a near-death-like experience (NDLE), phenomenologically equivalent to a spontaneous episode (*see* Section 5.5.1.). All participants, from what was called Study I, scored above the cut-off point of seven (7), defined as the threshold for the determination of an episode, according to the NDE Scale (Greyson, 1983). However, it was not clear if this induced experience, grounded on hypnotic suggestions, could be equated to a spontaneous near-death-experience (NDE). Even if the classical phenomenology was present, regarding the predicted aftereffects (*see* Section 4.2.), no clear pattern of variation was observed beyond the probable impact of the experience in single cases.

The qualitative observation of aftereffects was performed throughout Chapter Six with the exploration of the contents of two open-ended questionnaires using thematic analysis (TA). By using TA (Braun and Clarke; 2006), the quantitative findings regarding the ability of hypnosis to induce an NDLE were confirmed, as well as its capacity to positively affect spirituality measures, reduce the fear of death and dying, and increase its acceptance, without distress or discomfort. However, the aftereffects were subtle, except for two spiritually savvy and highly motivated participants, pseudonymised as Fairydust and Pixie-K, for whom the experience was especially intense. The qualitative analysis showed that hypnotically induced NDEs could facilitate mystical experiences, in the same way as spontaneous NDEs do (Pahnke, 1969; Pennachio, 1986; 1988), in participants who revealed a high level of spiritual maturity (Genia, 1990; 1991; 1997). This personality trait seemed to generate a more favourable attitude towards transcendental themes, probably leading to expressive outcomes, in the form of physical and emotional benefits. The process that led from one thing to the other was not clear, but deserved further exploration, in the sense that there might exist a specific group of people who could benefit more from hypnotically induced NDEs. This fact alone imposed a few adjustments on the study's methodology to include a sample of spiritually mature participants.

Therefore, another data collection phase was planned, with the goal of adding information to the understanding of the possibilities of induced NDEs. Even if spontaneous NDEs do not seem to target a specific type of person (Moody, 1975; Ring 1980), a differentiated sample might prove itself to be the best option, in terms of studying the possibilities of an experience that carries limitations which are inherent to hypnosis. In fact, not everyone is hypnotizable, and some traits of personality are more associated with highly hypnotizable individuals, like *openness to experience* (and its facet *openness to feelings*), a construct normally associated with hypnotic susceptibility (Telegen and Atkinson, 1974, Zhang et al., 2017).

Additionally, lessons from the previous chapters pointed to the conclusion that a 'one fits all' strategy was not practical, and some modifications should be considered, due to unexpected difficulties in recruiting participants, sample attrition issues and budgetary constraints. Therefore, the best option included collecting data from motivated volunteers who, supposedly, had some degree of openness and previous education regarding transcendental themes. From previous experiences with highly motivated volunteers from hypnosis workshops and from a study conducted in a group with a strong interest in transpersonal themes (Machado, Farinha and Simões, 2022), an affluence of spiritually savvy, highly motivated participants was expected. Which is normally a strong predictor of a reasonable behavioural response to hypnosis (Braffman and Kirsh, 1999). In principle, a sample of participants with such qualities would, at the same time, ensure a reasonable return rate.

This chapter describes how a second experimental study was conducted, with the goal of collecting data from a sample of self-designated spiritually mature participants. Now the aim was to know more about the protocol's effectiveness in a specific group of people, considering the impact of the experience in two spiritually mature participants (*see* Section 7.5). A new variable is also explored, involving the psychometric assessment of the volunteer's state of consciousness with the APZ Questionnaire (Dittrich, 1998). As mentioned (*see* Section 2.5), a NDE might be triggered with hypnosis, as it enables deviations from ordinary, everyday consciousness towards a certain psychological threshold that facilitates a NDE (Facco and Agrillo, 2012). An instrument that assesses that shift, might provide interesting information for future studies.

The quasi-experimental research design is maintained but now, only with quantitative measures, so that some comparisons can be made with the previous group of naïve participants, in terms of depth of the experience, levels of mental well-being, and attitudes towards death and dying. This last phase of data collection will be described, along with the quantitative results coming from a

purposive sample of spiritually mature volunteers, recruited from a Spiritualist Association and a Transpersonal Psychology School in Lisboa, Portugal, in what was called Study II.

8.2. Goals and Hypothesis for Study II

The adequacy of the protocol in a naïve sample was established from Chapter's Five findings, but now the main goal now was to achieve a certain range of understanding regarding its effectiveness in self-designated spiritually mature volunteers, using statistical tools to determine if two new hypotheses revealed themselves correct (Stolar, 1980).

The new research goals and hypotheses for Study II were drawn from the results of two spiritually mature participants, Fairydust and Pixie-K, who underwent extraordinary experiences (*see* Section 7.5.). Following the full completion of the NDE Scale (Greyson, 1983), both scored the highest result of the group, meaning that they went through intense experiences that could not be differentiated from spontaneous episodes, both in phenomenology and aftereffects.

It was expected that with a sample of spiritually mature participants, deeper experiences would be achieved, according to the NDE Scale (Greyson, 1983, and that mental health indicators and death related attitude measures changed in the same direction as expected in Study I (*see* Section 4.2.). By using a self-designated sample of spiritually mature participants, some comparisons could also be made with the previous group in Study I, to determine whether significant differences existed between them (Foster and Gerald, 1990). This time, the assessment of spiritual well-being using SHALOM (Fisher, 2010) was not included, as the results from Study I pointed to the conclusion that this instrument would be better used with spiritually naïve participants (*see* Section 5.5.2.). It was also expected that a clear deviation from an ordinary state of consciousness could be observed, by assuming that NDEs only happen beyond a certain

degree of deviation (*see* Section 2.5). Therefore, a new instrument was included, the APZ Questionnaire (Dittrich, 1998).

All considered, in Study II the aim was to assess the effectiveness of the hypnosis protocol to induce a NDLE in a sample of self-designated spiritually mature participants, according to the goals and hypothesis that were described in Section 4.2 for Study I and to which we refer to, except spiritual well-being, which was not included. Additionally, two new research goals were included:

a. The assessment of the level of deviation from an ordinary state of consciousness, measured by the APZ (Dittrich, 1998).

b. The comparison of the intensity of the experiences and aftereffects to those caused in a sample of healthy volunteers from Study I.

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These novel goals generated two (2) new related hypotheses, adding to Section 4.2:

H7. An induced NDLE facilitates a clear deviation from an ordinary state of consciousness in spiritually mature participants, according to the APZ (Dittrich, 1998)

H8. An induced NDE facilitates more intense experiences and aftereffects in spiritually mature participants than in naïve participants.

8.3. Design for Study II - A quantitative quasi-experimental study

The need for exploring a certain type of participants led to another experimental cycle, to generate an estimate of the protocol's impact on a few selected outcomes, without a comparison

cohort. The same methodological strategy was used but with variations, adjusted to the sample's features. The quasi-experimental approach that was used to collect data and establish a causal association between the intervention (hypnosis) and possible outcomes in a non-randomized sample was maintained, as described in Section 4.3., but now only using quantitative methods with a purposive sample of participants.

As Daniel (2016) affirmed, quantitative data are effective for studying what is already known, instead of assisting in unravelling the unknown. For this reason, quantitative data analysis was chosen, to achieve such a breadth of understanding and eventually, potential representativity and generalizability (Palinkas et al, 2015), in case a higher number of volunteers would be recruited.

The use of standardized quantitative scales for assessing the presence and depth of a NDE and its aftereffects was still a methodological priority, and also the comparison of results with those from the undifferentiated convenience sample in Study I. At this stage, the quantitatively driven design, beyond NDEs core elements, attitudes towards death, and psychological distress symptoms, included another construct: the assessment of the level of the deviation from an ordinary state of consciousness, using a previously developed psychometric tool, as it will be described below in the materials section below (Section 8.5).

8.4. Recruitment, Screening and Setting for Study II

8.4.1. Recruitment of a Purposive Sample of Spiritually Mature Participants

In Study II, the recruitment method changed to include the possibility of selecting volunteers from a purposive sample of participants, also called judgment sampling. As with the convenience sampling in Study I, with purposive sampling a non-probability method is used, with the

difference that the participants are selected according to the researcher's best judgement, who considers that a relevant sample with certain specificities can be attained, without representativeness concerns. In fact, the researcher is not aiming for representativeness, nor to create generalizations pertaining to the entire population (Etikan, Musa and Alkassin, 2016). With purposive sampling, a deliberate choice of participants is made, on grounds of what needs to be observed, due to their qualities, the knowledge they possess about a certain theme and eventually, their willingness to cooperate. Therefore, Guarte and Barrios (2006:277) describe this method as a *random selection of sampling units within the segment of the population with the most information on the characteristic of interest*. With purposive sampling, the idea is always to gain the possibility of comparing, contrasting, and identifying similarities and differences in the phenomenon of interest (Palinkas et al, 2015). This form of sampling would guarantee a certain homogeneity, by focusing on candidates who shared similar traits, specific characteristics and experience with the research topic (Cresswell and Plano Clarke, 2011; Etikan, Musa and Alkassin, 2016).

The aim, in Study II was to test the protocol in a group of people with certain features indicative of *spiritual maturity* (Section 7.4.3.). It aimed to integrate volunteers who attended certain type of groups and practices and would, empirically, offer a higher probability of possessing such a trait, according to the criteria that were used to build the Spiritual Experience Index (Genia, 1991; 1997), such as: a '*transcendent relationship to something greater than oneself',' 'consistency of lifestyle, including moral behaviour, with spiritual values', 'commitment without absolute certainty', 'appreciation of spiritual diversity', 'absence of egocentrism and magical thinking', 'equal emphasis on both reason and emotion', 'mature concern for others', 'tolerance and human growth strongly encouraged', 'struggles to understand evil and suffering'* and *'a felt sense of meaning and purpose'*.

For the recruitment of a presumptive spiritually savvy volunteers, Study II counted on the support of two different Portuguese institutions (described below) which have, as a common aim, the promotion of spiritual values within their mission. By deliberately recruiting participants within

such groups, in which so-called spiritual practices and teachings were regularly performed and ministered, there was a reasonable probability of assembling a motivated sample of spiritually mature individuals (Genia, 1990; 1991): bearing in mind that what needed to be observed was the response of spiritually mature participants to the hypnosis protocol, those qualities, by being regularly practiced in specific groups, probably indicated that all volunteers, coming from those institutions, were more educated in so-called spiritual practices and themes than the general population. As described in Section 4.3.2.1., and given the exploratory nature of this study, the hypnotizability of the participants was not considered, in accordance with recent guidelines (Kekeks et al. 2022). The screening of the participants was performed according to the rules described in Section 4.3.2.2..

8.4.2. Recruitment in Two Associations - Garden of Light Fraternity and Alma Soma Transpersonal School

Two associations of which the researcher had previous knowledge about showed interest in cooperating. The first, Fraternidade Jardim de Luz (Garden of Light Fraternity) was recognized as an Institution of Public Utility in 2012, and aims to promote a holistic and integral awareness of being as an instrument for self-development and social inclusion. By promoting values such as the sacredness of life, wholeness of being, integral healing, fraternity, and solidarity, they have, as primary areas of action, spiritual, social, cultural, and ecological dimensions of life (www.jardimdeluz.org). The participants were recruited from a group of regular volunteer workers in energetic healing sessions organized, at its foundations, according to basic Spiritist principles, eclectically integrated with theosophy and esoteric teachings (Dixon, 2022; Huxley, 1945/2009). Spiritism is the science of the nature, origin, and destiny of the spirits and how they

interact with the living (Kardec, 1884/2013). In this sense, their work is based on the belief that alleged spiritual helpers work through the body of a psychic (or medium) to transmit healing frequencies (Tart, 1985; Wisneski, and Anderson, 2005), to people who attend sessions in search for cures to the most diverse ailments, whether physical, psychological, or spiritual. In that sense, they work as channelers. According to Klimo (1987:2), 'channeling' involves *the communication of information to or through a physically embodied human being from a source that is said to exist on some other level or dimension of reality than the physical as we know it*. Here, they believe that the so-called 'healing frequencies' they transmit are being received from benevolent non-physical beings who act as helpers.

The second association, Alma Soma – Transpersonal Institute, is both a school and a therapeutic space where, a Path to develop formative relationships is offered. Through several courses within a transpersonal approach as well as individualized work, the best in each person is sought for, as well as the best therapist in each person (www.almasoma.pt). In Alma Soma, the students go through a self-development process, beyond the classes they attend, where they become used to work with NOSCs within a therapeutic transpersonal framework. For example, all volunteers were already quite familiar with past life regression using hypnosis, as part of their teaching programme. Transpersonal approaches to therapy acknowledge that spiritual experiences and transcendent states play a fundamental role in both psychopathology and healing being, as such, worthy of scientific attention (Kasprow and Scotton, 1999).

For Garden of Light Fraternity, a written announcement was published in a Whatsapp Group for regular members, with the following text:

> *Would you like to participate in a study in the field of Parapsychology?*
>
> *Would you like to know how people who go through a Near Death Experience feel?*

You can do it in a safe environment, using guided imagery techniques, without any risk to your physical or psychological health.

This experience, which takes place in the last week of July 2020, is part of a PhD project carried out with the University of Northampton in the United Kingdom in collaboration with LIMMIT – Laboratory of Mind-Matter Interaction with Therapeutic Intent, entitled Induced NDEs in Volunteers Healthy: phenomenology, psychophysiology and aftereffects (Induced Near-Death-Experiences in Healthy Volunteers: phenomenology, psychophysiology and after effects). *If you want to subscribe, please contact*: sofia.machado@northampton.ac.uk

A total of 10 participants (four men and six women) volunteered, before COVID lockdowns ended the possibility of recruiting more members. The association was also undergoing a relocation process, which prevented the continuity of the experience. At this point a strategic decision had to be made, and since there were no more requisites to the new sample, apart from an empirical assessment of their spiritual maturity, Alma Soma was contacted. They adhered with enthusiasm to the proposal of including a volunteer participation in this experience within their student's curricula. A verbal announcement was made by the 3rd Supervisor, Professor Mário Simões, in a classroom of students enrolled in one of their Transpersonal Psychotherapy modules, and a total of 22 participants (three men and 19 women) volunteered. Therefore, Study II counted on a total of 32 participants recruited from two separate samples of self-designated spiritually mature participants.

All sessions were conducted in Garden of Light Fraternity and Alma Soma head offices, as described in Section 4.4. Before the session all volunteers were briefly introduced to the experimental protocol, the goals of the study, what a typical hypnosis session entailed and, specifically, what the NDE protocol involved, including the pre and post-test procedure and possible risks or discomfortable episodes.

8.5. Research Tools for Study II

The standardized hypnosis procedure thoroughly described in Section 4.5.1 was applied, in the same way as in Study I, to guarantee the least amount of variation between groups.

All assessment instruments defined in Sections 2.3. and 4.6.1. were applied, except SHALOM (Fisher, 2010), as all spiritually mature participants were expected to have a relevant closeness to spirituality. As concluded in Section 5.5.2, this instrument did not reveal itself reliable in detecting variations in participants who already considered themselves spiritually inclined. Therefore, in a sample of self-designated spiritually mature participants, it would probably not be very useful in the detection of variations. Another standardized psychometric instrument was added, Dittrich's (1998) APZ Questionnaire for the Assessment of Altered States of Consciousness, described in the section below, to measure deviations from an ordinary state of awareness.

8.5.1. Criteria for using the Research Instruments with a Portuguese Sample

Since the candidate is Portuguese (*see* Introduction) and the possibility of collecting data in Portugal was present since the beginning of the project, one of the criteria for choosing the instruments, was the fact that they should be translated (and ideally, adapted) to the Portuguese population, beyond the demonstration of good psychometric properties. As described in Sections 2.3. and 4.6.1., all instruments filled such criteria, and written permissions for their use were obtained from the authors. In Study II, the Portuguese versions of the instruments were used, as all volunteers were native Portuguese speakers.

With the NDE Scale (Greyson, 1983), a translated and semantically equivalent version of the NDE Scale was used (Serralta et al., 2010). However, since this is a Portuguese-Brazilian version

of the original NDE Scale (Greyson, 1983), and some semantical variations do exist between countries, slight adjustments in wording were made to adapt verbal contents to the language specificity, without any detriment to its operationality (*see* Section 2.3 and Appendix 5).

With the BSI-18 (Derogatis, 2001), a Portuguese version of the instrument was used after being validated for the clinical and general population (Canavarro et al, 2017). This version showed very good internal consistency (Cronbach alpha results >80) and construct validity with statically significant positive correlations ($p < .001$) between subscales (*see* Section 4.6.1.2. and Appendix 6).

The DAP-R or Death Attitude Profile-Revised (Gesser, Wong and Reker, 1987-88), was translated and adapted for Portuguese adults (Loureiro, 2010), showing satisfactory fidelity indices as well as construct validity, via an adjusted structure between the rational derivation underlying the scale and the results obtained after factor analysis (*see* Section 4.6.1.3. and Appendix 7).

8.5.2. The APZ Questionnaire for the Assessment of Altered States of Consciousness (Dittrich, 1998)

The same rule applied to the previous tools was taken into consideration when choosing the APZ (Aussergewohnliche Psychische Zustande originally), or Abnormal Mental States Questionnaire (Dittrich et al, 1985; Dittrich, 1998). The APZ, given the good reliability and validity result, has become the standard instrument when assessing such states, and equivalent forms exist in several languages, including Portuguese (Simões et al, 1986). For Dittrich (1998:80) an abnormal mental state is represented by *a marked deviation in the subjective experience or psychological functioning of a normal individual from her/his usual waking consciousness.* Besides lasting for a few hours, and causing changes in mood, perceptions, and/or motor activity, it can be spontaneous or self-induced by diverse agents of induction, and is *generally considered "irrational", "abnormal", exotic", or "pathological"* by

social norms (*idem*). Dittrich's APZ questionnaire (1998) and its revised versions, OAV (Bodmer, Dittrich and Lamparter, 1994) and 5D-ASC (Dittrich, Lamparter and Maurer, 2006; 2010), are among the most widely used self-report questionnaires for assessing such experiences (Studerus, Gamma and Vollenweider, 2010).

One of our research questions was if a hypnotically induced NDE facilitated a deviation from an ordinary state of consciousness in spiritually mature participants. Therefore, an ideal assessment tool should measure common denominators of such states, considering that as Schmidt and Berkemeyer (2018) affirmed, they are a *multidimensional phenomenon, meaning that not only one aspect of consciousness is affected, but the relative intensity of multiple consciousness aspects changes* (*idem*:1). Such common denominators, according to Dittrich (1998), could translate into alterations in thinking, feelings, body image, time and space distortions, intense emotions, changes in perception, including visual hallucinations, among others. The development of the APZ Questionnaire departed from the premise that altered states of consciousness (ASC)[29] have common denominators, independent of their means of induction.

For APZ's construction, Dittrich (1998) departed from a collection of subjective experiencers, to build a theoretical approach based on categories of what have been considered common dimensions of an 'altered' experience. He considered that, irrespective of the induction agent, as it happens with personality, a few major dimensions would always be present, to differentiate them from ordinary, waking consciousness. According to Studerus, Gamma, and Vollenweider (2010) *the detection of features that are common/invariant for all ASC and at the same time differentiate them from normal waking consciousness would help to lay the foundation for a more coherent definition of the term ASC* (*idem:* 12414). The same underlying constructs across would point to a different ASC, apart from

[29] In the literature review (*see* Section 2.5.), we defended that when referring to deviations from normal waking consciousness, the common term 'altered' should be avoided. Instead, the term non-ordinary states of awareness (NOSCs) would be used, except when citing an author, to avoid any unfair connection with underlying dysfunctional or pathological processes (Facco & Agrilo, 2012). In the literature referring to the APZ, the term altered is preferably used, so whenever citing the author, it will be maintained.

the induction method, whether it would be a hallucinogen, ensory deprivation, or overload, among other possibilities.

The APZ consists of a pool of 158 questions presented in the first person singular, selected from an initial pool of 800, devised from the author's experience, other assessment forms, personal narratives, and psychiatric rating scales. The author recommends using the APZ before and after the ASC proving condition, as a dependent variable (Dittrich, 1972), to assess the state retrospectively, by answering either "yes" or "no" to each item (*see* Appendix 18).

After eleven pilot studies (Dittrich, 1985;1996) and by using factor and cluster analyses and multidimensional scaling, three primary subscales were identified: the first is designated 'Oceanic Boundlessness' (OSE), and includes 13 items (1, 7, 13, 16, 31, 34, 68, 84, 92, 95, 127, 129, 147), describing a state similar to the mystical experiences: *e.g. I had the feeling everything around me was somehow unreal.* The second subscale is designated 'Dread of Ego-Dissolution' (DED) and contains 22 items (9, 32, 40, 44, 55, 56, 64, 66, 71, 83, 91, 105, 107, 110, 131, 133, 136, 141, 148, 156, 157, 158) indicating the typical drug-user 'bad trip' signs: *e.g. I had difficulty in distinguishing important from unimportant things*. According to Studerus, Gamma and Vollenweider, (2010), the DED Scale includes unpleasant aspects like feelings of derealization and depersonalization, cognitive disturbances, catatonic symptoms, paranoia, and loss of thought and body control.

The third primary scale is called 'Visionary Restructuralization' (VUS), and encompasses 14 items (14, 29, 33, 42, 43, 51, 70, 80, 100, 119, 120, 128, 134, 138), which include visual (pseudo)-hallucinations or visions, illusions and synaesthesia *e.g. I saw lights or flashes of light in total darkness or with closed eyes.* A comparison made by the author himself, compares these three primary subscales to Huxley's (1956 *in* Dittrich, 1998) descriptions of psychedelic "Heaven", "Hell" and "Visions". According to Studerus, Gamma and Vollenweider (2010), the secondary scale (G-ASC), composed by 72 etiology-independent items, can be seen as a general measure of consciousness alteration.

Various methods were used to assess APZ's validity, and statistically significant differences between experimental and control groups were found for OSE and DED in four of the six comparisons, and for APZ in all six comparisons (Dittrich, 1998). Thus, demonstrating that the instrument differentiates well between waking, or ordinary states of consciousness and ASCs, and that the subscales, even though correlated, are nor redundant (*idem*). Besides its adequacy to the goal of assessing a deviation from ordinary state of awareness, the APZ was translated and validated to Portugal (n=164) in a field study involving six countries where its external validity was tested (Simões et al., 1986). Permission for using the translated version was granted from the 1st author.

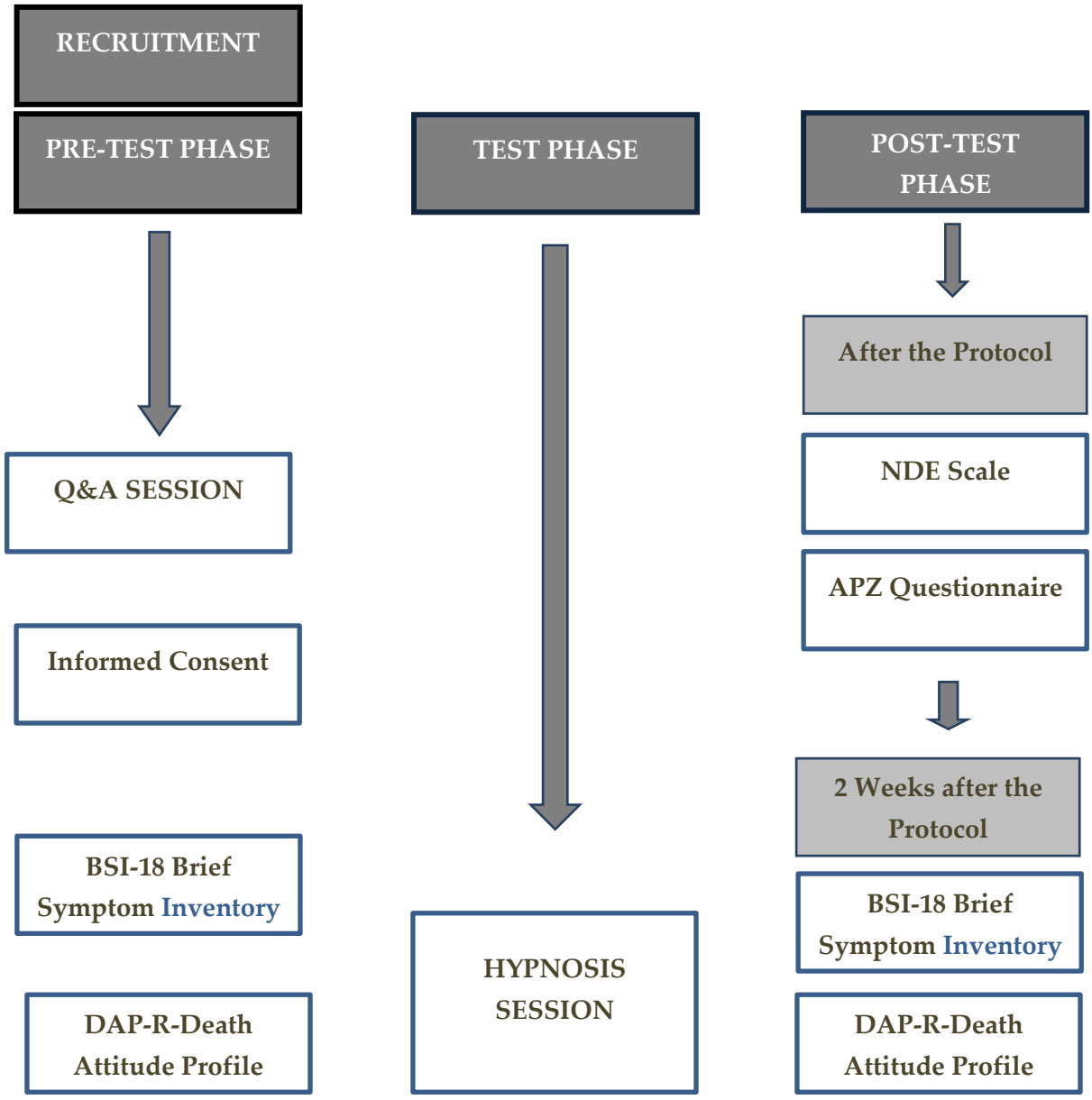
In Study II the instrument was applied just once, after the hypnosis protocol application, for two reasons: the first, related to the fact that the participants should not be overwhelmed by the pre-test phase and tired by the wearing task of filling in instruments. The APZ is a rather long questionnaire, and the volunteers were already reading a long information sheet, filling in the consent form and two other instruments, on top of a Q&A session. The second reason is associated with the fact that in the case of Study II, the volunteers were already experienced in shifts in their everyday state of consciousness. All of them were either learning to use hypnosis as a therapeutic tool in Alma Soma, while experiencing it, or they were working as channelers (Klimo, 1987) in Garden of Light Fraternity for many years. Therefore, they were all experienced in NOSCs and, from experience, they knew the difference between their baseline mode of functioning and any subjective deviation that would result from the experiment. In that sense, the decision was made not to overload them with a pre-test version of the APZ and assume that their previous baseline state corresponded to a self-recognizable expression of an everyday waking state. Any shift would therefore be easily detected. Additionally, only two scales were analysed and presented for analysis, given the unlikely possibility of suffering a 'Dread of Ego-Dissolution' experience. with hypnotically induced NDEs (Machado, Farinha and Simões, 2022).

8.6. Task Description for Study II

The procedure for Study II was adapted from Study I regarding the quantitative segment, as described in Section 4.7. In both associations, the participants were informed about ethical guidelines and the General Data Protection Regulation (GDPR), according to Sections 4.3.2.2. and 4.8. No financial compensations were offered, nor any other benefits not related to the experience. Volunteers were guaranteed that all data would only be used for research purposes and were informed about their right to withdraw without any explanation, at any moment and up to one month after completing the protocol.

As in Study I, recommendations were made during the Q&A session and before the participant's screening was conducted, as described in Section 4.5.2., to minimize the risks of an adverse experience and address potential sample weaknesses. All volunteers in Study II met the inclusion criteria described in the information sheet and informed consent, and filled the BSI-18 (Derogatis, 2001), as a screening tool, and DAP-R (Wong, Reker and Gesser, 1994) All materials were described in Sections 2.3. and 4.6. and were included in Appendixes 3 to 11. Regarding the procedure, the same order was followed, starting from the information sheet and informed consent, after which a battery of psychological tests was applied twice to each participant as pre-test measures, before the hypnosis protocol described in Section 4.5. Afterwards, the participants were asked to fill the 16 item NDE Scale (Greyson, 1983 *in* Appendix 5) and the APZ Questionnaire (Dittrich, 1998) (*see* Appendix18), and the same psychological measures from pre-test were reapplied following a two-week interval, to assess the medium-term aftereffects of the experience. Open-ended questionnaires were applied in the same way as in Study I, to keep all the conditions equivalent, even if they were not used for qualitative analysis. The post-test measures in paper format, were sent back by email within two weeks from the experiment. The possibility of contacting the experimenters with any question related to the experience was also secured.

Both samples provided a high-response rate: the first sample of 10 participants returned all questionnaires, which were considered valid, and with the second sample of 22 volunteers, two of them did not return the post-test questionnaires. Therefore Study II included 30 valid participants, seven men and 23 women. For data collection details, duration of the experience, safeguards, and study approvals, *see* Sections 4.7, 4.8 and Appendix 1. The procedure with the full Task Description Model is included below, with some adaptations made for Study II *(see* Section 4.7.).



Scheme 8.1: Task Description Model for Study II

8.7. Study II Results Overview

8.7.1. Sample Characterization

The research design for Study II counted on the use of quantitative measures on a purposive sample of spiritually mature volunteers. To provide confidence about the stability of the findings, in this data collection cycle, the initial goal was to include 30 participants to increase the possibility of delivering meaningful statistical outputs (Kline, 2005). As in Study I, Study II counted on two separate samples, in a total of 30 volunteers, recruited in two associations. Therefore, the possibility that they might present some differences that could prevent combining them in one sample should be considered.

But before assessing both samples normal distribution as in Study I (*see* Section 5.3.1.), a preliminary assessment regarding the NDE Scale (Greyson, 1983) was performed, to know if all participants scored above the cut-off point of seven (7), used for the determination of a NDE. Since the aim for the study was to trigger a NDLE using hypnosis in a group of spiritually mature subjects, a decision was made to remove those who scored below the cut-off point, to avoid the risk of distorting the results. A frequency analysis was used, and the outcome showed that four (4) volunteers scored below the pre-established cut-off point of seven: one (1) participant from the Garden of Light Fraternity, who scored four (participant 306), and three (3) participants from Alma Soma, two scoring four and one scoring three (participants 411, 414 and 418), were excluded. The reasons behind their scores were investigated, using the answers to the same open-ended questionnaires in Study I (even if they were not further analysed), where the participants briefly described their experience: Participant 306 reported that despite entering the NDE scenario, no conscious memory remained; Participant 411 had a different experience, related to a deep yearning to connect with nature, find her own voice and address a physical ailment, concerning which she received useful insights; Participant 414 reported remembering seeing a lot of images but without any conscious memory of any of them; and Participant 418 reported

entering a place where instead of light was dark, without remembering what happened before she was instructed to return. After removing these four (4) participants, Study II counted on 26 valid participants coming from two different samples, recruited from Garden of Light Fraternity and Alma Soma. Once again, it was essential to know if the two samples were homogeneous enough to be considered as one for statistical analysis, as it was done in Section 5.3.2. for Study I.

8.7.2. Sample Distribution

A **Shapiro-Wilk test** (< 0.05) was used to assess the normal distribution of both samples, before considering the use of parametric statistical tests, as recommended (Ghasemi and Zahediasl, 2012). The Gaussian distributions were verified for the following measures (Tables 8.1 and 8.2): '*Age*', all scores in the NDE Scale (Greyson, 1983), BSI-18 '*Global Severity Index'* (Derogatis, 2001) for Garden of Light Fraternity, all DAP-R (Wong, Reker and Gesser, 1994) dimensions except two for Alma Soma post-test, and APZ '*Total Score'*, '*OSE*', and '*VUS*' (Dittrich, 1998).

However, the Shapiro-Wilk tests' results were significant ($p < 0.05$), in the case of the BSI- 18 (Derogatis, 2001) 'Global Severity Index' and DAP-R (Wong, Reker and Gesser, 1994) post-test '*Fear of Death/Dying*' and '*Neutral Acceptance*' dimensions for Alma Soma, indicating that the normality assumption could not be verified in all cases (Table 8.2). Thus, combining samples might not be advisable as they could be significantly different. A non-parametric test should be used instead. For details regarding the research instruments *see* Sections 2.3., 4.6. and 8.5., and for illustrative box plots *see* Appendix 22.

STUDY II	Shapiro-Wilk ($p < 0.05$) Garden of Light n=9	Shapiro-Wilk ($p < 0.05$) Alma Soma n=17
Age	0.839	0.950
NDE Scale Total Score	0.077	0.365
NDE Scale Cognitive Component	0.337	0.852
NDE Scale Affective Component	0.313	0.171
NDE Scale Paranormal Component	0.382	0.467
NDE Scale Transcendent Component	0.467	0.100
APZ Total Score	0.129	0.639
APZ OSE	0.152	0.298
APZ VUS	0.650	0.113

Table 8.1. Analysis of Age, NDE Scale and APZ Gaussian distribution at the significance level of 0.05 for Study II

STUDY II	Shapiro-Wilk ($p < 0.05$) Garden of Light n=9		Shapiro-Wilk ($p < 0.05$) Alma Soma n=17	
	Pre-test	**Post-test**	**Pre-test**	**Post-test**
BSI-18 GSI	0.188	0.076	**0.000**	**0.001**
DAP-R Death Fear	0.387	0.077	0.091	**0.011**
DAP-R Death Avoidance	0.890	0.259	0.028	0.002
DAP-R Death Neutral Acceptance	0.117	0.138	0.704	**0.011**
DAP-R Approach Acceptance	0.731	0.268	0.159	0.273
DAP-R Escape Acceptance	0.065	0.488	0.243	0.378

Table 8.2. Analysis of Gaussian distributions at the significance level of 0.05 for BSI-18 and DAP-R data for Study II

For consistency reasons, a nonparametric **Mann-Whitney U** test was used to observe if any significant differences ($p < 0.05$) existed, in terms of their distribution on the following measures: NDE Scale (Greyson, 1983) total score and four components subscores; the BSI- 18 (Derogatis, 2001) global index (GSI); DAP-R (Wong, Reker and Gesser, 1994) dimensions, and APZ (Dittrich, 1998) total score, OSE and VUS components. For details regarding the histograms, *see* Appendix 23.

STUDY II	Mann-Whitney U Test ($p < 0.05$) n=26
Age	0.339
NDE Scale Total Score	1.000
NDE Scale Cognitive Component	0.780
NDE Scale Affective Component	0.842
NDE Scale Paranormal Component	0.315
NDE Scale Transcendent Component	0.661
APZ Total Score	0.751
APZ OSE	0.672
APZ VUS	0.164

Table 8.3. Comparison between samples for Age, NDE Scale and APZ at the sig. level of 0.05 for Study II

STUDY II	Mann-Whitney U Test ($p < 0.05$) Pre-test n=26	Mann-Whitney U Test ($p < 0.05$) Post-test n=26
BSI-18 GSI	0.278	0.905
BSI-18 Mood	0.497	0.968
BSI-18 Anxiety	0.968	0.968
BSI-18 Somatic	0.133	0.400
DAP-R Death Fear	0.367	0.560
DAP-R Death Avoidance	0.711	0.634
DAP-R Death Neutral Acceptance	0.263	0.426
DAP-R Approach Acceptance	0.367	0.874
DAP-R Escape Acceptance	0.833	0.958

Table 8.4. Comparison between samples for BSI-18 and DAP-R at the significance level of 0.05 for Study II

The **Mann-Whitney U test** indicated that there were no significant differences between Garden of Light Fraternity and Alma Soma ($p > 0.05$) results for all analysed parameters. Therefore, it was possible to assume that the individuals from both groups could be combined into one sample.

In terms of demographic information, the combined sample consisted of a total of 26 individuals, overrepresented by females (88.5%), with a mean age of 50.77 years and dispersed (Mdn = 49.5; SD = 9.75) between a minimum of 32 and a maximum of 69 years old. In terms of occupation, 76.9% of all participants had frequented tertiary education facilities (higher education) and 36.6% were therapists.

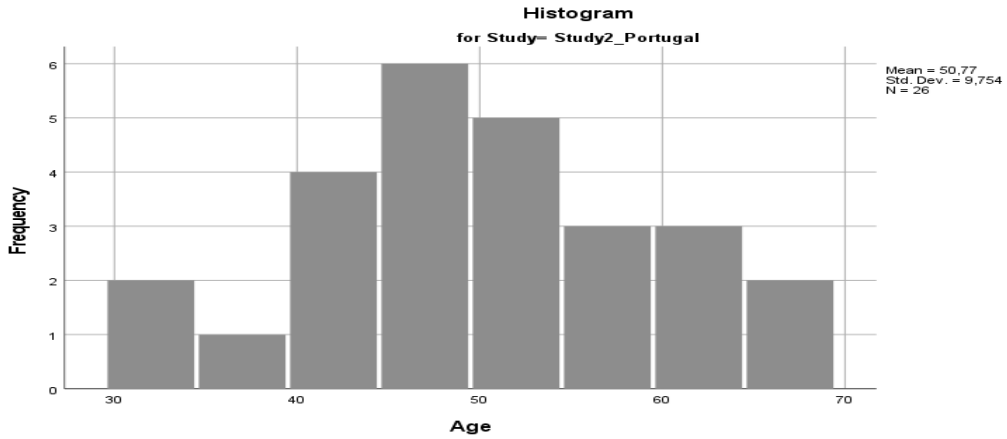


Figure 8.1. Age Distribution for Study II

8.8. Quantitative Data Analysis for Study II

Except for data coming from the NDE Scale (Greyson, 1983) and the APZ Questionnaire (Dittrich, 1998), that were applied once, all other data were computed as differences between pre and post-test scores, *i.e.* before and after the hypnosis protocol, to measure aftereffects (*see* Sections 4.7 and 8.6).

8.8.1. NDE Scale Results for Study II

The main goal behind Study II was to assess the effectiveness of the hypnosis protocol to induce a NDLE in a sample of non-clinical, spiritually mature participants, measured by the presence and depth of the phenomenological components of a NDE. The NDE Scale (Greyson, 1983), applied once after the protocol (*see* Section 8.6.), was meant to assess the equivalence of the phenomenological components of an episode, according to the cut-off point of seven.

According to Table 8.5, the results pointed to the fact that 26 volunteers from the combined sample produced scores situated above the cut-off point of seven (7), beyond which Greyson (1983) considered the existence of a NDE within the validation sample.

The total index produced a mean score of 15.58 [SD=6.14; Md=15.0], with values ranging from 7 to 29. In Study II, 53.8% of the sample scored 15 or higher, and nearly 88.5% scored above 22. Regarding the subscales, the affective component produced the highest score [M=5.38; Md=5.0] among all four subscales. The paranormal [M= 2.58; Md=2.0] subscale produced lower scores than the cognitive [M= 3.65; Md=3.0] and transcendental [M= 3.96; Md=4.0] subscales.

STUDY II NDE Scale n=26	**Total NDE Scale**	**Cognitive Subscale**	**Affective Subscale**	**Paranormal Subscale**	**Transcendental Subscale**
Mean	15.58	3.65	5.38	2.58	3.96
Median	15.00	3.00	5.00	2.00	4.00
Std.Deviation	6.14	2.04	1.79	1.33	2.68
Minimum	7	0	1	0	0
Maximum	29	8	8	5	8

Table 8.5. Descriptive Statistics on the Total Index and Subscales of the NDE Scale (Greyson, 1983) for Study II

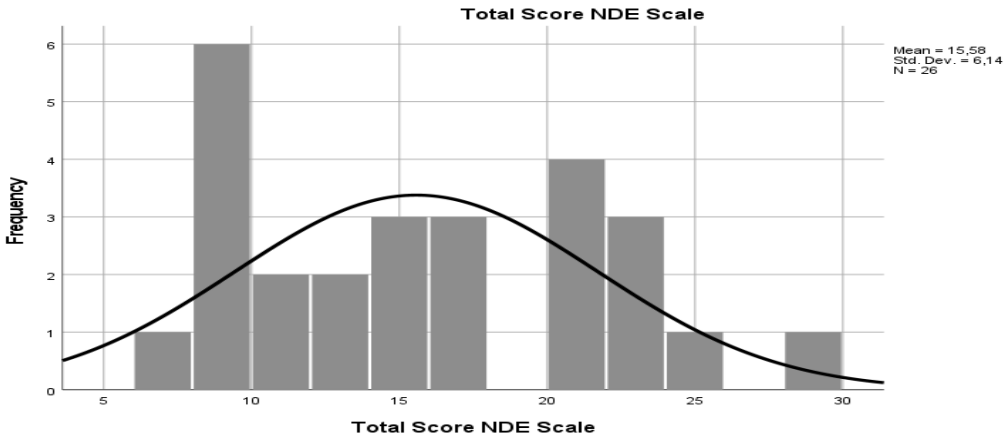


Figure 8.2. Total Index of the NDE Scale for Study II

As with Study I, and as recommended (Greyson, 1990), weighed criteria were used to measure the components of the experience (*see* Section 5.4.1.). The results for each subscale, described in Table.8.6., indicated that the participants produced scores for all four discrete components of a true NDE (Greyson, 1990): 50% of the sample experienced a predominantly affective event, 34.6%, a cognitive episode, 15.4% a predominantly transcendental episode, and 7.7% had a paranormal episode. For half of the sample, a predominantly affective experience meant that they selected items translating feelings of peace, pleasantness, joy, harmony, and being surrounded by a bright light, meeting with guides, ancestors, or spiritual entities, all before returning to the body. For those who had a predominantly cognitive event, perceptions of time, space and mental processes changed. Those with a transcendental episode, selected items related to otherworldly journeys and encounters, and those who had a paranormal episode, the feeling of being separate from the body and extra-sensorial perceptions were predominant.

STUDY II NDE Subscales Values n=26	Frequency	Percent
Cognitive	9	34.6
Affective	13	50
Paranormal	2	7.7
Transcendental	4	15.4
Total	26	100.0

Table 8.6. NDE Scale subscores according to weighted criteria for Study II

The fact that 50% experienced a predominantly affective event, 15.4% a transcendental event, and 7.7% a paranormal episode, in a total of 73,1% matches previous findings, in the validation study and in a sample of 87 real NDErs who reported non-cognitive experiences more prevalently (Greyson, 1983; 1985). Comparing data between Study I and Study II, the sample of spiritually mature participants scored higher, with a difference of 1.47 between mean values and 2 in median values: in Study I [M= 14.11; Md=13]) and Study II [M= 15.58; Md=15]. And, even if both samples had predominantly affective experiences, in Study l, the majority (84,2%) followed this trend, against half of the sample in Study II. In this latter study, 34,6% also had predominantly cognitive events, where in Study I none had neither a cognitive nor paranormal experience.

Total Score NDE Scale	Study I n=19	Study II n=26
Mean	14.11	**15.58**
Median	13.00	15.00
Std.Deviation	6.07	6.14
Minimum	7	7
Maximum	28	29

Table 8.7. Descriptive Statistics on the Total Index of the NDE Scale (Greyson, 1983) for Study I and II

NDE Subscales Values	Study I n=19		Study II n=26	
	Frequency	Percent	Frequency	Percent
Cognitive	0	0.0	9	34.6
Affective	16	84.2	13	50
Paranormal	0	0.0	2	7.7
Transcendental	3	15.8	4	15.4
Total	19	100.0	26	100.0

Table 8.8. NDE Scale subscores according to the weighted criteria for Study II

The scoring per item, according to component is described in Tables 8.7. to 8.10.

	STUDY II NDE Scale Items	Responses	Frequency (n=19)	Percent %
Cognitive Component	1. Did time seem to speed up or slow down?	Everything seemed to happen all at once/time stopped/lost meaning	1	3.8
		Faster or slower than usual	13	50
		Neither	12	46.2
	2.Were your thoughts speeded up?	Incredibly Fast	13	50
		Faster than usual	10	38.5
		Neither	3	11.5
	3.Did scenes from your past come back to you?	Past flashed before me, out of my control	13	50
		Remembered many past events	10	38.5
		Neither	3	11.5
	4.Did you suddenly seem to understand everything	About the Universe	14	53.8
		About myself or others	3	11.5
		Neither	9	34.6

Table 8.9. NDE Scale per item in the Cognitive Component for Study II

Affective Component	**5.Did you have a feeling of peace or pleasantness?**	**Incredible peace of pleasantness**	**2**	**7.7**
		Relief or calmness	8	30.8
		Neither	16	61.5
	6.Did you have a feeling of joy?	Incredible joy	3	11.5
		Happiness	18	69.2
		Neither	5	19.2
	7.Did you feel a sense of harmony or unity with the universe?	United, One with the world	7	26.9
		No longer in conflict with nature	3	11.5
		Neither	16	61.5
	8.Did you see or feel surrounded by a brilliant light?	Light clearly of mystical or other worldly origin	2	7.7
		Unusually bright light	11	42.3
		Neither	13	50

Table 8.10. NDE Scale per item in the Affective Component for Study II

Paranormal Component	**9.Were your senses more vivid than usual**	**Incredibly more so**	**11**	**42.3**
		More so than usual	11	42.3
		Neither	4	15.4
	10.Did you seem to be aware of things going on elsewhere, as if by ESP?	Yes, and facts later corroborated	15	57.7
		Yes, but facts not yet corroborated	10	38.5
		Neither	1	3.8
	11.Did scenes from the future come to you?	From the world's future	0	0
		From personal future	5	19.2
		Neither	21	80.8
	12.Did you feel separated from your physical body?	Clearly left the body and existed outside it	5	19.2
		Lost awareness of the body	11	42.3
		Neither	10	38.5

Table 8.11. NDE Scale per item in the Paranormal Component for Study II

Transcendental Component	**13.Did you seem to enter some other unearthly world?**	**Clearly mystical or unearthly realm**	**4**	**15.4**
		Unfamiliar, strange place	7	26.9
		Neither	15	57.7
	14.Did you seem to encounter a mystical being or presence?	Definite being or voice clearly of mystical or other worldly origin	10	38.5
		Unidentifiable voice	5	19.2
		Neither	11	42.3
	15.Did you see deceased spirits or religious figures?	Saw them	12	46.2
		Sensed their presence	6	23.1
		Neither	8	30.8
	16.Did you come to a border or point of no return?	A barrier I was nor permitted to cross or sent back to life involuntarily	15	57.7
		A conscious decision to return to life	5	19.2
		Neither	6	23.1

Table 8.12. NDE Scale per item in the Transcendental Component for Study II

8.8.2. BSI-18 Brief Symptom Inventory- 18 Results for Study II

Another research goal for Study II was the assessment of aftereffects, through changes in mental health levels, according to the BSI-18 18 (Derogatis, 2001). Pre and post test scores of psychopathological symptomatology were assessed using the Global Severity Index (GSI), corresponding to the general level of individual psychological malaise, and three subscales corresponding to '*Mood', 'Anxiety',* and '*Somatization*' (*see* Section 4.6.1.2). In 18 items (6 per

component), the lowest score in each is 1 (Nothing), and the maximum is 4 (Extremely), with a maximum possible score of 24 per component and 72 in total.

The results in Table 8.13 showed that no significant differences were found before and after the intervention with all values remaining relatively stable. The values were relatively low before the intervention, and they remained without significant variations afterwards (*see* Appendix 24 for histograms).

As in Study I, within each paired group, differences in pre-and post-test variables were assessed using a Wilcoxon signed-rank test, to determine if the scores changed, in a statistically significant manner, between pre and post-test mean values in all dimensions. By using this test, no significant differences were found, confirming the frequency analysis. All scores, per component and total score, remained far from their maximum possible values: they were low before the intervention and remained low after the hypnosis session. This means that any minor changes in symptomatology did not signify more than day-to-day changes that should not be imputed to the intervention (*see* Appendix 24 for histograms).

STUDY II BSI-18 n=26		**Pre-Test**	**Post-Test**	**Difference**	**Wilcoxon Signed Rank Test U Test ($p < 0.05$)**
G.S.I	**Mean**	**7.7**	**7.2**	-0.50	0.258
	S.D	(8.35)	(8.58)	0.23	
Somatization	**Mean**	**2.1**	**2.35**	0.25	0.648
	S.D.	(2.73)	(2.35)	-0.38	
Mood	**Mean**	**2.3**	**2.3**	0	0.938
	S.D	(3.26)	(3.55)	0.29	
Anxiety	**Mean**	**3.3**	**3.1**	-0.2	0.336
	S.D	(3.38)	(4.0)	0.62	

Table 8.13. BSI-18 differences between pre and post-test scores at 0.05 significance for Study II.

Comparing data between Study I and Study II, no significant differences were found between samples, according to Table 8.14. The sample of spiritually mature participants from Study II showed less variation between pre and post-test scores than in Study I, where the observed increases in global mean scores were reflecting strong individual variations in few participants (*see* Section 5.5.2.).

BSI-18 Mean Values n=26	Study I			Study II		
	Pre-test	**Postest**	**Difference**	**Pre-test**	**Postest**	**Difference**
G.S.I	8	9.32	1.5	7.7.	7.2.	-0.50
Somatization	1.58	1.63	0.05	2.10	2.35	0.25
Mood	3.16	3.32	0.16	2.30	2.30	0
Anxiety	3.26	4.37	1.11	3.30	3.10	-0.2

Table 8.14. BSI-18 Mean Scores for Study I and II

8.8.3. DAP-R Death Attitude Profile-Revised Results for Study II

One research goal behind Study II was to assess the presence of aftereffects in a spiritually mature sample, through changes in attitudes towards death, after the intervention, and according to the DAP-R (Wong, Reker and Gesser, 1994). With 36 items distributed by five independent factors, this scale measures a broad spectrum of attitudes towards death, ranging from avoidance to acceptance dimensions. Each item is scored with a Likert scale from 1 to 7, in the direction of strongly disagree (1) to strongly agree (7): the maximum value for each dimension depends on the number of items included, ranging from five to ten. For each independent dimension, '*Fear of Death/Dying', 'Neutral Acceptance', 'Approach Acceptance', 'Escape-Acceptance'* and *'Death Avoidance'*, a

mean scale score is computed by dividing the total score by the number of items (*see* Section 4.6.1.3.).

DAP-R n=26		Pre-Test	Post-Test	Difference	Wilcoxon Signed Rank Test (*p* Value)
Fear of Death	**Mean**	**16**	**16.5**	**0.50**	0.726
	S.D	(6.38)	(7.23)	0.85	
Death Avoidance	**Mean**	**11.6**	**11.2**	**-0.4**	0.725
	S.D.	(5.43)	(6.49)	1.06	
Neutral Acceptance	**Mean**	**30.4**	**29.9**	**-0.5**	0.431
	S.D	(2.86)	(3.88)	1.02	
Approach Acceptance	**Mean**	**49.6**	**50.5**	**0.9**	0.721
	S.D	(9.06)	(9.70)	0.64	
Escape Acceptance	**Mean**	**17.0**	**17.8**	**0.8**	0.434
	S.D	(5.57)	(7.07)	1.5	

Table 8.15. DAP-R differences between pre and post-test scores at 0.05 significance for Study II

Regarding the overall results, and in all other components, non-significant changes were observed between tests, confirmed by a Wilcoxon signed-rank test. Except for '*Neutral Acceptance'* and '*Approach Acceptance'*, with higher mean values, all other components were relatively low before, and they remained without significant variations after the intervention (*see* Appendix 24 for histograms). In Study I, the difference in the '*Fear of Death/Dying'* indicator proved to be significant (Wilcoxon signed rank test, p=0.029), and a significant decrease (p=0.021) in the '*Neutral Acceptance'* dimension between pre and post-test, was also observed. However, those differences were attributed to the impact of individual variations in a small sample (*see* Section 5.5.2.). In Study II, no such variations were observed: '*Fear of Death/Dying'*, '*Death Avoidance'* and '*Escape Acceptance'* components, all remained low and stable.

DAP-R Mean Values n=26	Study I			Study II		
	Pre-test	Postest	Difference	Pre-test	Postest	Difference
Fear of Death	30.95	34.05	**3.11**	16	16.5	0.50
Death Avoidance	27.37	27.58	0.21	11.6	11.2	-0.4
Neutral Acceptance	10.95	9.32	-1.58	30.4	29.9	-0.5
Approach Acceptance	41.11	38.11	-3	49.6	50.5	0.9
Escape Acceptance	20.05	19.69	-0.36	17.0	17.8	0.8

Table 8.16. DAP-R Mean Scores for Study I and II

8.8.4. APZ - Questionnaire for the Assessment of Altered States of Consciousness for Study II

All 26 participants filled the full 158 item instrument after the hypnosis session. But, as described in Section 8.5.2., only two primary scales were analysed, given the unlikely possibility of suffering a '*Dread of Ego-Dissolution*' (DED) experience with all the typical 'bad trip' features. In our experience (Machado, Farinha and Simões, 2022), such episodes do not happen with hypnotically induced NDEs, and they did not happen. According to Studerus, Gamma and Vollenweider (2010), '*Oceanic Boundlessness'* (OSE), includes 13 items (1, 7, 13, 16, 31, 34, 68, 84, 92, 95, 127, 129, 147) measuring positively experienced depersonalization and derealization, deeply-felt positive mood, and experiences of unity, with high scores therefore indicating a state similar to mystical experiences. And '*Visionary Restructuralization*' (VUS), containing 14 items (14, 29, 33, 42, 43, 51, 70, 80, 100, 119, 120, 128, 134, 138), measures visual (pseudo)-hallucinations, illusions, auditory-visual synaesthesia, and changes in the meaning of perceptions. Both are presented below along with the '*Total Index',* in Table 8.17 (*see* Appendix 24).

The '*Total Index*', for the purpose of the study, was considered to be composed by the sum of the two primary scales, with a M=12.81 (SD=5.35) out of a maximum of 27, and a maximum score of 20. The sample of spiritually mature participants scored M=7.31 (SD=3.22) out of a maximum

of 13 in the OSE scale, and M=5.5 (SD=2.67) out of a maximum of 11 in the VUS scale. The minimum and maximum scores per scale, are shown in the histograms below.

APZ n=26	Total Index (27 items)	OSE (13 items)	VUS (14 items)
Mean	12.81	7.31	5.5
Median	11	6	7
Std.Deviation	5.35	3.22	2.67
Minimum	1	1	0
Maximum	20	12	12

Table 8.17. Descriptive Statistics on the Total Index and OSE/VUS components of the APZ (Dittrich, 1998 for Study II

The scoring per item, according to component is described below, in Table 8.18 for '*Oceanic Boundlessness*' and Table 8.19 for '*Visionary Restructuralization*'. A higher number of participants scored higher (≥20) in items in the OAV Scale, like '*I felt as though I were floating*', '*I had the feeling that I had been transferred to another world*', 'I felt very happy and content for no outward reason' and '*I could have sat for hours looking at something*'.

	APZ Questionnaire Items OAV – Oceanic Boundlessness (n=26)	Frequency		Percent %	
		Yes	No	Yes	No
1	I had the feeling everything around me was somehow unreal	14	12	53.8	46.2
7	I felt as though I were floating.	20	6	76.9	23.1
13	The boundary between myself and my surroundings seemed to blur	15	11	57.7	42.3
16	I felt totally free and released from all responsibilities.	15	11	57.7	42.3
31	I had the feeling that I had been transferred to another world.	20	6	76.9	23.1
34	It seemed to me that there were no more conflicts and contradictions in the world.	14	12	53.8	46.2
68	It seemed to me as though I did not have a body anymore.	12	14	46.2	53.8
84	I felt very happy and content for no outward reason.	21	5	80.8	19.2
92	I could have sat for hours looking at something.	21	5	80.8	19.2
95	I was completely indifferent toward everything.	2	24	7.7	92.3
127	I experienced past, present and future as a oneness.	13	13	50	50
129	It seemed to me that my environment and I were one.	16	10	61.5	38.5
147	It seemed to me that I was dreaming.	12	14	46.2	53.8

Table 8.18. OSE Dimension of the APZ Scale for Study II

A higher number of participants scored higher (≥20) in items in the VUS Scale, like '*I saw lights or flashes of light in total darkness or with closed eyes*' and '*The colors of the things I saw were changed by sounds and noises'*.

	APZ Questionnaire Items VUS – Visionary Restructuralization (n=26)	Frequency		Percent %	
		Yes	No	Yes	No
14	So many thoughts and feelings assailed me at once that I became confused.	8	18	30.8	69.2
29	I saw lights or flashes of light in total darkness or with closed eyes.	23	3	88.5	11.5
33	I saw scenes rolling by like in a film in total darkness or with my eyes closed.	15	11	57.7	42.3
42	Objects around me engaged me emotionally much more than usual.	5	21	19.2	80.8
43	Things around me appeared to be bigger than usual.	7	19	26.9	73.1
51	Things around me had a new, strange meaning for me.	6	20	23.1	76.9
70	I saw colors before me in total darkness or with closed eyes.	19	7	73.1	26.9
80	I saw things that I know that were not real.	11	15	42.3	57.7
100	I saw regular patterns in complete darkness or with closed eyes.	7	19	26.9	73.1
119	Something occurred to me and I did not know whether I had dreamt or actually experienced it.	9	17	34.6	65.4
120	I saw strange things, which L now know were not real.	4	22	15.4	84.6
128	Everyday things gained a special meaning for me.	5	21	19.2	80.8
134	Sounds seemed to influence what I saw.	4	22	15.4	84.6
138	The colors of the things I saw were changed by sounds and noises.	22	4	84.6	15.4

Table 8.19. VUS Dimension of the APZ Scale for Study II

8.9. Discussion of the overall results for Study II

8.9.1. NDE Scale Results and Implications

Study I's main conclusion pointed to the fact that NDLEs could be hypnotically induced and facilitate deeper experiences and transformative aftereffects in spiritually mature participants (Genia, 1990; 1991; 1997), as a case study analysis revealed (*see* Sections 5.6., 6.7. and 7.9). In such participants, hypnotically induced NDEs resembled mystical experiences, in the same way as spontaneous NDEs do (Pahnke, 1969; Pennachio, 1986; 1988). Thus, it was worthwhile exploring if participants with similar features would benefit more from hypnotically induced NDEs. Therefore, Study II participants were purposively recruited from 'spiritual' groups' that, from an empirical perspective, offered a higher probability of being spiritually mature (Cresswell and Plano Clarke, 2011; Etikan, Musa and Alkassin, 2016; Genia, 1991; 1997). Study II counted on a total of 32 participants, with whom the selection criteria were applied (*see* Section 4.3.2.). The quasi-experimental approach was maintained (*see* Section 4.3.1.), using quantitative methods, even though open-ended questionnaires were filled to keep all conditions equal. However, at this stage, they were not analyzed.

In the same way as with Study I, the first conclusion from the quantitative analysis confirmed the fact that the experience was successful, in terms of using hypnosis to induce a NDLE, phenomenologically similar to a spontaneous event in spiritually mature participants. According to the NDE Scale (Greyson, 1983) results, 26 (86.7%) volunteers scored above the cut-off point of seven (7) established as a threshold for what can be considered as a spontaneous NDE.

But for four volunteers (13.3%), the experience went into a different direction, as they declared they did not enter the suggested NDE scenario: three participants reported being brought back without any conscious memories of the experience, and one participant had a different phenomenological experience, from which she brough back useful insights. For those three who

had no conscious recollections, the hypothesis that they went through some sort of post-hypnotic amnesia, a phenomenon well described in literature (Khilstrom, 1985; Kihlstrom and Barnhardt, 1993), can be put forward. Even if most studied situations are provoked, and due to post-hypnotic suggestions designed to induce 'forgetting', sometimes, forgetfulness might be attributed to the fact that hypnotic effects are often ambiguous and difficult to segregate from other NOSCs. Participants, in fact, can feel bewildered, as some effects might be common to a wide range of consciousness altering experiences and may even *reflect the relaxation and sensory restriction components common to most standard inductions*. (Radtke and Spanos, 1981:362). For this reason, and according to their level of susceptibility, participants might report post-hypnotic manifestations that share commonalities to other states of deep relaxation or sensory deprivation, including feeling asleep, floating, spinning, or even blacking out (Hilgard, 1965). In this context, these three participants might have experienced a different way of being under hypnosis, which is not an indication of failure, but rather a manifestation of how subtle the difference between states and how important the psychological set of each participant is (Eisner, 1997) to understand variation.

Regarding the situation of the other participant, a different explanations should be put forward. In recent years, meditation, and mindfulness-based practices (Kuyken et al.2010), have been increasingly applied in psychotherapy, to induce deep relaxation and reduce negative thoughts and emotions, through the increase in alpha-waves and decrease in mental activity (*e.g.,* Moszeik, von Oertzen and Renner, 2020; Parker, Bharati and Fernandez, 2013). Hypnosis starts with relaxation as a pre-requisite to promote psychological change, so it comes with no surprise that, along with other complementary therapies, once any underlying tension is resolved, there is an increased likelihood of psychological insight (Vickers. Zollman and Payne, 2001). Hypnosis could be also envisaged as a meditative state (Williamson, 2019) and volunteers might follow what is being suggested, but as with any other subjective experience, a different course might ensue,

depending on individual variables, including the level of expertise the participant possesses and the willingness to comply, or not. This is what might have happened with the participant that underwent her own designed experience. As Facco, Fracas and Tressoldi (2021:615) affirmed *some relevant ASCs, like hypnosis and meditation, are not a matter of experience only; rather they are intentional and complex well-structured procedures, endowed with a wide range of mental processes and tasks, yielding a full range of experiences and changes of mind and body regulation.* Nonetheless, and despite individual differences, in 86,7% of the volunteers (26), it was possible to observe they had the same phenomenological experience as spontaneous NDErs, once again reaffirming the possibility of inducing a similar episode with hypnosis.

The mean score (M=15.58) in Study II was slightly higher than in Study I (M= 14.11), and closer to the mean scores observed in a study using spontaneous NDErs who scored M=16.48 (Greyson, 1990). However, this difference of 1.47 between mean scores, is not relevant enough to confirm the hypothesis that hypnosis facilitates more intense experiences in spiritually mature participants. In Study I the maximum score was 28, out of a maximum of 32, and in Study II was 29, confirming small differences between groups and the absence of deeper experiences in spiritually mature participants.

Other variables, that might not have been present in Study II, might have influenced the case study's expressive outcome: with Pixie-K and Fairydust a strong intention for the experience was formulated, along with other personality variables, differentiating them from the rest of the sample. This is a topic that deserves attention and will be better addressed in the final discussion chapter. For now, we will just leave this reference, to comment on the fact that no major differences were noted between samples regarding the intensity of the experience.

In Study II, the large majority (73.1%) experienced a non-cognitive event, as the subscale scores clustered into three specific patterns, affective (50%), transcendental (15.4%) and paranormal (7.7%), in the same manner as with non-induced NDEs. As in Study I, the predominant affective

tendency (50.0%) matched the tendency observed in the validation sample of 87 real NDErs who reported non-cognitive experiences more prevalently (Greyson, 1983; 1985). As in Study I, within the sample of spiritually mature volunteers, a safe and positive experience was expected, as they could relax and enjoy the inner journey they were about to undergo, and experience OBEs, connecting with a bright light, guides, and spiritual entities, and feeling overwhelming positive feelings, all before returning to the body (*see* Section 5.5.1.).

It is interesting to notice that if in Study l, no one reported neither a cognitive or paranormal experience, in Study II, 34.6% of the volunteers, even if they were expecting a NDLE to happen, experienced predominantly cognitive episodes, which included normal time sequence distortion and alteration in thought processes. A possible explanation for this might have to do with the fact that they were all skilled in NOSCs and might have their personal strategies for navigating such states, that were not impacted by the NDE theme. Some of them might even be used to having frequent experiences, keeping in mind that at least 17 were students at Alma Soma, a school that offers training in hypnotherapy. They also might have taken advantage of the induction, as a launch pad to enjoy a personal journey, as they were used (and taught) to take advantage of NOSCs as an opportunity to explore personal themes. Nonetheless, the phenomenology went into the predicted direction for the majority. It remains to see if, as in spontaneous events, the aftereffects also followed the hypothesized pattern.

8.9.2. Aftereffects Results and Implications

Regarding aftereffects, the results in Study II did not show differences regarding psychological distress but offered some clues regarding death attitudes. The scores obtained from the BSI-18 (Derogatis, 2001) were inexpressive. Within each paired group, no significant differences were found between pre and post-test, and no single case variations were observed. The baseline

scores were considerably low before the intervention, and remained low: The initial hypothesis, stating that low scores in indicators of psychological distress would remain stable after hypnosis, was thus confirmed. Low values in indicators of psychological distress followed other studies (*see* Section 2.11.), confirming that a well-developed spirituality is associated with dimensions of better mental health, well-being, and emotional stability (Chandler, 2012; Klein at al., 2016; Koenig, 2008, 2010; Lancaster and Palframan, 2009). As no high baseline values were reported, the third hypothesis stating that high values would decrease after hypnosis, could not be tested. Therefore, it's important not to exclude the possibility of the intervention having no effect in psychological variables. But, to withdraw an informed conclusion, a control group of people departing from a higher baseline would be necessary. This conclusion is similar to Study I's, where the quantitative results outcome regarding aftereffects was inconclusive.

The scores obtained from DAP-R (Wong, Reker and Gesser, 1994) showed non-significant variations, either small increases or decreases in the distribution of frequencies. In Study I '*Fear of Death'* increased, and '*Neutral Acceptance'* decreased between pre and post-test, but in Study II, '*Fear of Death'*, '*Death Avoidance'* and '*Escape Acceptance'* remained relatively low and stable (*see* Appendix 24). It seems that in a group of spiritually mature participants, their attitude was not tainted by death fear before the intervention and remained that way.

Their average pre-test attitude favoured a quiet acceptance without judging death as cruel (*item* 1), or anxiety and fear provoking (*items* 2 and 18), to the point of causing worry and distress because of its definiteness (*items* 7 and 32). They did not seem to have an attitude of evasion, as the low scores in the 'Death *Avoidance'* component also indicated, as they envisaged death as part of life and as a natural and unavoidable event (*e.g.* item 6, 14, 17, 24, 30). And, even if their scores in the '*Approach Acceptance*' component were initially high and so remained, this means that even if they did believe that what lies beyond death was ultimate and heavenly bliss, in the company of departed loved ones in an eternal and holy realm (e.g. *items* 4, 8, 15, 15, 16), they did not feel the

need to escape life or see death as an easy exit from earthly struggles (*e.g. items* 5, 9, 11, 23 29). Therefore, the hypothesis that low baseline scores in '*Death Fear*' and '*Death Avoidance*' indicators would suffer no significant variations in spiritually mature participants, was confirmed. As was the hypothesis that if '*Death Acceptance*' indicators would have a high baseline in spiritually mature participants, they would also suffer no significant variations.

We know, from NDE studies (*see* Section 2.9.), that the loss of death fear is one of the most common aftereffects, and it seems plausible to associate such an outcome with the manifestation of transcendental elements (Greyson, 1992; Van Lommel et al., 2001). However, in Study II, it might be plausible to assume that, by the fact that the sample was already educated in spiritual themes, there was no visible impact of the experience. Overall, their scores indicated an overall healthy relationship with the theme of death and dying, a belief that might be strongly related to their spiritual outlook upon reality and their openness to transcendental themes. The spiritual transformation following a NDE (Greyson and Khanna, 2014; Pargament, 2006), might have already happened in some, so there might have been nothing to be transformed in terms of death fear and anxiety, which was, in fact, our initial hypothesis. This conclusion is different from Study I's where an increase in quantitative measures was reported, expressing the impact of the experience in a low number of participants (*see* Section 5.5.2.).

8.9.3. Deviation from an Ordinary Waking State in an Induced NDLE

The last research goal for Study II aimed to assess the level of deviation from an ordinary state of consciousness caused by the intervention. The APZ, or Abnormal Mental States Questionnaire (Dittrich et al, 1985; Dittrich, 1998) was used to help in the assessment of hypnosis as a tool to induce a deviation from ordinary waking consciousness in spiritually mature participants, through the presence of common denominators of an 'altered' experience. It was assumed that spiritually

mature volunteers would recognize a shift in awareness, compared to their baseline state, and be able to correctly report it. Even though the instrument was used without a pre-test phase, the fact that the participants were experienced in NOSCs was considered as a trustworthy criterion in terms of their self-assessment capabilities.

In average, the sample of spiritually mature participants scored M=12.81 (SD=5.35) out of a maximum of 27 (with a maximum score of 20) in the Total Index, composed by the sum of the two primary scales. This indicates that, according to their self-observation, a deviation in their subjective experience occurred with the induction. In the OSE dimension, they scored M=7.31 (SD=3.22) out of a maximum of 13, and in the VUS dimension, the average value was M=5.5 (SD=2.67) out of a maximum of 11. The fact that the participants scored in some of the items of each component indicates that induced NDEs share some underlying constructs with other NOSC's. In this sense, our final hypothesis, that an induced NDLE facilitates a clear deviation from an ordinary state of consciousness in spiritually mature participants, was confirmed.

This deviation, facilitated by hypnosis, not only shared common aspects with other NOSCs, but specifically, with NDEs. In fact, commonalities exist within what can be called consciousness and its multiplicity of meanings (Ventegodt and Merrick, 2011). Very few comparative studies have been conducted so far, but Vaitl et al. (2005), introduced a reference system of four common dimensions for what they called altered states of consciousness. The study concluded that the *relaxed activation, narrow awareness, absent self-awareness* and *decreased sensory dynamics* characteristic of NDEs, might occur in hypnosis, even though it is a psychological method of induction (*idem*). Therefore, an induced NDE might express typical manifestations of more than one state of consciousness It might express typical NDE phenomenology, as suggested by the script, but also forgetfulness, typical of hypnosis, as it was analysed in the section above. According to this conclusion, the typical NDE phenomenology might not represent a distinct and exclusive trait of a NDE.

When analysing the items in each APZ dimension, the overlap between some of them and NDE core elements was obvious, according to what the NDE Scale measured (Greyson, 1983): the *feeling of unreality*, *being in another world* or *seeing things that were not real* in the APZ (*items* OSE 1, 3 and VUS 80, 119, 120) and *being in an unworldly dimension* in the NDE Scale (*item* 13 – Transcendental Component); the *feeling of floating and without a body* in the APZ (*items* OSE 7 and 68) and *feeling separated from the body* in the NDE Scale (*item* 12 - Transcendental Component); the *feeling that boundaries were blurred*, the *world and myself as one* and *no more contradictions existed* in the APZ (*item* OSE 13, 34 and 129) and *feeling one with the world* in the NDE Scale (*item* 7 – Affective Component); *feeling free from conflict* or *indifferent* in the APZ (items OSE 16 and 95) and *relief and calmness* in the NDE Scale (*item* 5-Affective Component); *feeling very happy and content without a reason* in the APZ (*item* OSE 84) and *feelings of joy* in the NDE Scale (*item* 6-Affective Component); *feeling past, present and future as one* (*item* OSE 127) and *feelings of joy* in the NDE Scale (*item* 1-Cognitive Component); the *feeling of being overwhelmed by ideas and feelings* (*item* VUS 14) and the *speeding up of the thought processes* in the NDE Scale (*item* 2-Cognitive Component); *seeing colours, regular patterns light or luminosity and scenes as in a movie, in complete darkness or with closed eyes* (*items* VUS 29, 33, 70) and *being surrounded by a bright light* in the NDE Scale (*item* 8-Affective Component); *objects outside seeming bigger*, *having an emotional impact or a different and novel meaning*, *sounds influencing images or colours* (*items* VUS 42,43,51 and 128) and *senses more vivid than usual* (*item* 9-Paranormal Component).

This phenomenological overlap clearly prevents subjective content, by itself, from functioning as a diagnostic element of one category of NOSC instead of the other, even when a certain type of content is said to be a distinct trait of NDEs. This is why other variables might be needed to establish the possible similarity between induced and spontaneous NDEs. As in Study I, an important question remains to be answered: if the outcome of an induced experience grounded on hypnotic suggestions is somehow comparable to the outcome of a spontaneous NDE.

The script contained instructions designed to facilitate the phenomenology of the experience, causing some difficulty in discerning between aspects attributable to the script, from aspects attributable to the experience the script was meant to induce.

The point of departure for this study was the assumption that, by using hypnosis as a tool, an approximation to a hypothetical NOSC that could mimic a NDE could be achieved, in response to specific suggestions. And that an adequate shift from everyday consciousness would enable the opening of a specific psychological pathway conducive to the production of a certain phenomenological core structure, conceptually defined as a NDE. We know now that the hypnosis protocol, besides triggering the phenomenological content through an appropriate script, assessed by the NDE Scale (Greyson, 1983) also induced an adequate shift in consciousness, assessed by the APZ Questionnaire (Dittrich et al, 1985; Dittrich, 1998). Both, together, facilitated an experience close to a spontaneous NDE, even though it is not clear about its impact in terms of aftereffects, given the sample baseline values.

Therefore, with Study II it was not possible to conclude unequivocally, with the available data, if the participants experienced a NOSC that might be equated with a spontaneous NDE, beyond its phenomenology: not only because there are overlapping phenomenological features that make the differences between NOSCs elusive, but also because some of those elements were also suggested. Phenomenological results alone are, thus, insufficient. To achieve more consistent conclusions, it seems crucial to continue moving beyond the degree of deviation from normal waking consciousness and phenomenology, as diagnostic criteria, to establish a similarity between spontaneous and induced NDEs. To determine if this specific type of hypnotically induced event carries the aptitude, beyond phenomenology and a certain degree of deviation from ordinary waking consciousness, to facilitate an experience analogous to a spontaneous NDE, other variables concerning aftereffects, and their longitudinal impact, should be further included and analysed. This is a theme for Chapter Nine.

8.10. Chapter Summary for Study II

In this chapter an empirical study was described, exploring the ability of hypnosis to induce a NDLE in a sample of spiritually mature volunteers, purposively recruited from so-called spiritual groups, who offered a higher probability of reporting more meaningful experiences (Braffman and Kirsh,1999; Cresswell and Plano Clarke, 2011; Etikan, Musa and Alkassin, 2016; Genia, 1990; 1991). Therefore, Study II counted on a non-randomized purposive sample of volunteers, within a quasi-experimental context using quantitative methods of analysis. In this chapter, the result of the quantitative analysis of Study II was described, from data collected from a combined sample of 30 valid participants, then reduced to 26, after excluding four who did not score above the threshold beyond which an experience can be considered as a NDE (Greyson, 1983).

In the same way as in Study I, the first conclusion confirmed the first hypothesis, regarding the adequacy of hypnosis to induce a NDLE in spiritually mature individuals, that could not be phenomenologically differentiated from a spontaneous NDE. In Study II, 86,7% of the volunteers had the same phenomenological experience as spontaneous NDErs, according to the NDE Scale (Greyson, 1983). As in Study I, the results supported conclusions from other studies reinforcing the role of expectations in NDEs: like in non-induced NDEs, when people expect them to happen somehow, most of the reports fall into the non-cognitive category, whether affective, transcendental, or paranormal.

The mean score in Study II was slightly higher than in Study I. However, this difference was not relevant enough to confirm the hypothesis that hypnosis facilitates more intense experiences in spiritually mature participants. Hypnosis, as a multidimensional experience, makes the induction outcome less predictable. A differentiating factor between the two case study participants and Study II's sample, might lie in personality variables, that determined, for example, the strong intention both had for the experience.

Regarding aftereffects, the results pointed to the fact that the experience did not increase psychopathology indicators when the baseline values were already low and did not influence death attitude indicators in a sample of spiritually mature participants, who already brought a positive attitude towards death and dying. If it weren't for the qualitative outcomes from Study I and the case studies' conclusions, it could not be excluded that the intervention might not affect psychological variables. In fact, in a group of spiritually mature, psychologically healthy participants, there was already an overall healthy relationship with death before the experience, and there might have been nothing to be transformed. Using qualitative data might have brough different results, as it did in Study I, where subtle impacts of the experience were after all revealed.

From the APZ (Dittrich, 1998) it was possible to conclude that a deviation from ordinary waking consciousness was facilitated by the intervention, through the observation of what have been regarded as common denominators of an 'altered' experience. The results clearly indicated that a deviation in subjective experience occurred with the induction, and that an induced NDE shares some underlying constructs with other NOSC's. Hypnosis is, then, a psychological method for inducing a specific NOSCs, which contents overlap with spontaneous NDEs (Viatl et al., 2005). However, only relying on phenomenological criteria does not allow for a clear distinction between induced and spontaneous NDEs outcomes. They might, in fact, share elements, but still not be similar. To determine if this specific type of hypnotically induced event carries the aptitude, beyond phenomenology and a certain degree of deviation from ordinary waking consciousness, to facilitate an experience analogous to a spontaneous NDE, other variables concerning aftereffects should be included. This aspect will be approached, in more detail, in the final discussion chapter, where the final conclusions regarding the complete study and the entire collection of data, will be withdrawn.

Chapter Nine

Final Discussion and why was this Project Important

> *Nothing, then, happens in nature which is in contradiction with its universal laws. [... She] preserves a fixed and immutable course. [...] A miracle, whether contrary to nature or above nature, is a sheer absurdity; and therefore, that by a miracle in Holy Writ we are to understand nothing more than a natural phenomenon which surpasses, or is believed to surpass, human powers of comprehension.*
>
> Spinoza (1632-1677)

9.1. What was Achieved so Far

In the Introduction chapter, this project's milestones were described, beginning with the idea of inducing near-death-experiences (NDE) with hypnosis to support people facing life and death situations, since most who go through an episode make peace with both, by creating or deepening a relationship with transcendental aspects of existence. We hypothesized that the same outcome could be delivered with an induced NDE.

Another motive for conducting this research aimed at bringing scientific attention to transpersonal psychology, especially the increasingly important role of spirituality in research and non-ordinary states of consciousness (NOSC), used as therapeutic tools to catalyse self-actualization processes (Daniels, 2013; Hartelius, Rothe and Roy, 2013; Piedmont et al., 2009). Hypnosis within this context, is often used to induce such states and expand perspectives towards life and death (Facco et al., 2018; Leskowitz, 2000). By putting all these aspects together, through the induction of hypnotic

NDEs, this project aimed at bringing scientific attention to the therapeutic possibilities of NOSCs, used within a transpersonal psychology framework. Foremost, by demonstrating the effectiveness of an almost risk-free intervention with healthy volunteers so that, in the future, it could be used with people who need adequate strategies to deal with life and death challenges.

A quasi-experimental experimental mix-method design was put together to assess if a near-death-like experience (NDLE) could be induced, with its typical phenomenology and aftereffects. Within a sample of 19 participants, in the first stage of the project called Study I, it was demonstrated that hypnosis was an effective tool to induce a NDLE, phenomenologically equivalent to a spontaneous episode. This equivalence was confirmed though qualitative analysis, which revealed '*common aspects between induced and non-induced NDEs'*, and their similar '*affective'* and '*transcendental*' nature.

Concerning possible aftereffects, the quantitative results were non-significant, and a pattern of variation was not established. But the exploration of qualitative data revealed otherwise: an induced NDE positively affected spirituality measures, reduced the fear of death and dying, and increased its acceptance. This phenomenological observation covered two main themes: '*openness to uncommon experiences effect'* and '*death acceptance effect in the absence of discomfort'*. The fact that hypnosis was a safe tool of induction was also confirmed, as no distressing side-effects resulted from the procedure.

Both quantitative and qualitative data revealed that, for two participants, the impact of the experience was stronger, as they narrated very intense, transcendental events with significant aftereffects. The analysis of in-depth interviews revealed a positive link between the ability of induced NDEs to facilitate mystical experiences in spiritually mature participants (Genia, 1991) The relevance of this last aspect led to the possibility of adding another step to this research denominated Study II, by repeating the experience with a sample of self-designated spiritually mature participants who, theoretically, would have deeper experiences. The results of a quantitative analysis confirmed the adequacy of hypnosis to induce a NDLE, with the same phenomenology of a

spontaneous episode. However, it was not possible to conclude, only with quantitative data, that hypnosis facilitated more intense experiences and aftereffects in spiritually mature participants.

One of the aspects that will be analysed in more depth, concerns the aptitude of hypnosis to facilitate an experience that can be compared with a spontaneous episode. Even if it was demonstrated that hypnosis could be used to induce a NDLE, the question of its 'realness' remains: is the outcome of a 'suggested' experience, comparable to the outcome of a spontaneous episode? Can we answer that when, in terms of aftereffects the overall results did not reflect any pattern, and we could only observe them individually, by using a qualitative approach? This is a question to be discussed throughout this chapter, and from it, some of the limitations and suggestions for future studies will be proposed, based on the initial inspiration guiding this research, which was to offer people facing life-challenging situations the possibility of overcoming the fear of death and dying.

9.2. Can an NDLE be induced with Hypnosis?

9.2.1. Quantitative and Qualitative Results Summarized

This quasi-experimental mix-method research study, conducted with non-clinical participants, first and foremost, aimed at finding out if hypnosis was effective at inducing a NDLE, measured by the presence of the core elements of a spontaneous NDE. This observation was conducted, in two different cycles, Study I and Study II, using the NDE Scale (Greyson, 1983), where the cut-off point of seven (7) out of a maximum of 32, defines the threshold for the determination of an episode (*see* Sections 2.3., 5.4.1. and 8.5.1.).

Study I was conducted with a convenience sample of 19 healthy participants and Study II used a purposive sample of 26 self-designated spiritually mature participants. In both studies, the quantitative results pointed to the adequacy of hypnosis to induce a NDLE, phenomenologically equivalent to a spontaneous episode, confirming the success of the protocol (*see* Sections 5.4.1. and 8.8.1.): In Study I, the total index of the NDE Scale (Greyson, 1983) produced a mean of 14.11 (SD=6.07; Md=13.0), and in Study II produced a mean of 15.58 (SD=6.14, Md=15), with values ranging from 7 to 29, beyond the defined cut-off point (Greyson, 1983). In Study I, most experiences followed an affective trend, where most participants (84.2%) reported elements, such as having OBEs, contacting a bright light, and feeling overwhelming peace and joy. In Study II, 50% of the sample experienced a predominantly affective episode, and 34.6% experienced predominantly cognitive events, which included elements related to normal time sequence distortion and alteration in thought processes. The quantitative differences between groups were minimal, leading to the conclusion that a difference of 1.47 between mean scores was not relevant enough to affirm that hypnosis facilitates deeper experiences in spiritually mature participants.

A qualitative analysis of open-ended questionnaires from Study I's participants was performed using Thematic Analysis (TA), following Braun and Clarke's (2006) process, confirming the success of hypnosis in inducing the core elements of the experience (*see* Section 5.5.1.1.). Indeed, the *first theme,* was labeled as *'common elements of spontaneous NDEs',* and with it, the occurrence and subjective relevance of the typical NDE elements was established. This theme branched into three subthemes: the first corresponded to the *'positive affective quality'* of the episode; the second to the paranormal experience of leaving the body, which facilitated the manifestation of the third subtheme, '*transcendental elements and uncommon inner experiences'*.

9.2.2. Confronting findings regarding hypnotically induced NDEs with literature

The main conclusion, coming from data collected in two experimental rounds, pointed to the fact that hypnosis was effective in inducing a transcendental episode, felt as positive by the participants, that could not be phenomenologically differentiated from a spontaneous NDE. With such results, the literature regarding spontaneous NDEs could be legitimately applied to induced episodes.

9.2.2.1. *Induced NDLEs Share Common Elements with Spontaneous NDEs*

One possible definition of NDEs describes them as *an intense psychological experience of debated nature, characterized by an atypical state of consciousness occurring during an episode of apparent unconsciousness and usually in life-threatening condition*s (Palmieri et al., 2014). Here volunteers knew, beforehand, they were not approaching death. But the rest of the elements do apply, as they still described intense psychological experiences caused by *an atypical state of consciousness* triggered by hypnosis. As it also happens in spontaneous episodes, they described experiencing transcendental elements that, in 'real' NDEs, are typically interpreted in spiritual terms (Roe, 2016).

Indeed, the same classical phenomenological features mapping on to accounts of spontaneous NDEs were present, composing the same type of psychological experience (*see* Section 2.2.). Confirming that, as in non-induced events, the outcome followed *a discernible common pattern* (Moody, 2017:13), manifested through the same relatively universal, unifying *collection of recurring features* (Parnia and Fenwick, 2002), modelling a complete experience (Moody, 1975/2001). The *invariance hypothesis* noted by Ring's (1984), who pointed to the fact that in NDEs, a typical framework of elements exists, was also noted in induced events, at least when corresponding suggestions to experience those elements are included in the protocol.

Beside this unifying pattern, the quality of the experience can be compared with the outcome of exploratory studies, where the phenomenology of death experiences under past-life regression

therapy were examined and compared to NDEs. Ohkado and Greyson (2018) concluded that 'dying' during hypnotic regression might be comparable to spontaneous NDEs, and Pederzoli et al., (2018) concluded that the characteristics and nature of past-life experiences, were similar to those reported in typical NDEs. Therefore, even though the intention, with these studies, was not to induce an NDE, the results could be compared in terms of their phenomenology. Ohkado and Greyson (2018) went as far to conclude that "death" experiences in past-life regression therapy could be deeper than NDEs.

They are certainly intense in terms of the emotions they generate, which can also resemble. In fact, in this study, a predominantly affective pattern was demonstrated, matching a tendency observed in the validation sample of 87 real NDErs, who reported non-cognitive experiences more prevalently (Greyson, 1983, 1995, 1990). As discussed extensively in Sections 4.5., 5.5.1. and 8.9.1., this affective trend matched findings, demonstrating an inclination towards affective episodes whenever expectations are involved and NDEs have no survival value (Greyson, 2001; Goza et al., 2014). In the present case, the volunteers were adequately prepared and were expecting to safely experience psychological death or 'near-death' in some way and could relax into the experience. Therefore, for the majority, the experience was successful in terms of providing a predominantly affective experience that paved the way for the manifestation of transcendental elements, as it happens with spontaneous events.

9.2.2.2. *Induced NDEs as Transcendental Episodes with OBE Perceptions*

Even though people knew they were not physically near-death or dead, they reported feeling as they were leaving the body behind, confirming the quantitative results: according to the NDE Scale

(Greyson, 1983), most participants experienced a separation from the physical body (*see* Tables 5.9. and 8.11.), confirming the subjective importance of OBEs in induced experiences.

In spontaneous NDEs, OBE perceptions, sometimes called 'veridical perceptions' (Ring and Lawrence, 1993) have been cited as their second most common feature (Charland-Verville et al., 2014). They have also been considered as the hallmark of 'true' NDEs, since it has been sometimes possible to obtain third party confirmations for perceptions occurring during episodes of apparent unconsciousness, differentiating them from hallucinations (Sabom,1998). Here, one of the case study participants went as far as to report something close to veridical perceptions (*see* Section 9.4.1.).

The typical feeling of leaving the body behind, caused some authors to view an altered awareness of the self as an explanatory mechanism of NDEs (Noyes and Kletti, 1977), and Martial et al. (2021), affirmed that NDEs might signal an episode of disconnected consciousness, facilitating the feeling of ego-dissolution. In fact, the self's altered awareness, associated with the impression of leaving the body, more than an explanation for a NDE, might constitute a stepping-stone for the rest of the experience to unfold, both in induced and spontaneous experiences.

Letting go of physical limitations, including the fear of harming the body, might help in opening a psychological space where transcendental perceptions arise, as the feeling of '*unity',* said to be the hallmark of mysticism, is (Hayes, 1997; Hood, 2013; Greyson, 2006; 2014). As Hood wrote (2009:1) *in the study of mysticism, a transcendent I is revealed whose unity is not that of selfhood as empirically studied, but rather is a unity with Reality, God, or the Absolute for which the concept of a soulful self is useful.*

In the induced experience, the participants jumped from OBEs to transcendental experiences, as a logical progression of an episode, as the subtheme, *'transcendental elements and uncommon inner experiences'* confirmed. The manifestation of a *paranormal self* (Irwin, 2015) was indeed facilitated by extra-corporeal perceptions, contributing to the impact of the event and subsequent aftereffects, as in spontaneous NDEs. These elements suggested that induced NDE can also work as a probe to *explore human (self) consciousness* (Martial, 2021:10), and have access to normally unavailable

information. This privileged access to unusual information has been at the root of explanatory theories defending the need of transcendental explanations for NDEs (Agrillo, 2011). In induced events, the question of a transcendental cause might not be put, but analogous speculations regarding unexplainable elements which were not suggested by the protocol can be made.
From what was said above, it is safe to confirm the subjective importance of experiencing classical core elements, with a transcendental hue, in induced NDEs. However, despite its phenomenological success, a question that needs to be addressed is the following: do similar aftereffects, as a rule, follow the phenomenology of an induced NDE? And if they do, at what extent?

9.3. Can an NDE induced with Hypnosis cause similar Aftereffects?

The second goal of this research aimed at assessing the presence of typical aftereffects (*see* Section 2.7). Quantitatively, in Study I, the predictions were the following (*see* Section 4.2.1.):

a) Indicators of psychological distress would decrease, among those who presented high levels, according to the BSI 18 (Derogatis, 2001);
b) Indicators of psychological distress would not decrease among those who presented low or moderate levels, according to the BSI 18 (Derogatis, 2001);
c) Indicators of death fear and anxiety would decrease, according to DAP-R (Wong, Reker and Gesser, 1994);
d) Indicators of death acceptance measures would increase, according to DAP-R (Wong, Reker and Gesser, 1994);
e) Indicators of spiritual well-being would increase, according to SHALOM (Gomez and Fisher, 2003).

In Study I, open-ended questionnaires were used to explore the existence of other subjectively relevant elements and aftereffects and the presence of discomfort (*see* Section 4.2.1.). In Study II, only quantitative analysis was used to assess changes in levels of mental health, death related attitudes, and the level of deviation from an ordinary state of consciousness measured with Dittrich's (1998) APZ Questionnaire (*see* Sections 8.5.2 and 9.4.1.). The predictions were the same, except for the measurement of spiritual well-being that was removed, considering the participants pre-requisites in terms of spiritual maturity (*see* Section 8.2.2.).

9.3.1. Quantitative Findings Regarding Aftereffects Summarized

In Study I the protocol did not produce the predicted aftereffects, as the results did not show a pattern of change that could be attributed to the hypnosis session (*see* Section 5.5.2.). Given the sample size, the conclusion pointed to the fact that the observed changes were not reflecting an overall trend but were, instead, expressing the impact of the experiment in single cases, compromising the possibility of detecting patterns and making meaningful inferences. This impact came mainly from two spiritually savvy women from Study I, whose results imposed the need to add another data collection cycle, with a purposive sample of self-designated spiritually mature participants. In Study II the results were also inexpressive, confirming that the intervention did not cause psychological distress and that the volunteers had an overall healthy relationship with the theme of death and dying, a belief that might be strongly related to their previous spiritual outlook upon reality (*see* Section 8.8.3.).

But even if in both studies the quantitative results showed that the intervention was not expressive in terms of tangible aftereffects, some outcomes might have escaped the reach of the psychometric measures, that were not specifically constructed for the assessment of such experiences. These

effects might have been present anyhow, in a very subtle or idiosyncratic way, and this is where the qualitative analysis demonstrated its intrinsic value.

9.3.2. Qualitative Findings Regarding Aftereffects Summarized

The qualitative segment of Study, through open-ended answers, brought relevant evidence about subtle impacts, complementing shortcomings from standardized data collection and statistical analysis (Johnson and Onwuegbuzie, 2004; Onwuegbuzie and Leech, 2005). By using TA to analyze the data, the theme *'Aftereffects and Insights beyond Spontaneous NDE Core Elements'* (*see* Section 6.4.2.) was built, from the bottom-up exploration of the participants' reflections. This theme was then split into two subthemes, *'Openness to Uncommon Experiences'* and *'Death Acceptance Aspects'*. From these, the prediction that an induced NDE could positively affect spiritual aspects, reduce the fear of death and dying, and increase its acceptance, was confirmed.

The first subtheme, *'Openness to Uncommon Experiences'* (*see* Section 6.4.2.2.), pointed to the subjective need, in some participants, in learning more about 'spiritual' areas, allowing for the conclusion that an induced NDLE impacted the participants' 'spiritual' worldview. Concerning the subtheme, '*Death Acceptance Aspects'* (*see* Section 6.4.2.1.), a more peaceful attitude towards death and dying was reported in some participants, reinforcing the hypothesis that a decrease in death fear should be expected.

The last theme, *'Elements of Discomfort'* (*see* Section 6.4.3.), reflected the fact that the overall outcome of the experience was regarded as positive. The absence of reports of lasting discomfort also revealed that it would be difficult to have an increase in psychological distress and death fear or anxiety, when the experience was felt as peaceful and benign.

Concluding this section, it is safe to say that the qualitative results informed and added relevant information to the quantitative data where some effects were missed. However, even though some open-ended answers accounted for interesting results, some caution should be exerted since the present findings only addressed experiences coming from a small sample. And that most expressive and impressive aftereffects happened with two participants who reported stronger experiences. But before analysing them, the findings regarding aftereffects will be confronted with the literature.

9.3.3. Confronting the findings regarding Induced NDEs Aftereffects with Literature

Evidence about personal impacts supported the prediction that an induced NDE could positively affect spiritual aspects, reduce death fear, and increase its acceptance. Several participants, from the moment a separation from the body occurred had insights with some impact in their worldviews, which is something that also happens in spontaneous NDEs (Greyson, 2010; Holden Kinsey and Moore, 2014). And this is where relevant comparisons can be made. This section will be, therefore, organized around themes revealed by the qualitative analysis: '*Openness to Uncommon Experiences"* and '*Death Acceptance Aspects in the Absence of Discomfort'*.

9.3.3.1. Regarding the Openness to Uncommon Experiences Effect

In Chapter II, typical post-NDE effects were described as a pattern of favourable change affecting attitude and stance towards life and others, branching into intertwining psychological, social, biological, and spiritual aspects (Flynn, 1986; Greyson, 1992; Holden, Kinsey, and Moore, 2014;

Noyes, 1980). NDErs report gaining new perspectives on life, after coming face-to-face with a transcendent reality and a personal God, with whom they developed a close relationship with (Greyson, 2006; Musgrave, 1997; Noyes et al, 2009; Ring, 1980). This seems to be an important ingredient for change that has been associated with spontaneous NDEs. As a direct consequence of a transcendental experience, a newfound conviction that life does not end, predisposes participants to deepened spiritual awareness (Flynn, 1982; Greyson, 2006; 2014; 2014a).

In the case of our sample, the evidence did not point to an existential crisis or awakening as an overall effect (Greyson and Khanna, 2014; Khanna and Greyson, 2014a), but to subtle changes in most participants. Directing them to new areas of experience and learning (*see* Section 6.4.2.2.). Induced NDE cannot be reputed as spiritual catalysts (Ring, 1996), or promotors of spiritual transformation (Pargament, 2006) as a universal rule, despite the reported openness to new experiences, and as far as the qualitative analysis showed. The centrality of a spiritual awakening in NDErs lives or a newfound relationship with God (Noyes et al., 2009) did not show up probably because, in most cases, an intense direct experience (Greyson, 1992), did not happen, except for two participants. But for most, subtle effects indeed occurred, including other ways of understanding, and facing life and death.

9.3.3.2. Regarding the Death Acceptance Aspects Effect in the Absence of Discomfort

For some participants, the qualitative outcome pointed to a more peaceful attitude towards death, when describing an experience marked by peaceful and loving feelings (*see* Section 6.4.2.1.). This result is in alignment with how 'true' NDErs feel about death as a peaceful and benign process, strengthened by the conviction that an afterlife unfolds, and a reinforced faith in the existence of a superior loving being (Greyson, 2007b; 2007c; Ring and Valarino, 1998; Sabom, 1982; 1998). The

loss of death fear has been considered as the most uniform manifestation of a NDE, that seems to be linked to its transcendental nature and to the unfolding of an unshakable belief in an afterlife (Flynn, 1982; Greyson, 1992; Noyes, 1980; Musgrave, 1997; Ring, 1980).

However, as the study's participants did not experience any risk of dying, it seems reasonable that they also did not report a significant effect upon their attitude towards physical death. The overall conversion effect and the complex coping process that NDErs undergo (Van Lommel et al.,2001), might only be present among those who go through a 'true' NDE (Greyson, 1992). As Gabbard and Twemlow (1981:45) put, p*eople who have near-death experiences may never fear death again. Their faith is strengthened so that the sense of catastrophe with which they live is finally mastered*. This sense of overcoming a catastrophe, with the revelatory certainty that something survives the body, was not present in induced NDEs. In this respect, we might hypothesize this certainty appeases, or eliminates, any disturbance caused by the perspective of near dying, also potentiating spiritual well-being and eventually, post-traumatic growth (PTG), defined as the *experience of positive change that occurs as a result of the struggle with highly challenging life crises* (Tedeschi and Calhoun, 2004:1). Cozzolino (2006) developed a model where NDEs are integrated with PTG theory, pointing to the possibility of people improving psychological functioning after a death encounter. This confrontation was not present in induced NDEs, neither the physical impact coming from it. Therefore, the extraordinary growth effect attributed to NDEs, envisaged as spiritual events, should not be expected in induced events, as a rule.

9.3.3.3. Regarding the Absence of Discomfort

The experience was not felt as a catastrophe as the last theme, '*Elements of Discomfort',* revealed. Besides some transitory uneasiness for some participants, coming from the OBE feeling, no distressing side-effects were reported (*see* Section 6.4.3.). As expected, and as documented in a previous experience (Machado, Farinha and Simões, 2022), nothing like a negative NDE happened

because of the induction (Bush, 2002; Greyson and Bush, 1992; 1996). Therefore, no increases in psychological symptomatology, death fear or anxiety, nor decreases in death acceptance should be expected, in relation to the experience, when it was felt as overall peaceful and benign.

As a result, it is safe to conclude that hypnosis is not only a safe therapeutic technique but is also safe when used to induce NDLEs (*see* Appendix 28). Even in NDEs happening after a physically distressing event, there is no association with post-traumatic stress syndrome (PTSD), because of the positive affect surrounding the event (Greyson, 2001) Therefore, in a safe experimental situation, what are considered normal risks of hypnosis (*idem*), were not increased by the fact that the suggestions included the typical NDE phenomenology.

The marked change in awareness, caused by hypnosis, beyond a transitory discomfort in some participants, did not cause the dissonance that is sometimes reported in spontaneous NDEs (Bush and Greyson, 2014). However, any resulting discomfort would have been properly processed, and re-signified, as it should occur with negative NDEs, where a meaning-making process is crucial (Hoffman, 1995;1995a). But even if no psychologically disruptive events were reported, as far as the follow-up showed, the case of two participants revealed that strong transformative effects, spiritual and otherwise, can result from an induced NDE, as in happens in spontaneous NDEs (Khanna and Greyson, 2015). For this reason, their individual situation was closely observed.

9.4. What Resulted from the Case Studies Thematic Analysis

Two spiritually savvy participants, who scored highest in the NDE Scale (Greyson, 1983), sent detailed reports of transcendental experiences pointing to more subtle aftereffects. For Fairydust, they were reflected in the release of negative emotions and in a newfound willpower, towards recovering the use of her legs, formerly paralyzed by a spinal cord injury (Machado and Freestone, *in*

press). This positive turn of events had at its roots, visions, insights, and messages of hope she received from her dead grandparents, allied to an unshakable feeling about their truthfulness. For Pixie-K, she became so empowered by an awe-inspiring immersion in an ocean of loving energy, that she felt she healed from 11 years of abuse-related trauma (*see* Section 7.2.). The reasons behind these aftereffects justified an in-depth analysis using semi-structured interviews, with the goal of collecting as much data as possible to answer two new research questions:

a) If a hypnotically induced NDE could facilitate a mystical experience and
b) If a spiritually mature personality would be more predisposed to have a mystical experience

From the interview material investigated with TA, the evidence pointed to stronger aftereffects and to a positive link between the ability of hypnotically induced NDEs to facilitate mystical experiences, in the same way as true NDEs (Pennachio, 1986; 1988), in spiritually mature participants.

9 4.1. Confronting the aftereffects from Two Case Studies with Literature

A wide range of aftereffects was observed justifying comparisons between spontaneous and induced NDEs. The overwhelming feelings of self-love, self-worth and acceptance that they felt, correspond to some of the psychological effects the literature reports (Moody, 1975; Noyes, 1980; Ring, 1980; 1996; Ring and Valarino, 1998; Sabom 1982; Sutherland, 1990). Such feelings came intertwined with spiritual and social aspects, as they flooded from a supernatural source and expanded towards others and the world, giving them a renewed sense of purpose. Fairydust sought to share, publicly, her healing experience (Machado and Freestone, *in press*), and Pixie-K wanted to specialize as a Death

Doula, as she felt more confident in sharing her natural gifts as a bridge between life and death. Physiologically, the recognition of paranormal or psi-related abilities, sometimes reported by NDErs (Ring, 1984; Sartori, 2014; Sabom 1998**)**, including nervous system's reprogramming (Ring, 1992) manifested in both since an early age, including Pixie-K's narcolepsy, that caused her to 'leave her body' in occasions. Ring (1992) matched similar physiological manifestations in NDErs with so-called 'spiritual awakenings' (Grof, 2009), which are often confused with mental illness symptoms (Greyson, 1993). Lukoff (1985) called such symptoms, in a non-pathological context, as *mystical experiences with psychotic features*. (*see* Section 2.10.2.). In this sense, the induced NDE, did not bring something completely new but helped them in validating what they thought was their identity, much like a spontaneous NDE does, in opening participants to an entire range of experiences (Greyson and Stevenson, 1980; Ring 1993). In fact, the transcendental aspects of their experience cascaded into other consequences, and, seemingly, carried a transformative potential, in the form of physical and psychological healing, much like it happens with mystical experiences. From the literature review (*see* Section 2.8.) resulted that a comparison between NDEs and mystical experiences could be legitimately made (Pahnke, 1969; Pennachio; 1986; 1988), and that the concept of spiritual maturity (*see* Section 2.11), might help in distinguishing *the spiritually mature from those with less evolved forms of faith* (Genia, 1997:345). Both themes seemed to go hand in hand here, and probably a combination of factors lies at the root cause of these impressive aftereffects.

9.4.2. Regarding induced NDEs as sources of mystical experiences

With the case studies (*see* Section 7.5.1.), it was possible to observe that induced NDEs seem to be an adequate vehicle to facilitate the same mystical quality of spontaneous episodes (Cressy, 1996). With Fairydust reporting the acquisition of paranormal information she declared not having before,

her experience could be legitimately compared to the veridical perception phenomenon, as it has been reported in spontaneous NDEs (Holden, 2017). She had no doubts about her grandparent's aliveness in another dimension, as Pixie-K had no doubts about what she called her strong inner 'essence', how life and death energies work and how she was always watched by benevolent beings.

The 'four marks of mysticism', as James (1902) called them, were present in both experiences, as meaningful patterns emerged from the TA: *ineffability* and *transiency*, *passivity*, and *noetic quality*, attained by two volunteers who were temporarily *grasped and held by a superior power* (*idem*:381). According to James (1902), gaining knowledge, received, and perceived immediately and directly, with a sense of authority, is the mark of 'noesis'. Their transcendental experiences defied non-ordinary reality, logical thinking, cause-effect laws, and linear time and space notions, as reported in the literature classifications of mystical episodes (Hayes, 1997; James, 1902; Stace, 1969; Underhill, 1912/2020; 1914). A clear correspondence was made with Walter Pahnke's (1969) nine universal elements of mystical experiences as a framework of analysis, that had already been used to characterize the outcome of spontaneous NDEs (Pennachio,1986).

In this sense, their experience can be compared with those of 'true' NDErs, whose reports typically include mystical features and, sometimes, veridical perceptions (Greyson, 2010b; Parnia et al, 2001, 2014; Ring and Cooper 1997; Sabom, 1982; Sartory, Badham and Fenwick, 2006). Ring and Lawrence (1993:228) concluded that such confirmations have strong emotional and cognitive effects, *either strengthening their pre-existing belief in the authenticity of NDEs or occasioning a kind of on-the-spot conver*sion. All these aspects were demonstrated throughout Chapter VII and Appendix 26, with corresponding citations.

Greyson (2004) suggested that even if NDEs can be differentiated from mystical experiences, the same profound transformative effects might follow, in association to its collection of mystical elements (Greyson, 2006; 2007c; 2014; 2014a). With Fairydust and Pixie-K, their experience of ''noesis' was, according to them, transformed into physical and psychological healing, validating its

mystical quality. The changes they underwent were not imaginary, as they were confirmed by the outcome. And, as in 'true' NDEs, an outcome cannot be compared to an hallucination. This is not to say that the objective authenticity of their experience, in terms of unequivocal healing was demonstrated. However, the result reinforced the subjective certainty of the transformation process that, as in spontaneous events, seems to be part of a more complex process (Khanna and Greyson, 2015), sometimes called as archetypal conversion with a '*metanoid*' component (Grosso, 1996). Referring to spontaneous NDEs, Ring and Rosing (1980) reputed this transformation model as psychophysical, in the sense that NDErs inevitably go through changes which facilitate a new level of psycho-spiritual growth to manifest. By accepting and understanding adversity and the possibility of overcoming it with the help of a transcendental agent, they reflected Ring and Rosing's (1980) Omega prototype, which is said to be the endpoint of an NDE (*see* Section 2.7.2).

Indeed, a sort of PTG followed their experience, through which they overcame years of physical and psychological ordeal, in the line of what Cozzolino (2006) affirmed about the result of a direct confrontation with death, leading to a drastic process of personal evolution. Here, the direct confrontation with physical death was not present, but a noetic immersion in a psychological dimension where death and life intertwine happened subjectively. As in spontaneous NDEs, the process is unknown, even though there is a visible outcome, in the form of physical and psychological healing, following a renewed relationship with transcendence.

The probability of such a process happening in induced events, seems to be lower than with 'true' NDErs: two thirds of NDErs described mystical features (Greyson, 2014), but here only two participants in a sample of 19 (10.5%) reported such results. Which seems to correspond to some incidence studies, reporting the average frequency of NDEs in random samples of resuscitated patients at around 10% (Greyson, 2003; Parnia et al., 2001; Van Lommel et al., 2001). Still, an induced NDE, in the same way as a spontaneous event, seems to be a pathway to mystical experiences, by exhibiting similar attributes, as well as a psychological restorative function that

facilitates unexpected and profound renewal and self-transformative effects (Pennachio, 1986; 1988). As the mystical state seems to have, at its origin, a shift from the everyday state of consciousness, the same can be said about an induced NDE. Both with NDEs and other type of experiences (Martial et al., 2021), a unifying contact with a transcendental reality is made by a non-ordinary part of the participant's awareness But, for some people, this access seems to be facilitated, probably by their personality traits, amidst other variables.

9.4.3. Regarding predisposing personality traits and spiritual maturity as a facilitating variable in induced NDEs

Fairydust and Pixie-K were different from other participants, as they revealed precocious signs regarding so-called psychic gifts, were experienced in NOSC and had knowledge about non-mainstream themes, including NDEs healing potential. Which led them to formulate a healing intention. Not only their mind set was different before the session, but also afterwards, as they were able to reconcile the transcendental, unusual, and even paradoxical, details of their experience within their mindset. In induced events, not everyone reaches the same level of experience, as it happens in 'true' NDEs (Cressy, 1996: 372). Which led us to formulating hypothesis regarding the possible existence of predisposing traits in people with stronger episodes.

Even though in 'true' NDEs there is no explanation for why some people go through this experience, in this context, a preexisting interest in the topic and/or the presence of certain favorable personality traits, might have facilitated the result. This exploration is in consonance with the *set and setting hypothesis* (*see* Section 7.5.2.), a popular concept in psychedelic research (Harthogsen, 2017).

In these two participants, what looked like 'spiritual savviness' was explored under the framework of *spiritual maturity* (Genia, 1991; 1997), supporting the conclusion that they were functioning at a *mature psychospiritual level* (Genia, 1990: 338). This loosely corresponds to what Genia (1991), called *transcendent faith*, the fifth and highest stage of a spiritual developmental model describing those individuals who are spiritually integrated and autonomous. Since early childhood, they demonstrated a healthy blending regarding several aspects of their lives (Genia, 1990), including a predisposition to deal with spiritual issues, which might have facilitated their attitude towards the experience, including the willingness to participate, the intention they set, and the ability to engage with suggestions (*see* Section 2.11. and Appendix 27).

They did not show signs of non-adaptative behaviour or any type of psychological imbalance during the screening process or the experience, as it happens with true NDErs, who show fewer symptoms of psychological disturbance than those who come near-death without an episode (Greyson, 1991; 2003; 2007; Van Lommel et al., 2001). However, both showed a *predisposition* to experience NOSCs since childhood, and Pixie-K's former diagnosis of narcolepsy was a stronger facilitator, as it trained her in leaving the body without disturbance, the first step of an NDE, according to Ring (1980;1984). Which is in consonance with what Irwin (1993) and Ring (1992) found in 'true' NDErs, who showed a distinctive history of troubled childhoods and greater likelihood to dissociate, which for them manifested through this early contact with other 'realities'.

This natural disconnection from the external world in NDErs (Ring, 1992) might have been present, facilitating the process of 'looking within', which might easily integrate within the category of the *attention absorption* cognitive perceptual style. Which was probably present at the time of the episode, and probably made them highly hypnotizable. It seems that traits correlated with hypnotizability, like *openness to experience* and *attention absorption* (Braffman and Kirsh, 1999), are linked to a fluid structure of consciousness (McRae, 1994:251), in accordance with traits exhibited by those prone to have

NDEs (Kumar and Pekala, 1988; Tellegen and Atkinson, 1974; Twemlow and Gabbard, 1984-8). Those traits might also have contributed to the intensity and depth of the process they underwent.

In sum, the case study analysis, pointed to the fact that there seems to be a positive link between the ability of hypnotically induced NDEs to facilitate mystical experiences, in the same way as true NDEs (Pennachio, 1986; 1988), in a certain type of participants, with a certain mindset and personality traits, that might have put them in an advantageous position. However, how this influence is manifested is not clear and other variables might have been at play here. In fact, the observation of a group of self-designated spiritually mature volunteers, in Study II, did not provide the same outcome in terms of a life changing experience. Several limitations will be referred in the final section. But before that, the next section will deal with an important question regarding the 'reality' of an induced NDE. Did something like a 'real' episode happened, or was the phenomenology a mere result from the hypnosis? In this situation, an induced episode would just be the predictable outcome of the hypnotic suggestions, with possible aftereffects as an incidental byproduct. This is a question with no final answer, but the reflection is mandatory.

9.5. Beyond the Hypnotic Suggestions, did a NDE really happen?

9.5.1. Results from the APZ (Dittrich, 1998) as a measure of the presence of a NOSC

The point of departure for this study was the assumption that, in response to relaxation cues and specific suggestions, the opening of a psychological pathway, conducive to the production of a certain phenomenological structure, conceptually defined as a NDE, could be achieved. In Study II, a formal assessment of the level of deviation from everyday consciousness, using the APZ Questionnaire (Dittrich, 1998) was recognised as an important goal to validate the fact that the

experimental protocol would enable a shift from everyday perception (Vickers, Zollman and Payne, 2001).

Indeed, the APZ (Dittrich, 1998) results pointed to the occurrence of such a deviation, given by several criteria that have been regarded as common denominators of an 'altered' experience' (*see* Section 8.8.4). These data also showed that hypnosis can function as an appropriate psychological method for inducing a NOSC (Vaitl et al., 2005), which contents coincide with NDEs core elements (Greyson, 1983), but also with other 'altered states' (Dittrich, 1998). This overlap, in aspects of the experience prevents phenomenological content, by itself, from functioning as a diagnostic element of one category of NOSC (*e.g.* hypnosis, meditation, psychedelics) instead of the other.

The results from Studies I and II informed about the phenomenological similitude between induced and non-induced NDEs (Greyson, 1983). But now, APZ (Dittrich, 1998) is also informing that there is a similitude in the outcome of induced NDEs and other NOSCs, because several experiential categories are shared. Therefore, an important question remains to be answered about the possible similarity between induced and spontaneous NDEs, when phenomenology, by itself, does not seem to be a differentiating criterion. How can a clear distinction be made?

9.5.2. Hypnosis as an unreliable diagnostic criterion

Using phenomenology alone, there is no substantiated evidence to support an unequivocal equivalence between induced and spontaneous episodes. Because specific phenomenological suggestions were part of the script, the outcome expressed what was suggested and expected, in this context. The question is, then, if the outcome might be more than a hypnosis artifact: according to Orne (1959:277) *the role the subject is expected to play demonstrates that in some instances an experimental result may more reasonably be accounted for on this basis than by invoking "trance effects."*

With hypnosis, as a rule, if a certain phenomenology is suggested, it most probably will express itself in result of the procedure, as suggestions seem to be the phenomenon upon which the response depends (Kirsch, 1999).[30] Therefore, the presence of vivid phenomenology is no guarantee that an experience analogous to a spontaneous NDE was achieved. Facco (2012:292) affirmed that *experiences similar to those of NDEs can be easily generated during hypnosis*. But the possibility of accurately discerning between phenomenological aspects attributable to the script, from aspects attributable to the episode the script was meant to induce, remains unclear. The 'realness' of the episode remains debatable when using phenomenology as a criterion, because the tool (hypnosis) facilitating the event, also limits the outcome: differentiating between what belongs to hypnosis and to NDEs is not a straightforward process, since there is a lack of methodological tools designed to catalog states of consciousness. Inside the realm of what can be called consciousness, very few comparative studies have been conducted. Vaitl et al. (2005), synthesizing previous classifications, including Tart's (1975), Ludwig's (1966), Pekala's (2015) and Farthing's (1992), introduced a four-dimension reference system for so-called 'altered states of consciousness' (ASC)[31]. According to this system, the '*relaxed activation*', '*narrow awareness*', '*absent self-awareness*' and '*decreased sensory dynamics*' characteristic of NDEs, also occur in hypnosis. Therefore, they not only share contents, as the NDE Scale (Greyson, 1983) and the APZ (Dittrich, 1998) revealed, but also a common framework.

The fact is that even if the NDE Scale (Greyson, 1983) differentiates real from ambiguous experiences (Greyson, 1983; 1990) and, for this reason, has been used in different contexts (*see* Section 2.5.), the 'realness' of the experience can be questioned. Therefore, a word of caution should be used concerning its ability to differentiate between anomalous experiences with the same phenomenology, especially those lying outside the category of life threatening or consciousness

[30] Kallio and Revonsuo (2003), in a most commented and controversial paper, suggested that a complete understanding of hypnosis demanded multiple levels of analysis, including social, cognitive, phenomenological, and neurophysiological. But how hypnosis operates, is not a debate that should be approached here, even though we stand in line with those who affirm that the evidence supports the claim that hypnosis induces an altered state of consciousness (Spiegel, 2005).

[31] *See* Section 2.5. for the difference between ASC and NOSC

compromising episodes (Tassel-Matamua and Holden, 2020). Scores might still be high in what have been called NDLEs (Facco et Agrillo, 2012), they might look the same, but they might not be the same.

However, some experiences went beyond what was suggested: if on the one hand, the protocol suggested the core structure of an episode, on the other, non-suggested idiosyncratic variations revealed themselves in qualitative analysis (*see* Sections 6.5). Experiences in consciousness do not happen in a perceptive void, and the associations a suggestion triggers, each person's distinctive way of responding and the effects they produce, all involve a synergy of variables, which combination produces a tailor-made uniqueness. Which is also known to occur in spontaneous NDEs, where the common framework is filled in and interpreted according to the individual's history, culture, and belief system (Corazza and Kurruppuarachichi, 2011). This synergy of internal (*set*) and external aspects (*setting*) adds difficulty to the process of discerning differences within the realm of NOSCs, which are said to be 'beyond words' or *ineffable* (Yaden et al., 2015). Therefore, even among skilled participants, differentiating between what comes from the script and what goes beyond it constitutes a challenging endeavor. In a previous study (Machado, Farinha and Simões, 2022), one of its conclusions pointed to the need to explore non-phenomenological variables, to assess if the outcome of an induced NDLE expressed more than suggestions. Without this analysis, the apparent realness of an induced episode should not be accepted at face value. Otherwise, we might be acknowledging as similar an artifact produced by suggestions made within a hypnotic trance.

9.5.3. The importance of the aftereffects variable to establish the 'realness' of a hypnotically induced NDE

Bearing in mind these reflections, the analysis of at least four variables was suggested for future studies regarding non-spontaneous NDEs (Machado, Farinha and Simões, 2022):

a) the trigger enabling the experience;
b) the degree of subjective deviation from an ordinary state of consciousness;
c) the phenomenology of the experience;
d) aftereffects.

The variable 'aftereffects' is an unescapable methodological step to compare induced and non-induced NDEs, as their presence, if not suggested by the protocol, could hardly be considered an artifact (Orne, 1959). Therefore, in the present study, four variables were already considered, including:

a) a hypnosis protocol that suggested the typical phenomenological elements (*see* Appendix 25)
b) the degree of subjective deviation from an ordinary state of consciousness, retrospectively assessed by the APZ in Study II (Dittrich, 1998);
c) the phenomenology of the experience, assessed by the NDE Scale (Greyson, 1983) [32], and open-ended questionnaires;
d) non-suggested aftereffects, assessed with the BSI 18 (Derogatis, 2001), the DAP-R (Wong, Reker and Gesser, 1994), SHALOM (Gomez and Fisher, 2003), open-ended questionnaires and in-depth interviews with two participants.

Did the inclusion of this last variable allow to conclude that the experience was similar to a real episode, based on the fact that aftereffects were not suggested and carried a similar quality?

In spontaneous experiences, aftereffects are life changing and, in theory, there was no reason to think that a hypnotically induced experience would have an inferior impact (*see* Sections 2.5. and

[32] Martial et al. (2020) validated the new 20 item Near-Death Experience Content (NDE-C) scale in 2020, after this project was developed, revealing five meaningful clusters, very good internal consistency (Cronbach $\alpha = 0.85$) and concurrent validity (correlations above 0.76), that might bring interesting results in future research, as it revealed 7 items specific to NDEs. No item was found to distinguish between NDEs and NDEs-like.

2.7.), which *may reflect the relaxation and sensory restriction components common to most standard inductions*. (Radtke and Spanos, 1981:362). The effects that might follow hypnosis are common to a wide range of consciousness altering experiences and theoretically, might not be different in terms of quality. As James' (1902/1999) ingeniously pointed out, regarding chemically induced phenomenal religious experiences, a tree should be recognized by its fruits: if *religion is true, its fruits are good fruits* (*idem*:377). Regarding this principle that he called *pragmatic principle* and Stace (1960) *causal indifference*, Yaden et al. (2017) reaffirmed a growing consensus around the legitimacy of psychedelic induced mystical states and the lack of importance of their origin. Stace (1960) suggested that *if the phenomenological description of the two experiences are indistinguishable, so far as it can be ascertained, then it cannot be denied that if one is a genuine mystical experience the other is also* (*idem*:30). Meaning that if the mystical result, or the positive fruits of the tree, are more important than the roots, the similarity of hypnotically induced experiences to spontaneous NDEs could be theoretically assessed by its outcome. All considered this the evidence pointed to a positive link between the ability of hypnotically induced NDEs to facilitate mystical experiences in predisposed participants, in the same way as spontaneous NDEs (Pennachio, 1986; 1988), which 'realness' was subjectively indisputable. Therefore, a few good fruits seem to have grown from the hypnotically induced NDEs tree.

9.5.4. Near-Death Consciousness as a doorway to the experience of near dying

Considering the above, a comparison with spontaneous NDEs could be legitimately made, *which to NDErs, appeared 'more real' than actual real-life events that were used as controls* (Parnia, 2016:68). The assessment of realness is always subjective, but should we legitimately call them NDEs?

Parnia (2016) affirmed that the precision of the term 'NDE' should be challenged since it is not clear whether all experiences, whether involving death threat or not, are comparable. According to him (*idem*:68), it would *be more accurate to suggest that experiences with many shared features and interpreted as mystical and spiritual by the experiencer may occur under a variety of circumstances, including being critically ill, near death or otherwise.* He defended, however, that for standardized research purposes, only experiences *related to a corresponding physiological state that approximates death* should be investigated (*idem*).

According to this idea, the NDE construct may not describe the phenomena in all its extension and variations, and a different approach should be used to describe episodes without any type of real death threat to accommodate possible differences. Indeed, when observing other experiences triggered by consciousness altering tools, what seems to precede NDEs, unvaryingly, is a shift in awareness (*see* Section 2.5.).

We can hypothesize that, in response to certain triggers (suggestions, in hypnosis) when no death-threat is present, an approximation to a hypothetical NOSC that can be called *Near-Death Consciousness* (NDC) can happen. In this state, the production of a certain typical phenomenological content, with a certain experiential intensity, conceptually defined as a NDE, might be facilitated. Metaphorically, and imagining that different states of consciousness are rooms inside a house, allowing for different dimensions of perceptual experience, hypnosis is one of the doors facilitating the entrance in a so-called NDC room. Each door, representing a different point of access, would correspond to a specific trigger, whether life-threatening, non-life-threatening, spontaneous, or planned. The point here is that, irrespective of the door through which one enters the room, a certain typical experience becomes accessible, beyond the point where a critical shift from everyday consciousness is achieved.

However, being exposed to the trigger, hypnosis, does not guarantee the result, entering a NDC, even in spontaneous events, as not everyone who has been physically near-death reports a NDE (Greyson, 2003; Parnia et al., 2001; Schwaninger et al, 2002; Van Lommel et al., 2001). NDEs are

unpredictable events, and the reason why only in some situations, not necessarily related to the process of dying (Facco and Agrillo, 2012), an episode occurs and/or is brought to awareness remains unknown. As the effects of an NDE probably reflect more the impact of the episode itself than the experience of being close to dying (Parnia, 2014), to produce a similar experience, an approximation to the first stages of death is not a key element. However, to have the same impact, a certain degree of intensity seems necessary.

Assuming consciousness encompasses quantitative and qualitative aspects (Plum et al., 1998), the degree of the deviation (quantity), or intensity, might be equally relevant to produce a similar experience (quality). Overgaard and Overgaard (2010) argued that conclusions about levels of consciousness depend, in a very direct way, on conclusions about content, but we would add that the argument goes both ways, and that the impact of a certain phenomenological content also depends on the level of deviation, or intensity. As observed, through spectacular results in two participants, the entrance into a NDC state might occur in situations where no life-threatening circumstances are present, but a synergy of variables was necessarily at work for a similar experience to unfold. What was different then, for these two participants, who successfully entered and navigated the NDC space?

9.5.5. Other Variables that might facilitate entering Near-Death Consciousness

The trigger and suggestions were the same, *i.e.,* the context or *setting* was the same, but the phenomenological intensity and aftereffects were different. An additional variable related to *'set',* spiritual maturity was considered, to help explaining the mystical tone of the experience and subsequent aftereffects. But, when a group of spiritually mature participants was investigated, the aftereffects were still modest, even if, in average, the intensity of the experience was higher (*see*

Section 9.2.1.). However, and even though the presence of transcendental elements was reported it might have not been, for the majority, a 'transcendental state of consciousness'.

Regarding *set*, a constellation of variables referring to their personality and previous experiences (Hartogsohn, 2017) was probably at work, to produce impressive aftereffects in two case studies. This would include childhood experiences, physical and psychological trauma, and the attempts they made towards overcoming it, combined with personality variables, including spiritual maturity, to predispose them to an experience. The fact that both were at the highest stage of 'transcendental *faith'* (Genia, 1990) with *more permeable psychospiritual boundaries* (*idem*:93), might have made them more receptive, facilitating a deeper immersion and the subsequent transformation. They were also marked by intensely traumatic circumstances before they were exposed to the near-death scenario (*see* Section 7.3.). Being at the highest stage of spiritually maturity, along with other personality variables and previous traumatic experiences, might have caused them to come to the experience with what Cozzolino (2006) called *death awareness,* something experienced by PTG/NDE survivors. Making them able to progress to a type of *mortality induced growth* (*idem*).

This is not the place to weave additional considerations about the PTG that trauma survivors might undergo, but it is enough to say that there are overlapping aspects with NDEs aftereffects, in terms of overwhelming changes in the way they see themselves, others and the world (Flynn, 1982; Noyes, 1980; Ring and Valarino, 1998; Sabom 1982; Tedeschi, Park, and Calhoun, 1998). This type of growth is connected to spiritual aspects to such an extent, that McGrath (2011) pointed out that PTG itself, may be an aspect of spirituality. In the case of these two participants, it seems safe to say that PTG followed their experience, through which they defeated years of physical and psychological ordeal after a noetic immersion into the NDLE, from which they emerged positively transformed.

According to Cozzolino (2006), intrinsically motivated growth responses shared by NDErs and serious trauma survivors come from the fact that, a confrontation with mortality activates death

awareness, but also provides answers to existential questions (*see* Section 2.9.1). Cozzolino et al. (2004:281) reported anecdotal evidence suggesting that after a NDE, *people respond in a manner quite different from individuals exposed to mortality salience. Whereas mortality salience leads to worldview defense and immortality striving, near-death experiences seem to compel worldview capitulation and psychological integration.*[33] *It is this evidence of a value shift from extrinsic to intrinsic among NDErs that opens the door for a new form of experimentally induced mortality awareness.*

Being a victim of domestic violence, as Pixie-K, or having a life-threatening accident as Fairydust had, might have contributed to a worldview capitulation, to face nothingness, and put both in a state of openness to the near-death scenario. Which might have been exactly what was needed to go beyond mortality awareness, providing existential hope, answers, solutions, purpose, and a way out of suffering, coming from a transcendental, mystical-like episode. As Ataria (2014) concluded, an overlap exists between traumatic and mystical experiences, as in both, one faces nothingness, which is a philosophical way of experiencing worldview capitulation, in the former, and unity, in the latter. Which means, in both, a loss of individuality: *it would appear that the root of this particular similarity between mystical and traumatic experiences lies in the nature of the encounter with emptiness* (*idem*:11). For them, being death aware might have started before the experience, but the NDLE, after worldview capitulation, showed them the light at the end of the mystical tunnel, awakening self-renewal, in the same way as spontaneous NDEs commonly do.

In sum, it seems that with certain people, with certain traits, including a certain level of spiritual maturity, NDLEs carry the potential for transformation, as 'true' NDEs do, as *they wear down culturally induced ego control, thereby eliminating the restrictions imposed on ego and the psyche* (Pennachio, 1988: 163-163). Therefore, in addition to the variables already included in this study and described in Section 9.4.3.,

[33] Cozzolino et al. (2004) used the term *worldview capitulation* as a reaction to death awareness, preventing mortality-induce defensiveness and allowing mortality-induced growth instead.

other *set* variables, namely personality facets, should be considered in future studies to improve the probability of replicating the phenomenology and aftereffects of a spontaneous event.

From this, and as a conclusion coming from the outcome of two spiritually mature participants after an induced NDE, we might hypothesize the following:

a) That an exposure to mortality cues, via an induced near-death scenario with its typical phenomenology,
b) in people with a high level of *spiritual maturity* called *transcendental faith*,
c) by causing them to have permeable psychospiritual boundaries and be more death aware,
d) might facilitate the entrance into a near-death consciousness space,
e) and contribute to positive aftereffects which are comparable to a spontaneous NDE.

In the section below regarding implications, some suggestions will be made regarding this aspect.

9.6. Limitations of this Study

Several limitations affected this study, mostly regarding methodological aspects, including the tool, hypnosis, the sample, and the instruments.

9.6.1. Limitations regarding the tool of induction, hypnosis

Regarding hypnosis, several shortcomings were mentioned in Section 9.5., to which we refer. Here, a recommendation for future studies can be made, regarding the possibility of using different scripts with looser suggestions, so that the influence of what is being suggested could be better ascertained. If a script is fairly open-ended and the phenomenological experience is the same as in a detailed

script, it would be possible to conclude that the outcome is not a mere product of what is being suggested. The importance of this aspect should not be understated, considering what was said above.

Still regarding the script used in the hypnotic induction, some concerns were raised by one of the examiners about the suitability of the content, and any possible stressful effects, as the participants were being invited to undergo a guided experience that included a life-threatening situation. Even if, as a precaution, the candidates were given full information about the script's setting, to exclude those with any kind of sensitivity or trauma regarding the scenario (near dying under an avalanche), in some cases hemodynamic monitoring should be used (Pinsky et al., 2022), to check possible sympathetic stress reactions during hypnosis. A strong sympathetic reaction might contraindicate its use in some participants, especially in clinical populations, therefore the identification of clinically relevant decompensation in patients with coronary syndrome should be considered.

9.6.2. Limitations regarding the sample

A limitation connecting both the sample and the tool, hypnosis, had to do with the ability of the participants to undergo hypnosis. In chapter II, it was mentioned that considering the exploratory nature of this study, the hypnotizability of the participants was not considered, even if, in other studies, their selection was based upon their previous experience with hypnosis, degree of suggestibility and/ or high motivation (Facco et al., 2019; Tressoldi et al, 2014). Hypnotizability refers to *an individual's ability to experience suggested alterations in physiology, sensations, emotions, thoughts, or behaviour during hypnosis* (Elkins et al., 2015). Kekecs et al. (2022), in recent guidelines produced by the 'Task Force for Establishing Efficacy Standards for Clinical Hypnosis', concluded that the assessment of hypnotizability, if not required to establish the efficacy of a hypnosis-based treatment, can nonetheless help in informing about any correlations with the effect, and assert if

it is attributable to suggestion or any another factor. According to the same authors (*idem*:113), *efficacy is a property of the treatment package as a whole and does not require specificity to any mechanism*. Taking this statement in consideration, which we agree with, amidst other factors, the decision of not assessing hypnotizability was made, which might have contributed, at least in Study I, to the inclusion of participants who, by their lack of experience and/or motivation, were less permeable to suggestions. This was a calculated risk, considering that if it is true that not everyone responds positively to hypnotic suggestions, individual differences in hypnotizability are measured by cumbersome performance-based tests, with a heavy behavioural component, that leaves behind other possible contributors, including emotions, that were a poweful aspect of this experience, as the majority of participants with affective episodes demonstrated. Instruments such as the Stanford Hypnotic Susceptibility Scale and the Harvard Group Scale of Hypnotic Susceptibility remain the "gold standard" for measuring hypnotizability, and are not only troublesome to apply, but are also scored according to objective behavioural criteria. (Kihlstrom, 2016). The protocol that we designed was meant to address affect, more than thoughts or behaviour. As most people are at least moderately responsive to hypnotic suggestions (*idem*) and we hoped that most volunteers were relatively motivated and did not carry interfering attitudes or expectancies, an average level of hypnotic response was expected. Therefore, not using such scales that would heavily weight on the participants disposition and might not address parameters that were crucial for the protocol's success, was considered a good methodological strategy. In future studies, more than assessing classical hypnotizability, according to the classical standards, might be useful to assess the presence of a personality trait such as *Attention Absorption* (a facet of the *Openness to Experience* dimension in the "Big Five" structure of personality), meaning the tendency to fully engage in an experience (Tellegen and Atkinson, 1974; Facco et al, 2019), which might be more helpful in terms of predicting the adequacy of candidates to fully engage in the experience. Regarding the self-selected samples, the most striking conclusion pointed to the fact that this study ended up being more of a collection of cases than an experiment. The fact that convenience and

purposive samples were used, meant that the findings would not be generalizable. However, this was an accepted trade-off, as the focal point of the study was investigating the effectiveness of hypnosis in inducing a NDLE. Thus, the volunteer's degree of motivation in self-selecting themselves would suffice in terms of predicting their behavioural response to hypnosis (Braffman and Kirsh, 1999).

However, and even considering the exploratory nature of the study, an adequate number of participants was set as a goal to achieve a statistically significant outcome (Andrade, 2020). But, even after combining statistically homogenous samples (*see* Sections 4.3.2., 5.2.1. and 8.7.), due to recruitment difficulties, sample attrition, and other motives related to the participants' quality, it was not possible to obtain higher numbers than 19 in Study I, and 26 in Study II. Therefore, not only the results were not statistically representative, but they also reflected a strong influence of the experience in few participants, compromising the possibility of making accurate inferences (*see* Section 5.5.). However, the effectiveness of hypnosis to induce a NDLE was established.

All considered, and even though this might not be a study to be extended to large samples, for its specificity, in future opportunities a higher number of engaged participants could be used, to explore the effects of the method in specific populations using statistical significance tests in controlled settings. Using spiritually mature or clinical groups with specific conditions, like people with life-threatening diagnosis, comes to mind, as useful ways of assessing the value of induced NDEs.

It became clear that volunteers who reported a previous interest in spiritual themes, not only guaranteed lower levels of attrition, as the high return rate in Study II demonstrated, but had stronger experiences, like the two case studies. Hence, personality variables could be included in future studies, *e.g. spiritual maturity* (Genia, 1991; 1997), *openness to experience*, *attention absorption,* and even hypnotizabiliy (Kumar and Pekala, 1988; Tellegen and Atkinson, 1974; Twemlow and Gabbard, 1984). The inclusion of groups with different personality profiles and comparing them to controls (*e.g.*, high levels of spiritual maturity *vs* low) would help us to better understand the role of personality variables in the quality of the experience and its effects.

Regarding Study II, an important limitation should be stated, regarding the absence of qualitative data regarding aftereffects in a sample of spiritually mature participants. Therefore, we do not know if any exceptional participants existed, beyond what the quantitative data reflected. Figure 8.3. showed that at least two participants scored above 25 in the NDE Scale (Greyson, 1983), and we do not know what their experiences encompassed, qualitatively. In Study I, the alert to the existence of two exceptional participants came from their spontaneous report, but in Study II, no such initiative was undertaken. However, the hypothesis that exceptional experiences occurred should not be dismissed. In fact, we do not know if the absence of more depth and intensity, in general, was due to a biased judgment regarding the expected level of spiritual maturity of the sample, or if indeed, there was no association between both aspects. The fact that Study II recruitment pragmatically departed from the assumption that a certain level of commitment to spiritual activities might necessarily be associated with a certain level of spiritual maturity or development (*see* Section 8.4.), might have led us to potentially false conclusions regarding the associations of such an assumption with deeper experiences.

In Section 2.11, we departed from the premise that a conceptual exploration of 'spirituality' would be helpful in understanding the spiritual transformation dynamic following a NDE. In that sense, spirituality was described as an attribute of the individual who has as personal relationship with the transcendent aspects of life and can be envisaged as a personality dimension (Hill, 2000; Piedmont, 2001; 2009). The fact that measures of spiritual practice have been correlated with traits of *Openness to Experience* and *Attention Absorption* (Gandy, 2022: McDonald, 2000) which, in turn, have been associated with hypnotic susceptibility (Tellegen and Atkinson, 1974), led us to believe that in the case of a hypnotically induced spiritual experience, as a NDE recognizably is, the influence of personality variables should not be dismissed. However, a formal assessment of the level of spiritual development of the participants should be undertaken, beyond the selection of a purposeful sample of self-selected spiritually mature participants, who engaged in so-called spiritual activities, so that a

clear relationship between personality variables and the type of experience could be established. Considering this, it cannot be excluded that some experiences in Study II were as deep and intense as the case studies. It can can also not be excluded that some of them were not spiritually mature, even when they consider themselves to be so, by engaging in spiritual activities.

A long-term assessment phase that includes qualitative analysis is also advisable, in future studies, since not only in spontaneous NDEs positive changes became more visible at eight than at two years of follow-up (Van Lommel et al., 2001), but in other experiences with NOSCs (Doblin, 1991). Even here, and with Fairydust, the results did not yet come to an end: after three years, she has left the wheelchair, fulfilling her Grandparents' prophecy and going against the direst medical predictions (Machado and Freestone, *in press*). The opportunity to observe the possibility of long-term growth after an exposure to an induced near-death scenario should not be missed.

9.6.3. Limitations regarding the assessment instruments

Several limitations concerning the psychometric tools were already pointed out, and we refer to Sections 5.5.2. and 8.9.2 for details. Regarding the NDE Scale (Greyson, 1983), it resulted from the APZ (Dittrich, 1998) that some core elements, taken separately, could be experienced in non-NDE stated. And that the scale did not differentiate NDEs from NDLEs (Charland-Verville et al., 2014). Since the beginning of this study, a new scale to quantify NDE phenomenology, the NDE-C Scale (Martial et al., 2020) has been validated, using three different studies to characterize and quantify the NDE phenomenology. Even though Study 3 meant to assess the possibility of discriminating contents among different cohorts within 'modified states of consciousness' with specific items to *distinguish NDEs-like from the experiences elicited by hallucinogenic drugs, meditation, and cognitive trance* (*idem*: 11), no item was found to distinguish between NDEs and NDLEs The authors concluded that similar neurophysiological correlates can be activated in life-threatening and non-life-threatening

situations, and that the NDE-C scale is adequate to *identify the content of a NDE, whatever the context in which it has been experienced* (*idem*:11). Consequently, a NDLE will be more easily distinguished from a 'classical' NDE by the context (and life-threatening circumstances) that triggered the experience, than by the content, with its typical phenomenology. As with the NDE Scale (Greyson, 1983), this new instrument does not offer a criterion to discriminate between a 'true' NDE and other types of modified states of consciousness leading to the same experience. Therefore, in the future, even if this instrument showed to be psychometrically-sound and could be used in induced experiences, eventually comparing the results with the APZ (Dittrich 1998) and the original scale, it will not help in distinguishing non-spontaneous NDLEs. The solution might be to continue using open-ended questionnaires to identify specific elements of induced, non-life threatening NDLEs. In due course, the knowledge obtained by the continuous use of this strategy might contribute to improve what we know about the specificity of NDLEs in contrast with 'true' events.

The use of open-ended questionnaires, or even structured interviews, could also help in addressing the limitations of the somewhat inexpressive quantitative results regarding aftereffects. As the most relevant outcome came from TA it might be that, with this novel research theme, the use of qualitative tools is recommendable for future studies, instead of limiting the analysis to the scope of pre-existing, non-specific, quantitative instruments with a limited range of analysis, considering that they were not built having induced NDLEs in mind. Open-ended questions provide the perfect opportunity to capture a wide range of experiences and unexpected answers, that might, as it happened with the two case studies, the opportunity to suggest follow-up person-to-person interviews. Therefore, instead of suggesting different psychometric tools to assess death-related attitudes or spiritual well-being, without the shortcomings that were pointed out in Sections 5.5.2. and 8.9.2., a questionnaire built specifically to address these and other relevant constructs regarding after-effects could be suggested at this point.

Regarding psychological distress, the situation is somehow different, as a large number of qualitative tools that could be appropriately administered to address the BSI-18 (Derogatis, 2001) limitations, do exist. This instrument, developed as a brief screening tool for psychological distress in the general population (Recklitis et al, 2006), might not be sensitive enough to detect below the threshold situations of psychological distress. Other studies have pointed out the existence of a trade-off between sensitivity and specificity and the need to prevent consequences of false negatives in this area (Merport and Recklitis, 2012). In the case of this study, a diagnosis interview used as a pre-screening tool could address the sensitivity issue, capture more precise data than a three-dimensional instrument, and prevent false negatives, that could be eventually distressed by the hypnotic procedure. DIPS for DSM-IV-TR for example, has a good construct validity and is well accepted for diagnostic purposes in inpatient, outpatient, and research settings, but also addresses the most relevant mental disorders based on the definitions and criteria of the DSM-IV-T, by asking information about current and past episodes (American Psychiatric Association, 2013; Suppiger et al., 2009). Using it, in complement to open-ended questions, could prevent the inclusion of less apt participants and also facilitate the exploration of unknown variables that could be controlled to facilitate personal impacts and enable a favourable transformation process for people in need.

A last limitation has to do with the fact that in Fairydust's case, there is no way of concluding that the perceptions she had were veridical, since their origin could not be discerned. Even in 'true' NDEs, not many cases of veridical perceptions have been corroborated (Augustine, 2007), and they might be attributed to other causes (Blackmore, 1993b). Fairydust could, in fact, have repressed memories regarding the signs she received from her late grandparents. But what can be safely said is that her unusual experience was, according to her, an important element leading to the transformation process that followed (Machado and Freestone, *in press)*, as it is sometimes the case with the hypnotic recovery of memories, leading to symptom relief (van der Kolk and Fisler, 1995; Landry, Appourchaux and Raz, 2014). And the same happened with Pixie-K, for whom

experiencing in her body the effects of a transcendental event, allowed her to heal from trauma wounds (*see* Section 7.5.1). Even if in this study, there was no way of assessing the nature of such veridical perceptions during induced OBEs and NDEs are, nevertheless, an interesting subject to approach in future studies, considering the therapeutic potential they might hold.

9.7. Implications for Future Studies

For us, this study constitutes another stepping-stone adding to the research of NDEs and of the possible therapeutic uses of NOSC, used within a transpersonal psychology framework. In the Introduction chapter, the idea of using hypnosis to induce the phenomenological components of a spontaneous NDE in people who were terminally ill or with life-threatening diagnosis, was put forward. For ethical reasons, a healthy population had to be used. As their results cannot be extrapolated to the population, there is no way of knowing how most people, and especially participants in critical situations, would benefit from what we demonstrated is, in fact, a safe experience.

However, based on the conclusion that people without physical or mentally impairing conditions, could go beyond a certain psychological threshold, where a NDLE becomes possible, as well as the production of certain aftereffects, a few conjectures can be safely made. We can speculate that, as our two participants were in a state of receptiveness, conquered through their previous experience of trying to overcome atypical life-conditions and adversity, so would subjects in life-challenging situations. For them, a state where worldview capitulation and a confrontation with mortality already happened, and death awareness was probably activated (Cozzolino et al., 2004), the exposure to a

near-death scenario might open the door to the possibility of obtaining much needed answers to pressing existential questions (*see* Section 9.5.5.).

Considering the results with two people who were exposed to traumatic circumstances, we might cautiously speculate that no adverse effects would result for others in similar situations, as there were no reports of adverse experiences. With the results so far, and by knowing that hypnotically induced NDLEs are not only phenomenologically possible but almost risk-free, we feel encouraged to continue this research in people who are dealing with situations where the loss of death fear would make a considerable difference. We can hypothesize that, with such people, the benefits of an induced NDLE would appropriately address their situation, as we have seen with our two exceptional participants, who were considered healthy enough to participate but were no strangers to traumatic life-crisis, as people in life-threatening situations commonly are. This was the initial goal of the project, as stated in the Introduction and, considering the results, it seems that we have enough elements to pursue it in the future. Therefore, in future studies, when studying specific populations, including those facing life-threatening diagnosis, and with the goal of attaining a clearer perspective on how suitable a tool like hypnosis is to help them approaching the threshold we called Near-Death Consciousness, an ideal assessment model should include at least, five variables. Including the assessment of personality variables, so that we can understand what type of people could benefit more from the experience. The variable *spiritual maturity* seems to be worthwhile exploring to increase the probability of providing an experience that can be legitimately compared to a spontaneous episode. In spontaneous experiences, NDErs could not be differentiated by predisposing personality traits (*see* Section 2.6.2.) or differences in previous spiritual experience (Khanna and Greyson, 2014a). But as we are dealing with induced episodes, previous differences should be also considered, not only at the light of the results regarding spiritual maturity, but also in terms of the participant's susceptibility to hypnosis. For now, and referring to the *pragmatic principle* (James, 1902), the fruit of the hypnotically induced NDLEs tree, seems to be good (Stace, 1960),

depending on who eats it. Better participants, in terms of the advantage they can take from the protocol, seem to be those with a high level of spiritual maturity, combined with other personality variables and probably, previous experiences. What that level of spiritual maturity is, and what it takes to be there, is a different question, that will have to be addressed when working with specific populations, in the future, as we hope to do, making the best of the results achieved so far.

9.8. Conclusions regarding the success of the experience and its future relevance

The leading goal for this research aimed at finding out if it was possible to induce a NDE with hypnosis, where healthy people could safely journey into a similar phenomenological space and experience some of its typical aftereffects. And eventually, extend any valuable results, in the future, to people facing existential issues caused by life-threatening diagnosis or imminent death.

Using a quasi-experimental mix-method research study conducted with non-clinical participants, it was possible to conclude that hypnosis was effective at inducing a NDLE, measured by the presence of the core elements of a spontaneous episode, according to the Near-Death Experience Scale (Greyson, 1983). After two rounds of data collection, Study I and II, conducted with convenience and purposive samples of non-clinical participants, respectively, the quantitative results pointed to the adequacy of hypnosis to induce a NDLE, phenomenologically equivalent to a spontaneous episode, where most experiences followed a predominantly affective trend. TA, or thematic analysis (Braun and Clarke, 2006) performed upon open-ended answers from Study I's participants, confirmed this phenomenological similitude, by producing a theme labelled as '*common elements of spontaneous NDEs'*. Three subthemes branched from it, showing the *'positive affective quality'* of the episode, and the importance of having an '*out-of-the-body experience',* as a stepping-stone for the third theme, '*transcendental elements and uncommon inner experiences'* manifestation. Hypnosis proved to be

effective in inducing a positive transcendental episode that could not be phenomenologically differentiated from a spontaneous NDE, as the outcome followed *a discernible common pattern* (Moody, 2017:13). Confirming our first hypothesis that NDLEs are phenomenologically similar to NDEs. But do they produce the same range of aftereffects?

A subordinate goal aimed at assessing the presence of typical aftereffects, using quantitative and qualitative measures. The results were quantitatively modest but qualitatively relevant, revealing subtle aftereffects that went unnoticed by psychometric instruments, that aimed to measure psychological distress (BSI 18 by Derogatis, 2001); death attitudes (DAP-R, by Wong, Reker and Gesser, 1994) and spiritual well-being (SHALOM, by Gomez and Fisher, 2010). In Study I, minor quantitative changes expressed the impact of the experiment in single cases, compromising the possibility of making meaningful inferences.

However, the advantage of using a mix-method approach was revealed, as the qualitative segment of Study I brought relevant clues regarding the protocol's impact, manifested through the theme *'Aftereffects and Insights beyond Spontaneous NDE Core Elements'*, which branched into two subthemes, *'Openness to Uncommon Experiences'* and *'Death Acceptance Aspects'*. Thus, revealing that, as predicted, an induced NDE could positively affect spiritual aspects, reduce the fear of death and dying, and increase its acceptance. The 'spiritual' worldview of some participants was transformed by the experience, who demonstrated a more peaceful attitude towards death and dying, indicating that, as in spontaneous episodes, a pattern of favourable change, however subtle, can unfold (Flynn, 1986; Greyson, 1992, Holden, Kinsey, and Moore, 2014; Noyes, 1980). A final theme labelled as *'Elements of Discomfort'* revealed that hypnosis is safe when used to induce NDLEs in a clinical context. However, the experience was not overall life-changing, except for two 'spiritually savvy' women, whose impressive results imposed the need to add another data collection cycle, Study II, where a purposive sample of self-designated spiritually mature participants was observed. The quantitative

results showed that the intervention was not expressive in terms of tangible aftereffects, even if spiritually mature participants had deep and meaningful experiences.

From data collected through semi-structured interviews conducted with the two participants and analysed with TA (Braun and Clarke, 2006), two themes related to the mystical tone of the episodes and their spiritual maturity were revealed. The evidence pointed to stronger aftereffects and to a positive link between the ability of hypnotically induced NDEs to facilitate mystical experiences and the participants' degree of spiritual maturity. With both, an induced NDEs exhibited Pahnke's (1969) nine universal core features of *mystical experiences* (*see* Appendix 26) that had been previously considered to characterize the outcome of spontaneous NDEs (Pennachio,1986). A predisposing personality trait, possibly leading to the production of those same mystical contents was labelled as *spiritual maturity*. From this theme, several subclusters were formed and labeled, according to a pre-existing theoretical structure (*see* Appendix 27), corresponding to the criteria for the development of the Spiritual Experience Index (Genia, 1991; 1997). As in 'true' NDEs (Cressy, 1996), not everyone reaches the same level of experience and probably these participants, who were functioning at a *mature psychospiritual level* called *transcendent faith* (Genia, 1990; 1991), had a stronger predisposition to deal with spiritual issues. Which, altogether with other non-specified traits and previous experiences, might have contributed to the intensity of the process and to its transformative outcome. Thus, our second hypothesis, regarding aftereffects was confirmed to some extent since some conditions seem to determine their manifestation. But, in the end, was their NDE a real NDE?

From the APZ Questionnaire (Dittrich, 1998) analysis, used in Study II, we know now that hypnosis is an appropriate psychological method for producing a shift in awareness, with contents coinciding with spontaneous NDEs core elements, but also with other categories of NOSC. Therefore, phenomenology, by itself, does not seem to be a differentiating criterion between induced and non-induced events, as specific suggestions, designed to reproduce the typical NDE content, were part of the script. To assess if the NDLE outcome might be more than a hypnosis artifact, beyond

suggested phenomenology, the presence of non-suggested aftereffects should be an unescapable methodological step, as a previous study (Machado, Farinha and Simões, 2022) showed. Suggesting core elements is not the same as triggering the same experience, with its whole range of outcomes, unless an approximation to a hypothetical NOSC, labeled *Near-Death Consciousness* (NDC) happens. Beyond it, a theoretical threshold might be crossed, where a critical shift from everyday consciousness (quantity) happens and a certain content can manifest (quality). Did these two participants enter this NDC space, even if no life-threatening circumstances were present? And why?

From their results, it seems they did, but the fact that they were spiritually mature was not what did it, as demonstrated in a group of spiritually mature participants whose quantitative aftereffects were modest. A combination of their level of *transcendental faith* with other variables, including other personality traits and traumatic events preceding the experience, might have caused them both to come to the experience with what Cozzolino (2006) called *death awareness.* And, eventually, to progress to a type of *mortality induced growth* that sometimes happens to NDErs and serious trauma survivors (Tedeschi, Park, and Calhoun, 1998). The transformative outcome of both case studies pointed to a sort of PTG (Tedeschi and Calhoun, 2004) after an induced event. That, in the same way as spontaneous ones (Pennachio, 1986; 1988), had a psychological restorative function that facilitated unexpected, profound, and self-transformative effects, in two people with certain predisposing personality traits. Serious trauma destroys, but NDEs rebuilds: the fact that these two participants were exposed to previous traumatic circumstances, causing a worldview capitulation that serious trauma survivors face (Cozzolino et al., 2004), combined with the existential solutions and the sense of purpose that the mystical tone of the induced NDE provided, created a complex scenario where a psychological transformation unfolded. The ground where the seeds of emotional growth provided by an induced NDE could flourish, in the form of transformative aftereffects, was prepared beforehand, through their life story and in the form of traumatic events.

As a conclusion coming from the outcome of two spiritually mature participants after an induced NDE, we might hypothesize that an exposure to mortality cues, via an induced NDE, in people with a very high level of *spiritual maturity* called *transcendental faith*, might facilitate the entrance into a psychological space, labelled as *near-death consciousness*, where mystical-like experiences can unfold. Bringing a transformation potential, as 'true' NDEs do. Therefore, in addition to the variables already measured in this study, other variables related to personality traits and previous experiences should be considered in future studies to improve the probability of obtaining strong results and replicate the beneficial aftereffects of a spontaneous event.

Noyes et al. (2009) pointed out two important consequences of NDEs: one, the existential crisis forcing individuals to question the meaning of life, and the other the spiritual encounter that, for most, results in a spiritual awakening. This is where we wanted to arrive with this project, to the point where people facing existential crisis, could benefit from what an induced NDE can bring in terms of aftereffects. These two participants offered the result we aimed for, as they were healthy volunteers, considered the study requirements but had also endured traumatic circumstances that helped in understanding the potential application of the method. And this is the lesson learned from this study about the potential therapeutic value of induced NDEs. Which should not be dismissed because the impact in terms of aftereffects seemed initially modest, and further investigation with specific samples and longitudinal studies is certainly needed to increase our knowledge. A vast field of possibilities exists regarding the use of transpersonal hypnosis for psychotherapy, deserving to be explored with rigorous scientific enquiry. The exercise that was made using TA, even if not entirely conducive to the conclusions that were predicted regarding aftereffects, offered useful clues on how the therapeutic potential of NOSCs in general, and induced NDEs specifically, can be explored using a mix-method approach, where qualitative analysis, with its potential to grasp the complexity of subjective experiences, can complement straightforward, objective data. Lemercier and Terhune (2017) validated the power of hypnotic suggestion to enhance the therapeutic efficacy of

psychedelics, by increasing the likelihood of positive responses, including mystical-type experiences. It is our opinion that with this collection of cases, we can say the same about the power of hypnosis to bring about the benefits of induced NDEs within a risk-free therapeutic approach, in the form of a mystical experience, to help people facing dark nights of the soul by opening a psychological space where small miracles may happen. As Greyson affirmed (2007c:10), *protestant theologian Judith Cressy has compared typical NDE phenomenology and aftereffects to the mystical experiences of St.Theresa of Avila and St.John of the Cross and concludes that they both had ecstatic out-of-body travels, visions of God, clairvoyance, loss of the fear of death, and healing transformations*. With this study, we hope that the first step was taken, to bring transformation to those in need, from induced NDEs.

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APPENDIXES

APPENDIX 1

Ethical Approval

THE UNIVERSITY OF NORTHAMPTON

Dear Sofia

Application ID: ETH1718-0005

Project title: Induced near-death experiences in healthy volunteers: Phenomenology, psychophysiology, and aftereffects
Lead researcher: Miss Sofia Machado Alves Ferreira

Thank you for your detailed and well-evidenced response to the Research Ethics Committee. The response was considered on the 7th of September 2018. The decision is:

Approved

We are happy to confirm that your application can be approved with immediate effect. Congratulations on reaching this stage. We wish you all the best for your project.

Please update the Committee via Gateway if you need to make substantial changes or additions to the approved project.

Yours

John Horton

APPENDIX 2

Announcement

University of Northampton
Faculty of Health & Societies

ANNOUNCEMENT

Would you like to participate in a parapsychological experience?
Would you like to know how it is to go through a Near-Death Experience in a safe environment, using guided imagery and without any risk to your physical or psychological health?
The experimental part of a post-graduate research study entitled *Induced Near-Death-Experiences in Healthy Volunteers: phenomenology, Psychophysiology and after effects* is taking place between Saturday, the 27th of April and Wednesday, the 1st of May, at the University of Northampton, supervised by Professor Chris Roe.

If you would like to know more and register, you can contact one of the following researchers:
sofia.machado@northampton.ac.uk or noonauta@gmail.com

Further information and contact details: The research has been reviewed by an independent group called the Research Ethics Committee to protect you as a participant. The research meets the ethical guidelines of the British Psychological Society (BPS) and the EU Regulation nº2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and Directive 95/46/EC (General Data Protection Regulation.

Application ID: ETH1718-0005

Approved by the Research Ethics Committee on the 7th of September 2018

APPENDIX 3

Participant Information Sheet

PARTICIPANT INFORMATION SHEET

I am a researcher at the University of Northampton where I am conducting a post-graduate research study funded by BIAL Foundation, in Portugal, entitled *Induced Near-Death-Experiences in Healthy Volunteers: phenomenology, Psychophysiology and after effects*. A Near-Death Experience (NDE) is an episode that happens to about 10% of subjects who survive a close encounter with death, even though sometimes it can happen spontaneously without any death threat. People who go through this type of experience commonly report a transcendental episode characterized by typical elements that might include: a sense of detachment from the physical body, going through a tunnel or another space of transition, feeling a deep sense of peace and wellbeing, going through a life review in a non-judgemental setting, meeting deceased relatives and spiritual entities and often receiving a loving message about their life purpose before returning to their previous state of awareness. This episode is usually felt as entirely benign, lived through without any fear and a often with a feeling of bliss. The mechanism by which NDE' s occur is unknown, but typical aftereffects are associated with long-lasting transformations, presenting a pattern of favourable attitude change in daily life that may include a different attitude towards death and increased spiritual awareness.

PURPOSE OF THE RESEARCH STUDY:
The purpose of this study is to explore the possibility of mimicking an NDE episode by using a specifically built hypnosis protocol which includes music, relaxation, visualization and guided imaging techniques, to provide participants with the possibility of experiencing some of its core elements in a dream-like scenario. Thus, it is possible that during the experiment you might be able to feel like you are in fact experiencing some of the elements described above.
With this study, we intend to find out if it is possible to obtain some of the typical aftereffects of a NDE by means of a modified/amplified state of consciousness (MSC).[34] Findings of this research project will be published to improve the level of awareness and knowledge within this area so that, in the future, we might be able to help people who are dealing with complicated issues related to the process of death and dying. To achieve this, we will use the following measuring tools: psychological assessment scales, an open-end questionnaire and saliva collection, so that we can measure possible physiological changes. You will remain entirely **anonymous and unidentifiable** as a participant in this research.

Considering that you understood the purpose of this research study, we would like to invite you to take part, **if you want to and are certain of meeting these conditions**:

- You are 18 years or older;
- You have never been through a Near-Death Experience.
- You have never had any life-threatening experience;
- You are comfortable and willing to explore the subject of death and dying within the framework of a MSC;
- You are convinced that the theme of death and dying does **not** cause any adverse reaction that might lead to a panic situation.

[34] A modified or altered state of consciousness *has been defined as a changed overall pattern of conscious experience, or as the subjective feeling and explicit recognition that one's own subjective experience has changed* (see below), compared to what we understand by a normal state of consciousness. Dreaming or day-dreaming, as well as hypnosis, are considered MSC. *Revonsuo,A.; Kallio, S. & Sikka, P. (2009). What is an altered state of consciousness? Journal of Philosophical Psychology, 22 (2): 187-204.*

- You do **not** have a history of mental health issues that would affect your ability to consent to taking part.
- You did **not** undergo any surgery procedure in the previous month.
- You do **not** suffer from any serious physical or mental illness.
- You **never** had a psychotic episode.
- You are **not** pregnant or breastfeeding.
- You do **not** have issues with medications, drug or alcohol abuse.
- You did **not** consume drug, alcohol or any other mind-altering substances before the experience.

If you are sure you meet the criteria stated above, please read the following information carefully and take time to decide if you wish to take part.
If you would like more information or have any questions, please contact one of the researchers (sofia.machado@northampton.ac.uk or noonauta@gmail.com)

FAQ's

Do I have to take part? What are the possible disadvantages and risks of taking part?

No, taking part is voluntary and there are no consequences if you do not want or are not able to participate. You do not have to provide us with a reason for your choice. Also, there is no compensation, financial or otherwise, for your participation.

But if you decide to participate, we will ask you to provide written consent in before taking part. You will also have to fill a psychological assessment form so that we are sure that you meet the conditions for undergoing a hypnosis session without any risk to your health. The results will remain entirely **anonymous and unidentifiable and they will only be used for the purposes of the research.**

If you decide to participate you will have to undergo all the procedures described below in two different stages, fill all the instruments and collect your own saliva sample. This collection will not involve any physical contact with the research team. You are free to withdraw at any time during the study and up to 2 weeks after finishing it, without giving a reason.

If you have any doubts regarding what hypnosis is, you will have the opportunity of asking the researchers any questions you have. However, the conclusions emerging from the literature on the risks associated with experimental hypnosis indicate that post-hypnotic effects on possible risks and in a sample of university students are not different from those produced by a situation of evaluation in class or exam.
If you need, feel free to ask for some references on this subject to the researchers above.

What will taking part involve?

If you want to take part and meet all criteria to, you will sign a consent form showing that you fully understand the information and complete a short questionnaire. Then, you will be randomly assigned to one of three protocols: two of them include a hypnosis session and the other involves attending a seminar. If you are allocated to one of the hypnosis groups, you will be able to clarify all your doubts regarding this procedure and the 1st saliva sample will be collected.

Before the session you will be asked to fill two psychological assessment questionnaires. It should take around 15 minutes to finish. The protocol, hypnotic induction or seminar attendance, will be applied, according to each groups' specificity.
After the protocol has been applied to the NDE group, participants will be asked to fill a self-report questionnaire with two open-ended questions and one other psychological assessment questionnaire. This will take 15-20 minutes. Regarding the other groups, participants will be asked to fill the self-report questionnaire. This will take 5-10 minutes. The second saliva sample will be collected as a post-test measure in all groups.
One month later post-test measures will be applied, and you will be asked to repeat the same psychological tests used in the pre-test phase, as well as an open ended self-report questionnaire. This will take 45 minutes approximately. You will not be identifiable from any data you provide, including the results from the open-ended questionnaire or from the saliva samples.

Will my taking part in the study be kept confidential?

You will be completely anonymous. Any information you provide cannot not reveal your identity. Your answers will be securely stored according to university policy and the General Data Protection Regulation in a way that means you cannot be identified. You'll be given a participant number, which you can use to withdraw your data. You will not be identifiable from the data you provide. You will not be identified by anything in the questionnaire, and if any citation is used from your answers, your identity will not be revealed. Your saliva sample will be processed for specific purposes regarding two molecular biomarkers, cortisol and melatonin or oxytocin, that will be used for the purposes of this study only. The samples will be destroyed after processing and you will not be identified through any biological material. The findings may be published in a scientific journal or presented at a conference. But you will remain anonymous and unidentifiable in all publications and presentations of the findings. Your data may also be stored, archived, shared and re-used securely for further research but you will remain unidentifiable at all times.

Who is organizing or sponsoring the research?

The study is organized and carried out by a researcher at the University if Northampton as part of a PhD research project. The PhD research project is funded by BIAL Foundation, in Portugal.

Further information and contact details:

The research has been reviewed by an independent group called the Research Ethics Committee to protect you as a participant. The research meets the ethical guidelines of the British Psychological Society (BPS) and the EU Regulation nº2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and Directive 95/46/EC (General Data Protection Regulation). If you would like to review these guidelines, please contact sofia.machado@northampton.ac.uk and request a copy. If you would like any further information regarding this research you can contact a member of the university research team.

Name	Position	E-mail
Sofia Machado	PhD Student	sofia.machado@northampton.ac.uk
Prof Chris Roe	Director of Studies/Supervisor	Chris.Roe@northampton.ac.uk
Dr. Callum Cooper	Supervisor	callum.cooper@northampton.ac.uk
Prof Mário Simões	External Supervisor	noonauta@gmail.com

APPENDIX 4

Informed Consent

University of Northampton
Faculty of Health & Societies

INFORMED CONSENT FOR EXPERIMENTAL

HYPNOSIS GROUP

Application ID: ETH1718-0005 Approved by the Research Ethics Committee on the 7th of September 2018

Title of proposed research: *Induced Near-Death-Experiences in Healthy Volunteers: phenomenology, Psychophysiology and after effects.*
Project: Degree by Research Leading to Doctor of Philosophy(Psychology)

PGR Student: Sofia Machado Ferreira, MA. Project funded by BIAL Foundation (PI: Mário Simões, MD PhD)

Contacts: sofia.machado@northampton.ac.uk noonauta@gmail.com

University of Northampton	**Date:**
Name:	
Age:	**Gender:**
Address:	
Email:	
Phone Number:	
Education:	
Profession:	
Religion/Spiritual Belief:	

Thank you for your interest in being a part of this research study. Before you decide to participate, it is important that you fully understand why this study is being conducted and what it will involve. Make sure you read the Information Sheet that you were provided with, and if you still have any doubts talk to one of the researchers, because you are being asked to sign a consent form.

The purpose of your participation is to help studying the possibility of generating some of the positive after effects of a Near-Death Experience (NDE) artificially, by using hypnosis, and to compare it with other experiences that might have a similar beneficial impact. By taking advantage of your imagination, you will be guided through a virtual journey in a dream like scenario where you will be asked to experience some of the elements that characterize a typical NDE without any risk to your physical, mental or emotional well-being. These elements might include a sense of separation from your physical body, going through a space of transition, feelings of deep peace and wellbeing, an opportunity to review one's accomplishments and accept one's mistakes in a non-judgemental setting and a capacity to engage disinterestedly in other personal elements of the experience, some of them of a

transcendental nature, before returning safely to your everyday consciousness. If you experience any need to withdraw you can just open your eyes, much like it happens in a dream.

CONSENT

If you agree to be a part of this research project, it is because you volunteered, at your own free will, to participate as an experimental volunteer within a study that involves the participation in a hypnosis session, the completion of a battery of psychological tests, filling a self-report questionnaire and the collection of saliva samples. The study, which is taking place at the University of Northampton, is conducted by a Medical Doctor and a Psychologist (see header) trained as hypnotherapists. Before participating, and as a pre-requirement, **you must be able to honestly answer 'yes' to all the following statements:**

I read and understood the contents of the Information Sheet and I had the opportunity to ask questions regarding the study.	Yes	No
I am at least 18 years of age.	Yes	No
I do n**ot** have a history of mental health issues that would affect my ability to consent to taking part.	Yes	No
I voluntarily agree to participate in this study.	Yes	No
I write and read English fluently	Yes	No
I agree to provide the researchers with a saliva sample that will be analysed for the presence of cortisol and melatonin or oxytocin and **only** for the purposes of the present study. The sample will be destroyed after processing.	Yes	No
By taking part in this study I understand that all information is **anonymous.**	Yes	No
I believe I **never** had a near-death experience	Yes	No
I believe I **never** had a life-threatening experience	Yes	No
I am comfortable and willing to explore the subject of death and dying.	Yes	No
I did **not** undergo any surgery procedure in the last month.	Yes	No
I am **not** currently suffering from any serious physical or mental illness.	Yes	No
I was **never** diagnosed with schizophrenia.	Yes	No
I **never** had a psychotic episode.	Yes	No
I am **not** pregnant or breastfeeding.	Yes	No
I do **not** have issues with medications, drug or alcohol abuse.	Yes	No
I did **not** consume drug, alcohol or any other mind-altering substances before participating in the experience.	Yes	No
I understand that I have two weeks following completion of the questionnaire to withdraw my consent to participate without explanation or penalty, by quoting my unique participant number.	Yes	No
I agree that I will **not** receive any financial compensation for my participation.	Yes	No

By checking this box, I confirm that I agree to participate in this study and that I meet all of the requirements to participate. [check box] ☐

If you are unable to confirm that you meet all the requirements to participate and would like to contact the lead researcher, please email Sofia Machado at:

sofia.machado@northampton.ac.uk

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

CONTACT INFORMATION

If you have questions at any time about this study, or you feel the need to share your experience in more detail, you may contact the researcher whose contact information is provided on the first page.

We estimate the maximum duration of the experiment in 2 hours and a half (2h30m).

APPENDIX 5

Near-Death-Experience Scale

(Greyson, 1983)

Near-Death Experience Scale

(Greyson, 1983)[35,36]

The following pages contain 16 statements with which some people agree and others disagree. For each statement, choose the number ('0', '1' or '2') corresponding to the degree of your agreement or disagreement. Note, there is not right or wrong answer. All that is important is that you indicate the item that best reflects your experience.

1. **Did time seem to speed up?**

   2 = Everything seemed to be happening all at once; or time stopped or lost all meaning.

   1= Time seemed to go faster than usual, or slower.

   O = Neither

2. **Were your thoughts speeded up?**

   2 = lncredibly fast

   1= Faster than usual

   O = Neither

3. **Did scenes from your past come back to you?**

   2 = Past flashed before me, out of my control

   1= Remembered many past events

   O = Neither

4. **Did you suddenly seem to understand everything?**

   2 = About the universe

   1= About myself or others

   O = Neither

5. **Did you have a feeling of peace or pleasantness?**

   2 = Incredible peace or pleasantness

[35] Greyson, B. (1983). *The Near-Death Experience Scale: Construction, reliability, and validity*. Journal of Nervous and Mental Disease, 171, 369-375.

[36] Greyson, B. (1985). A Typology of Near-Death Experiences. American Journal of Psychuiatry, Vol.142 (8):967-969.

1= Relief or calmness

O = Neither

6. Did you have a feeling of joy?

2 = Incredible joy

1= Happiness

O = Neither

7. Did you feel a sense of harmony or unity with the Universe?

2 = United, One with the world

1= No longer in conflict with nature

O = Neither

8. Did you see or feel surrounded by a brilliant light?

2 = Light clearly of mystical or other-worldly origin

1= Unusually bright light

O = Neither

9. Were your senses more vivid than usual?

2 = Incredibly more so

1= More so than usual

O = Neither

10. Did you seem to be aware of things going on elsewhere, as if by ESP?

2 = Yes, and facts later corroborated

1= Yes, but facts not yet corroborated

O = Neither

11. Did scenes from the future come to you?

2 = From the world's future

1= From personal future

O = Neither

12. Did you feel separated from your physical body?

2 = Clearly left the body and existed outside it

1= Lost awareness of the body

O = Neither

13. Did you seem to enter some other unearthly world?

2 = Clearly mystical or unearthly realm

1 = Unfamiliar, strange place

O = Neither

14. Did you seem to en-counter a mystical being or presence?

2 = Definite being, or voice clearly of mystical or other-worldly origin

1= Unidentifiable voice

O = Neither

15. Did you see deceased spirits or religious figures?

2 = Saw them

1= Sensed their presence

O = Neither

16. Did you come to a border or point of no re- turn?

2 = A barrier I was not permit-ted to cross; or "sent back" to life involuntarily

1= A conscious decision to "return" to life

O = Neither

Thank you for your collaboration!

APPENDIX 6

BSI 18-Brief Symptom Inventory18
(Derogatis, 2001)

BRIEF SYMPTOM INVENTORY 18 [i]

(Derogatis, 2001)

Instructions: Below, follows a list of problems that people sometimes refer to. Read each one os them carefully and note the number that best describes the degree to which you felt disturbed by this problem in the last week, including today. Check only one number for each problem and leave no items unanswered. Please read the example given below before starting to complete this questionnaire.

Pain in the body	Nothing 0	A little 1	Moderately 2	Very Much 3	Extremely 4

IN WHAT MEASURE WERE YOU DISTURBED BY:	**Nothing**	**A little**	**Moderatel**	**Very**	**Extremely**
1. Faintness or dizziness	0	1	2	3	4
2. Feeling no interest in things	0	1	2	3	4
3. Nervousness or shakiness inside	0	1	2	3	4
4. Pains in heart or chest	0	1	2	3	4
5. Feeling lonely	0	1	2	3	4
6. Feeling tense or keyed up	0	1	2	3	4
7. Nausea or upset stomach	0	1	2	3	4
8. Feeling blue	0	1	2	3	4
9. Suddenly scared for no reason	0	1	2	3	4
10. Trouble getting your breath	0	1	2	3	4
11. Feelings of worthlessness	0	1	2	3	4
12. Spells of terror or panic	0	1	2	3	4

13.	**Numbness or tingling in parts of your body**	0	1	2	3	4
14.	**Feeling hopeless about the future**	0	1	2	3	4
15.	**Feeling so restless you couldn't sit still**	0	1	2	3	4
16.	**Feeling weak in parts of your body**	0	1	2	3	4
17.	**Thoughts of ending your life**	0	1	2	3	4
18.	**Feeling fearful**	0	1	2	3	4

Thank you!!!

APPENDIX 7

Death Attitude Profile-Revised (DAP-R)

Wong, P.T.P., Reker, G.T., and Gesser, G.

Death Attitude Profile-Revised (DAP-R)
Wong, P.T.P., Reker, G.T., and Gesser, G.

This questionnaire contains a number of statements related to different attitudes toward death. Read each statement carefully, and then decide the extent to which you agree or disagree. For example, an item might read: "Death is a friend." Indicate how well you agree or disagree by circling one of the following: **SA** = strongly agree; **A**= agree; **MA=** moderately agree; **U**= undecided; **MD**= moderately disagree; **D**=disagree; **SD**= strongly disagree. Note that the scales run both from *strongly agree* to *strongly disagree* and from *strongly disagree* to *strongly agree*.

If you strongly agreed with the statement, you would circle **SA**. If you strongly disagreed you would circle **SD**. If you are undecided, circle **U**. However, try to use the undecided category sparingly.

It is important that you work through the statements and answer each one. Many of the statements will seem alike, but all are necessary to show slight differences in attitudes.

1. Death is no doubt a grim experience. **SD D MD U MA A SA**
2. The prospects of my own death arouses anxiety in me. **SA A MA U MD D SD**
3. I avoid death thoughts at all costs. **SA A MA U MD D SD**
4. I believe that I will be in heaven after I die. **SD D MD U MA A SA**
5. Death will bring an end to all my troubles. **SD D MD U MA A SA**
6. Death should be viewed as a natural, undeniable, and unavoidable event. **SA A MA U MD D SD**
7. I am disturbed by the finality of death. **SA A MA U MD D SD**
8. Death is an entrance to a place of ultimate satisfaction. **SD D MD U MA A SA**
9. Death provides an escape from this terrible world. **SA A MA U MD D SD**
10. Whenever the thought of death enters my mind, I try to push it away. **SD D MD U MA A SA**
11. Death is deliverance from pain and suffering. **SD D MD U MA A SA**
12. I always try not to think about death. **SA A MA U MD D SD**
13. I believe that heaven will be a much better place than this world. **SA A MA U MD D SD**

14. Death is a natural aspect of life. **SA A MA U MD D SD**

15. Death is a union with God and eternal bliss. **SD D MD U MA A SA**

16. Death brings a promise of a new and glorious life. **SA A MA U MD D SD**

17. I would neither fear death nor welcome it. **SA A MA U MD D SD**

18. I have an intense fear of death. **SD D MD U MA A SA**

19. I avoid thinking about death altogether. **SD D MD U MA A SA**

20. The subject of life after death troubles me greatly. **SA A MA U MD D SD**

21. The fact that death will mean the end of everything as I know it frightens me. **SA A MA U MD D SD**

22. 22. I look forward to a reunion with my loved ones after I die. **SD D MD U MA A SA**

23. I view death as a relief from earthly suffering. **SA A MA U MD D SD**

24. Death is simply a part of the process of life. **SA A MA U MD D SD**

25. I see death as a passage to an eternal and blessed place. **SA A MA U MD D SD**

26. I try to have nothing to do with the subject of death. **SD D MD U MA A SA**

27. Death offers a wonderful release of the soul. **SD D MD U MA A SA**

28. One thing that gives me comfort in facing death is my belief in the afterlife. **SD D MD U MA A SA**

29. I see death as a relief from the burden of this life. **SD D MD U MA A SA**

30. Death is neither good nor bad. **SA A MA U MD D SD**

31. I look forward to life after death. **SA A MA U MD D SD**

32. The uncertainty of not knowing what happens after death worries me. **SD D MD U MA A SA**

APPENDIX 8

SHALOM©

Spiritual Health and Life-Orientation Measure

(Fisher, 2010)

Spiritual Health and Life-Orientation Measure (SHALOM)©

Spirituality can be described as that which lies at the heart of a person being human.

Spiritual health can be seen as a measure of how good you feel about yourself and how well you relate to those aspects of the world around you, which are important to you.

Instructions:

Please ***give two responses*** *to each of the following items, by* ***circling*** *the* ***numbers in Column a, then those in Column b****, to show:*

a*. how important you think each area is for your* ***ideal*** *state of* ***spiritual health, AND***

b*.* ***how you feel*** *each item reflects your personal experience most of the time.*

Each response is graded:

1 *= very low* ***2*** *= low* ***3*** *= moderate* ***4*** *= high* ***5*** *= very high.*

Do not spend too much time on any one item. It is best to ***record your first thoughts****.*

Items	a. **ideal** for **spiritual health**	b. **how you feel**
Developing:		
1. a love of other people	1 2 3 4 5	1 2 3 4 5
2. personal relationship with the Divine/God	1 2 3 4 5	1 2 3 4 5
3. forgiveness toward others	1 2 3 4 5	1 2 3 4 5
4. connection with nature	1 2 3 4 5	1 2 3 4 5
5. a sense of identity	1 2 3 4 5	1 2 3 4 5
Developing:		
6. worship of the Creator	1 2 3 4 5	1 2 3 4 5
7. awe at a breathtaking view	1 2 3 4 5	1 2 3 4 5

8. trust between individuals	1 2 3 4 5	1 2 3 4 5
9. self-awareness	1 2 3 4 5	1 2 3 4 5
10. oneness with nature	1 2 3 4 5	1 2 3 4 5

Developing:

11. oneness with God	1 2 3 4 5	1 2 3 4 5
12. harmony with the environment	1 2 3 4 5	1 2 3 4 5
13. peace with God	1 2 3 4 5	1 2 3 4 5
14. joy in life	1 2 3 4 5	1 2 3 4 5
15. prayer life	1 2 3 4 5	1 2 3 4 5

Developing:

16. inner peace	1 2 3 4 5	1 2 3 4 5
17. respect for others	1 2 3 4 5	1 2 3 4 5
18. meaning in life	1 2 3 4 5	1 2 3 4 5
19. kindness towards other people	1 2 3 4 5	1 2 3 4 5
20. a sense of 'magic' in the environment	1 2 3 4 5	1 2 3 4 5

- How important is religion in your life 1 2 3 4 5
- How important is spirituality in your life 1 2 3 4 5

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APPENDIX 9

Questionnaire PART I

Questionnaire PART I

Title of proposed research: *Induced Near-Death-Experiences in Healthy Volunteers: phenomenology, Psychophysiology and after effects.*
Project: Degree by Research Leading to Doctor of Philosophy(Psychology)

PGR Student: Sofia Machado Ferreira, MA.

Project funded by BIAL Foundation (PI: Mário Simões, MD PhD)

Contacts: sofia.machado@northampton.ac.uk noonauta@gmail.com

University of Northampton **Date:**

Name:

This questionnaire is a part of the research study above and you are being asked to answer an open-ended question regarding the experimental protocol you went through.

Only answer if you feel you have some additional information to share with the researchers. Your results will be completely anonymous, and you will not be identifiable from the data you provide.

Your answers will be securely stored according to university policy in a way that means you cannot be identified.

A citation may be published in a scientific journal or presented at a conference, but you will remain anonymous and unidentifiable in all publications and presentations of the findings.

PART I

1. Describe any elements that you found relevant regarding the contents of your experience.

2. Did you experience any discomfort or any other feelings that you found relevant?

Thank you for your participation!

APPENDIX 10

Questionnaire PART II

Questionnaire PART II

Title of proposed research: *Induced Near-Death-Experiences in Healthy Volunteers: phenomenology, Psychophysiology and after effects.*
Project: Degree by Research Leading to Doctor of Philosophy(Psychology)

PGR Student: Sofia Machado Ferreira, MA.

Project funded by BIAL Foundation (PI: Mário Simões, MD PhD)

Contacts: sofia.machado@northampton.ac.uk noonauta@gmail.com

University of Northampton **Date:**

Name:

This questionnaire is a part of the research study above and you are being asked to answer an open-ended question regarding the experimental protocol you went through.

Only answer if you feel you have some additional information to share with the researchers. Your results will be completely anonymous, and you will not be identifiable from the data you provide.

Your answers will be securely stored according to university policy in a way that means you cannot be identified.

A citation may be published in a scientific journal or presented at a conference, but you will remain anonymous and unidentifiable in all publications and presentations of the findings.

PART II

Describe the most relevant thing, if any, of having participated in this study.

Thank you for your participation!

APPENDIX 11

Open-Ended Questionnaires Quotes

OPEN-ENDED QUESTIONNAIRES QUOTES

THEME #1.

1. Elements common to the NDE Scale (Greyson, 1983)

SUBTHEME #1.

Positive Feelings and Affective Elements

Feeling of Fear when leaving the physical body but major Joy and Peacefulness when I realized that nothing bad is going to happen. (**Subject 101)**

Slight discomfort due to the situation being out of my control; Feelings of peacefulness; Feelings of not wanting to die (fear). Feelings of peacefulness. (**Subject 102)**

Relaxing atmosphere; Feeling calm and at peace; Alone in solitude; Lying back on the beach on holiday, smell ocean air, hear waves washing onto the shore. (**Subject 103)**

I felt very at peace in the tunnel light. (**Subject 104)**

Peaceful, calm, relaxed, very aware of the self. (…) Anticipation and wonder. (**Subject 106)**

I feel a profound joy and love, my heart is so full. I felt a deep sense of peace and love through me, around me and as a part of me. I found I could easily reach a state of relaxation. As I listened to the researcher's voice, my body became heavy and relaxed. As I listened to the researcher's voice, my body became heavy and relaxed. I saw a small intense white light. I could feel my heart racing and grow loader in my chest. At the same time the light gradually grew wider and brighter until I was submerged in the light. I could feel my heart slow and then I lost all sense of it beating. I was not afraid and felt peaceful in this place. (**Subject 107)**

I enjoyed the experience of being calm and relaxed and in another place (**Subject 108)**

I was calm and warm, I had a strong feeling of being guided and protected, feeling of love. (…) I had a strong understanding of myself, self-love, reassured. (…). I felt completely relaxed and calm, safe and informed. It was a very interesting and empowering experience. (**Subject 201)**

Very liberating. (**Subject 202)**

Very releasing experience like nothing I have done before. (**Subject 203)**

Sense of peace, lightness, lots of light, energized. **(Subject 205)**

Inner critic was present at the beginning and slowly faded away. Once past the tunnel part, I lost awareness of being here at the University. Feelings of aliveness and harmony. Disappointment about not being able to stay in that place and having to return. (…) I felt calm, empowered, peaceful and confident. (**Subject 206)**

Dreamlike, really relaxing. (**Subject 207)**

The experience was very pleasant relaxing and enjoyable. (…) I was not in any way disturbed by it. During the NDE I felt relaxed. (**Subject 208)**

I found the experience very interesting, profound and relaxing (…) very peaceful and pleasurable. **(Subject 209)**

SUBTHEME #2.

Positive Feelings and Affective Elements

Was in my personal library, books were episodes of my life; books of what to come, pages were blank; The welcoming presence were my deceased relatives: The birthday segment: was a birthday of what is to come; a future birthday surrounded by my wife and children, nieces and nephews, voice that called me back; was my mother's. My arms felt as if they were on backwards, until the countdown on the count of one, it is as they suddenly reverted back to normal. **(Subject 105)**

I saw incredible landscapes and then other images. I was surrounded by friends and family. All of them much older. **(Subject 106)**

I felt a hand take mine, I am lifted up and was greeted by my Nan and Grandad. I knew I could be strong, I felt a sense of grace from them, a pride in me, and then a shared love. I was shown a scene of my grandad in his garden. I was with him, he watches me pull up flowers and I feel his love for me as he picks me up. (…) I want to stay but am gently pulled from them by my hand and then the other. We clasp hands and I am in my body. I feel light and knowledge, my journey is good. **(Subject 107)**

Felling of fluidity – very energetic and moving as if in deep water, submerged. Lots of colour, like veils that I was moving through – very strong universal connection, very familiar to me. (…) Very aware of light energies – like giant forms, very powerful – almost like beacons/signposts – definitely in some kind of tunnel. The space around me was all conscious, collective movement in streams. I was past, present, future – I was not 'I' anymore, there was a fluidity to the space, the way I move, the streams of consciousness. It was awesome and infinite, yet it felt contained somehow. I felt calm, reassured, safe, humble. There are veils of colour, but no sound. (…) Totality. I was met by two light beings, giant forms – Angel? Alien? – very beautiful with warm light, who were guiding me along towards the light. I was completely ready and willing to surrender **(Subject 201)**

The most relevant element for me was the sense of an encounter with my 1st Zen teacher, a woman who has been dead for circa 20 years. I always had a good sense of gratitude to her, but also a sense that I had to live up to her expectations of me. Now I experienced to my surprise, a sense of her gratitude to me, something that has the potential to help me towards a profound resolution of a, sometimes, problematic relationship. Also, there was a presence of my ancestors from whom I always felt very different and distanced – a sense of their acceptance of who I am again surprised me and feels like. It surprised me that the meaningful content of this experience has been relational, nor merely 'inner travel gazing'. **(Subject 202)**

There was a strong smell of a pleasant perfume/perfumed incense that lasted for a few minutes. Early on experienced a white light and felt just above my body. **(Subject 204)**

Inner critic was present at the beginning and slowly faded away. Once past the tunnel part, I lost awareness of being here at the University. Feelings of aliveness and harmony. Disappointment about not being able to stay in that place and having to return. I thought about my family members and how much they would miss me if I wouldn't come back. I could imagine the picture of Jesus and felt very real and present. **(Subject 206)**

Dreamlike, really relaxing. Presence of beings, but they were not physical. Very similar to not recognizing a face in a dream. **(Subject 207)**

The experience was very pleasant relaxing and enjoyable. I was not in any way disturbed by it. During the NDE I felt relaxed and found that I had a much reduced sense of time and space and felt my self/dissolving/expanding, as if it was dissolving into the universe/cosmos and becoming part of it. Self, personality, ego, are not important. **(Subject 208)**

SUBTHEME #3.

Leaving the Body Behind

Feeling of fear when leaving the body. **(Subject 101)**

When we were directed to feel that we were going out of our bodies, I felt that sensation but then I felt that I hit a ceiling, like I couldn't rise any further. **(Subject 104)**

When asked to rejoin with my body, it was putting on a glove. (**Subject 105)**

When I was lifting, I could feel my heart pounding. Each beat felt uncomfortable and loud. I had no sense of body in the other realm, yet I was aware of my form. **(Subject 107)**

It felt strange coming back. (**Subject 108)**

Strong feeling of pulling away from my body. (…) *It was not easy to come back to the body.* (**Subject 110)**

I was amazed at the ease with which I left my body and had the immediate knowledge of how to move willingly and in any direction. I had the feeling of being very deep and very high simultaneously. (…) I was aware of travelling to the light, I had thoughts of my daughter and then was 'sucked' backwards to reconnect with my physical self. (…) *My thought was, 'I could stay, it would be fine', then immediately thought of my daughter, then Sofia's voice very clear 'I am bringing you back'. My visual was like dilated pupils shrinking, I felt like I was pulled back into my body, I though the lights had come on.* **(Subject 201)**

Felt just above my body. (…) Felt very relaxed and peaceful. (**Subject 204**)

Highlighted or brought attention to belief in the soul or spirit as a separate entity from the physical body. **(Subject 207)**

During the NDE I (…) felt myself dissolving/expanding, as if it was dissolving into the universe/cosmos and becoming part of it.

THEME #2

Negative Elements

Slight discomfort due to the situation being out of my control. **(Subject 102)**

Yes, I felt a sudden experience of shock and surprise and some fear when the near-death element was mentioned, as it was very sudden, rapid transition from a very calm holiday beach setting to somewhere suddenly threatening and dangerous. **(Subject 103)**

Uncertainty of where I was going next. Anticipation and wonder. **(Subject 106)**

When I was lifting, I could feel my heart pounding. Each beat felt uncomfortable and loud. I had no sense of body in the other realm, yet I was aware of my form. I heard a loud bang and saw a box fall. I felt a deep sense of peace and love through me, around me and as a part of me. **(Subject 107)**

No discomfort, perhaps a little scared when I could feel I was going to a different place. **(Subject 108)**

*Yes, when going into this, a sector of my past came up in my mind (a past trauma) and made me feel super itchy and I just could not focus because I was uncomfortable about a part of my past***. (Subject 109)**

My right fingers got numb. **(Subject 205)**

Tightness in my body at the begi7nning, but I could relax after guidance. I felt calm, empowered, peaceful and confident. **(Subject 206)**

No discomfort, feeling of being reassured. Still a little confused/processing the experience. **(Subject 207)**

THEME #3

Aftereffects and Other Insights beyond the NDE Scale

SUBTHEME #1.

Openness to Uncommon Experiences

Reflecting back on life, past decisions and things that have happened. (…) Realized I may have to try and allow myself to become more open-minded to these types of studies and practice as it may influence whether I actually get to experience it to know it actually works. **(Subject 102)**

Getting the opportunity to experience what such a guided hypnosis session was like, especially in the context of NDEs, can help those close to death to come to terms with their condition. **(Subject 103)**

I am more open to broader ideas in Psychology. **(Subject 105)**

Relaxation, self-reflection. Realizing the many different levels of hypnosis. **(Subject 106)**

A new understanding of hypnosis, how it happens, what it feels like. **(Subject 108)**

SUBTHEME #2.

Death Acceptance Aspects

A friend of mine passed away earlier this year. Whilst I was in the tunnel, I found myself happy that he had had that experience of peace and love when he died. **(Subject 104)**

I found after the experiment I was sensitive to my feelings about my purpose. I felt peaceful and supported in attaining my goals. I found to know I was watched over by loved ones very comforting to feel they will be there when my time has come a blessing and a joy to know. **(Subject 107)**

It motivated me to practice more of guided meditation. **(Subject 110)**

For two weeks I have felt grounded, embodied, positive. I considered if what I had experienced had been embryonic, and that the universe is the womb and the tunnel is being born. It has inspired me to attempt to paint my experience, I'd like to explore the out-of-body experience and being 'a friend in death'. (…) I was so grateful for the fact I was able to reconnect with the feelings I had following the study, and I feel strongly that I will continue to be able to access this source of tranquility. It was very present initially after the study and I believe that with regular practice, it would be possible to maintain that positivity long term. The feeling of being self-assured is a very powerful one. **(Subject 201)**

While I am not a believer in reincarnation, even though I am a committed Buddhist- the content of my experience has reinforced for me that these experiences allow our subconscious minds a chance to express themselves in a

sophisticated and meaningful symbolic language. My sense of resolution with my ancestors is not, for me, a communication from beyond the grave, but a reflection of my ongoing spiritual maturation, a plea from me to myself to stand firmly in my own footsteps, to embrace the shattering intimacy of my own life as it unfolds, unbeholden to the past, not limited to scripts from a personal narrative pre-history. **(Subject 202)**

Answering the questions on this form makes me think deeply about life, life after death, its meaning, purpose (if any) and my place in it. This coupled with the fact that I have attended several funerals this year made me think actually about life and death. Taking part in the study has further highlighted this. However, I still sit on the fence as to whether there is life for the individual after death which sometimes conflicts with what I intellectually and emotionally feel about death. **(Subject 204)**

Allowed me to accept my own spiritual beliefs, do not need religion-based verification. Highlighted or brought attention to belief in the soul or spirit as a separate entity from the physical body. Gave me comfort, following an emotional personal situation. **(Subject 207)**

I enjoyed the opportunity to think about and reflect on the subject of death. I found the process o be very interesting and wondered whether it would be interesting to do more guided meditations. The subject of death would then perhaps help people to come to terms with this subject. **(Subject 208)**

APPENDIX 12

Open-ended Questionnaires

Quotes matching NDE Scale items

(Greyson, 1983)

NDE Scale (Greyson, 1983) Items		N = 19	Illustrating Quotes
Cognitive	**1. Did time seem to speed up or stop or lose all meaning?**	**2**	**Subject 208:** I felt relaxed and found that I had a much reduced sense of time and space and felt my self dissolving/expanding (…).
	2. Were your thoughts speeded up?	**1**	**Subject 103**: (…) it was very sudden, rapid transition from a very calm holiday beach setting to somewhere suddenly threatening and dangerous.
	3. Did scenes from your past come back to you?	**5**	**Subject 109:** Yes, when going into this, a sector of my past came up in my mind (a past trauma) and made me feel super itchy and I just could not focus because I was uncomfortable about a part of my past.
	4. Did you suddenly seem to understand everything?	**1**	**Subject 201:** I considered if what I had experienced had been embryonic, and that the universe is the womb and the tunnel is being born.
Affective	**5. Did you have a feeling of peace or pleasantness?**	**15**	**Subject 209**: I found the experience very peaceful and pleasurable. I feel like underlying anxiety has moved through.
	6. Did you have a feeling of joy?	**4**	**Subject 101:** Feeling of fear when leaving the physical body but major Joy and Peacefulness when I realized that nothing bad is going to happen.
	7. Did you feel a sense of harmony or unity with the Universe?	**6**	**Subject 207:** Highlighted or brought attention to belief in the soul or spirit as a separate entity from the physical body. Gave me comfort, following an emotional personal situation.
	8. Did you see or feel surrounded by a brilliant light?	**4**	**Subject 104:** I felt vey at peace in the tunnel light. A friend of mine passed away earlier this year whilst I was in the tunnel I found myself happy that he had had that experience of peace and love when he died.
Paranormal	**9. Were your senses more vivid than usual?**	**3**	**Subject 204:** There was a strong smell of a pleasant perfume/perfumed incense that lasted for a few minutes.
	10. Did you seem to be aware of things going on elsewhere, as if by ESP?	**1**	**Subject 107:** I must admit I was particularly puzzled and confused by this part because the hand was quite scary (…) but I had felt enormous love and reassurance. I described a gnarled hand which black scars. My Mum got very teary at this point and said it was my grandads' hand.
	11. Did scenes from the future come to you?	**1**	**Subject 105:** The birthday segment: was a birthday of what is to come; a future birthday surrounded by my wife and children, nieces and nephew (…).
	12. Did you feel separated from your physical body?	**8**	**Subject 104:** When we were directed to feel that we were going out of our bodies, I felt that sensation but then I felt that I hit a ceiling, like I couldn't rise any further.

Transcendental	**13. Did you seem to enter some other unearthly world?**	**4**	**Subject 106: I felt relaxed, took in my surrounding, my sense of self was heightened. I saw incredible landscapes and then other image.**
	14. Did you seem to en-counter a mystical being or presence?	**2**	**Subject 201:** I was met by two light beings, giantforms – Angel? Alien? – very beautiful with warm light, who were guiding me along towards the light. I was completely ready and willing to surrender.
	15. Did you see deceased spirits or religious figure es?	**4**	**Subject 202:** Also there was a presence of my ancestors from whom I always felt very different and distanced – a sense of their acceptance of who I am again surprised me and feels like.
	16. Did you come to a border or point of no re- turn?	**2**	**Subject 206:** Disappointment about not being able to stay in that place and having to return. I thought about my family members and how much they would miss me if I wouldn't come back

Table: Quotes from the open-ended Questionnaires matching NDE Scale (Greyson, 1983) items

APPENDIX 13

Spontaneous Reports from Participants 107 and 201

PARTICIPANT 107 – F.L.

Open-ended Questionnaire Results

PART I

1. **Describe any elements that you found relevant regarding the contents of your experience.**

I felt a hand take mine, I am lifted up and was greeted by my Nan and Grandad. I knew I could be strong, I felt a sense of grace from them, a pride in me, and then a shared love. I was shown a scene of my grandad in his garden. I was with him, he watches me pull up flowers and I feel his love for me as he picks me up. I feel a profound joy and love, my heart is so full. I want to stay but am gently pulled from them by my hand and then the other. We clasp hands and I am in my body. I feel light and knowledge, my journey is good.

2. **Did you experience any discomfort or any kind of feelings that you found relevant?**

When I was lifting, I could feel my heart pounding. Each beat felt uncomfortable and loud. I had no sense of body in the other realm, yet I was aware of my form. I heard a loud bang and saw a box fall. I felt a deep sense of peace and love through me, around me and as a part of me.

PART II

Describe the most relevant thing, if any, of having participated in this study

I found after the experiment I was sensitive to my feelings about my purpose. I felt peaceful and supported in attaining my goals. I found to know I was watched over by loved ones very comforting to feel they will be there when my time has come a blessing and a joy to know.

PARTICIPANT 107 – F.L.

SPONTANEOUS REPORT

Sent by Email

Description of the experience.

I found I could easily reach a state of relaxation. As I listened to the researcher's voice, my body became heavy and relaxed. I saw a small intense white light. I could feel my heart racing and grow loader in my chest. At the same time the light gradually grew wider and brighter until I was submerged in the light. I could feel my heart slow and then I lost all sense of it beating. I was not afraid and felt peaceful in this place. I then felt a large hand hold mine, I got the impression my hand was small like a child's and the hand that held mine had dark scars and calluses'. This hand took me to an "other" place, where I met my Nan and Grandad. I recognised them as their younger selves. I sensed this rather than saw them as an image.

I saw in my mind's eye that my Nan was wearing a blue and white sports top. I felt this was unusual as when she was alive, I had never seen her in clothing like this. My Grandad was wearing loose baggy trousers and a plain shirt. I knew they were talking to me even though they didn't speak, I felt they were saying I was going to be fine and to trust those around me. I felt this was said in images and feelings rather than words and each image was given with flashes of loving emotion. I found myself looking into my Grandads eyes and was then transported to a memory of when I was a child. I could see myself in his garden and felt I was about two years old. I was following my Grandad in the garden and pulling up small seedlings he had just planted. I was watching this through my Grandads perspective but still remained myself. As he lifted me into his arms I felt an overwhelming sense of love. I knew he was irritated I had pulled up his plants but he was telling me he didn't really mind and again I felt this overwhelming sense of love.

I remember looking into his pale grey blue eyes and then felt as though I was pulled through them. I was then back in the "other" place, with both of my grandparents and felt suffused in such a strong vivid feeling of their presence. I felt their reassurance, love and a peace so intensely, I didn't want to leave them. However, the large hand pulled me gently back into my body where I awoke to the researchers and the lab room. It was a shock to be back to the real world, back in my body, but I found I didn't mind as the intense feelings I had experienced were still with me.

At some point in the experience I heard a load metallic bang and felt I was looking at an oblong object. I was as though I experienced this separate from where I was but knew it had happened.

Reflection after the experiment.

The next day I found my senses were raw. My environment seemed brighter, in sharper focus and more grating on my nerves. I found I could think about the experience and quickly feel the intense emotions I had had in the experiment. This made me feel so happy. I felt as though I had been given an insight I would otherwise not have had. I felt centred the following week and changed how I was reacting to my stress and problems. I feel my grandparents are watching over me and like to think I will be with them once again when I have finished my life.

Fact finding from family.

Three days after the experiment I asked my Mum about specific details I remembered about my Nan and Grandad. Firstly, I described the outfit my Nan was wearing, a blue and white stripped sports top, and explained I did not understand why she would be wearing such an item of clothing. When she was alive, I remember her wearing much more traditional clothing such as flowery dresses. My Mum informed me that my Nan was a sports captain of the women's cricket and football club for the company she worked at called Bouyant Upholsters. She said there was a photo of this in one of the photo albums she had in the attic wearing a top like the one I had described. I then asked her whether I had been shown this as a child at any time and she replied no, as they were tucked away in the attic. I queried again about whether they had talked about this when my Nan was alive and mum said it was not something my Nan talked about, she was more interested in the present.

I asked her about the clothes I saw my grandad was wearing, which were baggy slacks and a plain shirt and she replied that was what my grandad would always wear. He hated fitted trousers so always looked as though he was wearing trousers which were to big for him. Once again, I queried whether I has seen any photos of him like this and the answer was no. The photo albums of him were packed away after he died because my Nan found it to painful to look a them. I asked whether they had talked about what he wore when I was a child and mum couldn't remember but thought probably not.

The last thing I talked about was the hand which led me to and from them. I must admit I was particularly puzzled and confused by this part because the hand was quite scary to look at but I had felt enormous love and reassurance by it. I described a gnarled hand which black scars. My Mum got very teary at this point and said it was my grandads' hand. I asked her how she knew this and she explained that my grandad had been a coal miner all his life and the reason the scars were black were because coal dust would get into the wounds whilst they were healing. This meant her dads hands were arthritic and covered in black scars. I considered I knew about my grandad's profession but as he died when I was two, I had not thought about what that meant to his hands. I find this part particularly difficult to explain.

Overall, I am left with a positive association with this experience even though I am puzzled by some of the aspects I have described. I am able to remember the feelings vividly as if they were a new experience each time I remember. I would be happy if this feeling continues as I find it comforting and calming and I feel may help me through the third year of my degree and my physiotherapy sessions.

PARTICIPANT 201 – P.K.

Open-ended Questionnaire Results

PART I

1. Describe any elements that you found relevant regarding the contents of your experience.

Felling of fluidity – very energetic and moving as if in deep water, submerged. Lots of colour, like veils that I was moving through – very strong universal connection, very familiar to me. I was calm and warm, I had a strong feeling of being guided and protected, feeling of love. Very aware of Light energies – like giant forms, very powerful – almost like beacons/signposts – definitely in some kind of tunnel. I was aware of travelling to the light, I had thoughts of my daughter and then was 'sucked' backwards to reconnect with my physical self. I had a strong understanding of myself, self-love, reassured.

2. Did you experience any discomfort or any kind of feelings that you found relevant?

I felt completely relaxed and calm, safe and informed. It was a very interesting and empowering experience.

PART II

Describe the most relevant thing, if any, of having participated in this study

Immediately after leaving the college, I felt that my senses were very acute in a positive way. I had a heightened appreciation of colour and I was tuned into nature both sounds and visuals. I had a great feeling of calmness and I was processing my experience for a few days, and recalled the following thoughts: I was amazed at the ease with which I left my body and had the immediate knowledge of how to move willingly and in any direction. I had the feeling of being very deep and very high simultaneously. The space around me was all conscious, collective movement in streams. I was past, present, future – I was not 'I' anymore, there was a fluidity to the space, the way I move, the streams of consciousness. It was awesome and infinite, yet it felt contained somehow.

I felt calm, reassured, safe, humble. There are veils of colour, but no sound. I could hear Sofia and Mário but there was no other I could recall. Totality. I was met by two light beings, giantforms – Angel? Alien? – very beautiful with warm light, who were guiding me along towards the light. I was completely ready and willing to surrender. My thought was, 'I could stay, it would be fine', then immediately thought of my daughter, then Sofia's voice very clear 'I am bringing you back'. My visual was like dilated pupils shrinking, I felt like I was pulled back into my body, I though the lights had come on.

For two weeks I have felt grounded, embodied, positive. I considered if what I had experienced had been embryonic, and that the universe is the womb and the tunnel is being born. It has inspired me to attempt to paint my experience, I'd like to explore the out-of-body experience and being 'a friend in death'.

Yesterday (13/05/2019), I was gripped in a panic attack: I called my friend who came over and we sat together in meditation. I was so grateful for the fact I was able to reconnect with the feelings I had following the study, and I feel strongly that I will continue to be able to access this source of tranquility. It was very present initially after the study and I believe that with regular practice, it would be possible to maintain that positivity long term. The feeling of being self-assured is a very powerful one. I feel like I am a better person somehow because of the experience. I also feel like I have downloaded a lot but am not quite able to recall it: I would be more than willing to take part in any future studies such as these. Everything I believe about souls and essence has been confirmed through this. All my experiences of death, afterlife and life have been after death have been reassured, my contact with spirit is confirmed, people I have helped in passing, and others after they have passed. It has been an amazing privilege to experience. Thank you so much!

PS: I have Type 1 Narcolepsy and I think this may be significant because I spend a lot of time being conscious in dreamstate. If there are any other experiences, I would be happy to participate. It has been such an inspiring happening and that has given me valuable tools for coping with life; I was so surprised how easy it was for me to return to those senses with meditations. I am reaaly keen to keep up with 'spiirtual maintenance'.

PARTICIPANT 201 P.K.

SPONTANEOUS REPORT

Sent by Email



Hello Sofia

I have mailed my response to the address given for UON waterside campus.

I attach to this email an intuitive piece I have been working on since taking part in your NDE study.

I will continue to be in touch with anything I feel to be of importance -

I have been astonished by the effect this has had and it's especially important for me in my life. Its been vital for me to become embodied and embrace my physical self in this now. I have been recovering from sexual assault and domestic violence by my long term ex-partner and father of my daughter which took place in 2016.

I have spent the time until now in my head and my heart and I was having difficulty re-assimilating with my body. There's a lot of recall and fear and forgiveness I need to recognise and love. By leaving my body and returning to it with surrender, I feel like I can begin.

So I called my painting "The only way out is in". Please let me know what you think 😊

Warmest wishes

APPENDIX 14

Interview Schedule for Participants 107 and 201 Semi-Structured Interviews

1. Do you want to add something to your previous reports regarding the experience regarding contents and the outcomes?

2. Did something relevant happen since our last conversation that you can relate to the experience?

3. Can you give us a brief description of any aspects of your background that you might consider relevant for the experience you had?

4. How was your relationship with so-called spiritual themes before the experience?

5. Did it change after that? In what way?

6. What was your intention for the experience? Did you get what you intended in terms of outcomes?

APPENDIX 15

Quantitative Results for Fairydust

(Participant 107)

NDE Scale Scores

and

Differences between pre and post-test scores in BSI-18; Shalom and DAP-R.

FAIRYDUST 107

NDE Scale (Greyson, 1983)

Total	Cognitive Subscale	Affective Subscale	Paranormal Subscale	Transcendental Subscale
28	6	8	7	7

BSI – 18 (Derogatis, 2001)

GSI	Somatic	Mood	Anxiety
-3	0	0	-3
Pre-test 3	Pre-test 0	Pre-test 0	Pre-test 3
Post-test 0	Post-test 0	Post-test 0	Post-test 0

FAIRYDUST 107

Death Attitude Profile-Revised (Wong, Reker & Gesser, 1994)

Fear of Death	Death Avoidance	Neutral Acceptance	Approach Acceptance	Escape Acceptance
0.57	1.2	0	1.7	0.8
Pre-test M=1.57	Pre-test M=2.2	Pre-test M=6.8	Pre-test M=4.3	Pre-test M=3
Post-test M=1	Post-test M=1	Post-test M=6.8	Post-test M=6	Post-test M=3.8

FAIRYDUST 107

Shalom (Fisher, 2010)

Ideal Total	**Ideal Communal**			**How you Feel Total**	**How you Feel Communal**		
	Pretest	Posttest	Diff		Pre-test	Post-test	Diff
	5	5	0		**4.6**	4.4.	-0.2
Diff 0.55	**Ideal Transcendental**			**Diff 0.8**	**How you Feel Transcendental**		
	Pretest	Post-test	Diff		Pre-test	Post-test	Diff
	2.4	4.8	2.4		2	4	2
Pre-test M=4.35	Ideal **Environmental**			**Pre-test M=3.8**	**How you Feel Environmental**		
	Pretest	Post-test			Pre-test	Post-test	Diff
	5	5			4.6	5	0.4
Post-test M=4.9	**Ideal Personal**			**Post-Test M= 4.6**	**How you Feel Personal**		
	Pretest	Post-test			Pre-test	Post-test	Diff
	5	5			4	5	1
Importance of Religion				**Importance of Spirituality**			
Pre-test		Post-test		Pre-test		Post-test	
1		1		5		5	

APPENDIX 16

Quantitative Results for Pixie-K

(Participant 201)

NDE Scale scores

and

Differences between pre and post-test scores in BSI-18; Shalom and DAP-R.

IXIE-K 201 PIXIE-K

NDE Scale (Greyson, 1983)

Total	Cognitive Subscale	Affective Subscale	Paranormal Subscale	Transcendental Subscale
25	5	8	5	7

BSI – 18 (Derogatis, 2001)

GSI	Somatic	Mood	Anxiety
11	0	-1	12
Pre-test 3	Pre-test 0	Pre-test 2	Pre-test 1
Post-test 14	Post-test 0	Post-test 1	Post-test 13

PIXIE-K 201

Death Attitude Profile-Revised (Wong, Reker & Gesser, 1994)

Fear of Death	Death Avoidance	Neutral Acceptance	Approach Acceptance	Escape Acceptance
0	0.4	-0.6	-0.1	0.6
Pre-test M=1.43	Pre-test M=1	Pre-test M=5.8	Pre-test M=4.7	Pre-test M=3.6
Post-test M=1.43	Post-test M=1.4	Post-test M=5.2	Post-test M=4.6	Post-test M=4.2

PIXIE-K 201

Shalom (Fisher, 2010)

Ideal Total	**Ideal Communal**			**How you Feel Total**	**How you Feel Communal**		
	Pre-test 4.6	Post-test 5	Diff. 0.4		Pre test **4**	Post-test **4.4**	Diff. **0.4**
Difference 0.45	**Ideal Transcendental**			**0.45**	**How you Feel Transcendental**		
	Pretest 2.8	Post-test 3.4	Diff 0.6		Pre-test 1.8	Post-test 2.8	Diff. 1
Pre-test M=4.1	Ideal **Environmental**			**Pre-test M=3.5**	**How you Feel Environmental**		
	Pre-test 4.6	Post-test 5	Diff 0.4		Pre-test 4.6	Post-test 4.8	Diff. 0.2
Post-test M=4.55	**Ideal Personal**			**Post-test M= 3.95**	**How you Feel Personal**		
	Pre-test 4.6	Post-test 4.8	Diff 0.2		Pre-test 3.6	Post-test 3.8	Diff. **0.2**

Importance of Religion		**Importance of Spirituality**	
Pre-test 1	Post-test **1**	Pre-test 5	Post test 5

APPENDIX 17

Informed Consent for the In-Depth Interview

University of Northampton
Faculty of Health & Societies

INFORMED CONSENT FOR IN-DEPTH INTERVIEW

Title of proposed research: *Induced Near-Death-Experiences in Healthy Volunteers: phenomenology, Psychophysiology and after effects.*
Project: Degree by Research Leading to Doctor of Philosophy(Psychology)

PGR Student: Sofia Machado Ferreira, MA.

Project funded by BIAL Foundation (PI: Mário Simões, MD PhD)

Contacts: sofia.machado@northampton.ac.uk

University of Northampton	**Date:**
Name:	
Age:	**Gender:**
Address:	
Email:	
Phone Number:	

Thank you for your continued interest in being a part of this research study. You have already participated in the first part of the experimental study and you read the Information Sheet that you were provided with, and had the opportunity to talk to the researchers, before you signed the first consent form.

You are already aware that the purpose of your participation is to help studying the possibility of generating some of the positive aftereffects of a Near-Death Experience (NDE) artificially, by using hypnosis, and to compare it with other experiences that might have a similar beneficial impact. Because of your participation, and all the relevant information you provided us with, we decided to collect further data to help us in understanding the dynamics of hypnotically induced NDEs. For that purpose, we decided to perform an in-depth interview that will, in a nutshell, focus on aspects such as contents and outcomes, aftereffects, relevant aspects of your family background, previous familiarity/experience with spiritual themes, your intention for the experience and final result.

INFORMED CONSENT

If you agree to continue to be a part of this research project, it is because you volunteered, at your own free will, to be interviewed by one of the researchers, and as a pre-requirement, you must be able to honestly answer yes to all of the following statements:

a. I voluntarily agree to participate in this research study.
b. I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
c. I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
d. I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
e. I understand what the participation involves, since I read the Information Sheet that was provided to me.
f. I understand that I will not benefit directly from participating in this research.
g. I agree to my interview being audio-recorded.
h. I understand that all information I provide for this study will be treated confidentially.
i. I understand that in any report on the results of this research my identity will remain anonymous.
j. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
k. I understand that disguised extracts from my interview may be quoted in a dissertation thesis, published research papers/books and, conference presentations.
l. I understand that signed consent forms and original audio recordings will be retained with the PhD candidate and stored in a safe location until the exam board confirms the results of the dissertation.
m. I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

By checking this box, I confirm that I agree to participate in this study and that I meet all of the requirements to participate.

If you are unable to confirm that you meet all the requirements to participate and would like to contact the lead researcher, please email Sofia Machado at:

sofia.machado@northampton.ac.uk

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

CONTACT INFORMATION

If you have questions at any time about this study, or you feel the need to share your experience in more detail, you may contact the researcher whose contact information is provided on the first page.

We estimate the duration of the INTERVIEW in 1 hour and a half (1h30m).

APPENDIX 18

APZ-PO

(Altered States of Consciousness Questionnaire)

APZ PO

(Abnorme Psychischer Zustaende)

Instruções:

Nas páginas seguintes encontra-se uma série de afirmações, que podem ser respondidas com "**Sim**" ou "**Não**".

Por favor avalie se

durante a situação por si recordada

fez uma experiência correspondente, assinalando com uma **cruz** [**X**] o "Sim" ou o "Não".

Por favor, observe os seguintes pontos:

1. Não tenha medo de responder uma afirmação com "Sim", por talvez pensar que a sua experiência não tenha sido "**normal**". Muitas pessoas têm sob certas condições experiências estranhas, sobre as quais não falam no entanto com outras.
2. Por favor, responda **rapidamente** e não deixe afirmações **sem resposta**. Naturalmente que com estas curtas perguntas não podem ser consideradas todas as particularidades de uma experiência. Talvez, por isto, algumas não correspondam exactamente ao que experimentou. Decida-se mesmo assim, no caso de cada questão, da melhor maneira da qual se possa lembrar, se fez ou não uma tal experiência durante o seu estado de então ou, se a sua resposta tende para "Sim" ou para "Não".

Por favor, vire agora a página e comece a responder às questões.

		Sim	Não
1.	Eu tinha a impressão que tudo à minha volta era de certo modo irreal.	[ ]	[ ]
2.	Sons e ruídos soavam de modo diferente do que usualmente.	[ ]	[ ]
3.	O tempo passava mais depressa do que habitualmente.	[ ]	[ ]
4.	Eu tinha a impressão de que uma força superior falava por mim.	[ ]	[ ]
5.	Eu estava convencido de que os meus pensamentos eram vigiados.	[ ]	[ ]
6.	Qualquer pensamento sem importância não me "saía da cabeça".	[ ]	[ ]
7.	Eu me sentia como se estivesse flutuando.	[ ]	[ ]
8.	Eu tinha a impressão de que alguém estava me fitando com os olhos, embora não houvesse ninguém perto de mim.	[ ]	[ ]

		Sim	Não
9.	Eu tinha dificuldade de distinguir coisas importantes de coisas não importantes.	[ ]	[ ]
10.	Parecia-me ouvir vozes, embora ninguém estivesse presente.	[ ]	[ ]
11.	Tive consciência de que atrás do meu “Eu” habitual se escondia um outro “Eu”.	[ ]	[ ]
12.	Por causa de pequenas faltas tinha profundos sentimentos de culpa.	[ ]	[ ]
13.	O limite entre mim e o meu redor pareciam-se confundir.	[ ]	[ ]
14.	Vinham-me ao mesmo tempo tantas ideias e sensações que fiquei confuso.	[ ]	[ ]
15.	Eu sentia poder prever o futuro.	[ ]	[ ]
16.	Sentia-me completamente livre e isento de todas as obrigações.	[ ]	[ ]
17.	Sentia-me no limiar de uma revelação significante.	[ ]	[ ]
18.	Tinha um sabor estranho na boca, cuja origem não me podia explicar correctamente.	[ ]	[ ]

		Sim	Não
19.	O chão, sobre o qual estava, parecia oscilar.	[ ]	[ ]
20.	Tinha um zunido nos ouvidos.	[ ]	[ ]
21.	Ruídos sem sentido soavam como palavras ou frases correctas.	[ ]	[ ]
22.	Não podia me lembrar do que havido acontecido duas horas antes.	[ ]	[ ]
23.	Tinha perdido todo sentimento de decência tradicional.	[ ]	[ ]
24.	Tinha o sentimento vago de que comigo ia acontecer uma coisa importante.	[ ]	[ ]
25.	As outras pessoas podiam ler os meus pensamentos contra a minha vontade.	[ ]	[ ]
26.	Eu sentia poder modificar o mundo inteiro por meio de uma frase ou de um gesto.	[ ]	[ ]
27.	Odiava as pessoas à minha volta.	[ ]	[ ]

		Sim	Não
28.	Partes do meu corpo pareciam não me pertencer mais.	[ ]	[ ]
29.	Podia ver, durante completa escuridão ou com os olhos fechados, luminosidade ou raios de luz.	[ ]	[ ]
30.	Senti forças extraordinárias em mim.	[ ]	[ ]
31.	Senti-me deslocado para um outro mundo.	[ ]	[ ]
32.	Os meus pensamentos eram sempre interrompidos por pensamentos secundários.	[ ]	[ ]
33.	Eu via em perfeita escuridão ou com os olhos fechados se desenrolarem cenas inteiras como num filme.	[ ]	[ ]
34.	Tinha a impressão de que no mundo não havia mais qualquer contradição.	[ ]	[ ]
35.	Sentia-me transportado para a minha infância.	[ ]	[ ]
36.	Eu sentia um impulso irresistível de destruir tudo à minha volta.	[ ]	[ ]
37.	Tinha a impressão de que as pessoas falavam sobre mim atrás de minhas costas.	[ ]	[ ]

		Sim	Não
38.	Tinha a impressão de ter compreendido o sentido da vida.	[ ]	[ ]
39.	Tinha a impressão de que os meus membros eram maiores do que habitualmente.	[ ]	[ ]
40.	Meus próprios sentimentos me pareciam estranhos, como se não pertencessem a mim.	[ ]	[ ]
41.	Eu estava convencido de já ter vivido a mesma situação.	[ ]	[ ]
42.	Objectos ao redor de mim me afectavam emocionalmente muito mais do que habitualmente.	[ ]	[ ]
43.	As coisas ao meu redor pareciam-me maiores do que normalmente.	[ ]	[ ]
44.	Sentia-me torturado, sem saber exactamente porquê.	[ ]	[ ]
45.	Eu tinha medo de que ia morrer.	[ ]	[ ]
46.	Tinha a impressão de que ia ficar louco.	[ ]	[ ]
47.	Parecia-me que nada era coincidência, tudo estaria relacionado.	[ ]	[ ]
48.	Tinha medo de sofrer de uma doença incurável.	[ ]	[ ]

		Sim	Não
49.	As palavras possuíam um significado singularmente estranho.	[ ]	[ ]
50.	Tinha a impressão de que estava sendo controlado por microfones escondidos.	[ ]	[ ]
51.	As coisas à minha volta tinham para mim um significado estranho e novo.	[ ]	[ ]
52.	Eu falava em voz alta comigo mesmo.	[ ]	[ ]
53.	Acreditava não estar mais são, psíquica e mentalmente.	[ ]	[ ]
54.	Tinha a sensação de estar a viver o fim do mundo.	[ ]	[ ]
55.	Sentia-me como um autómato.	[ ]	[ ]
56.	O meu redor me parecia singularmente estranho.	[ ]	[ ]
57.	As coisas ao meu redor tinham outro odor que normalmente.	[ ]	[ ]
58.	Estava cansado e esgotado, porém ao mesmo tempo completamente acordado.	[ ]	[ ]

		Sim	Não
59.	Escutava ruídos, sem poder me explicar, de onde vinham.	[ ]	[ ]
60.	A minha própria voz me parecia estranha.	[ ]	[ ]
61.	Tinha a impressão de que as paredes do quarto iam cair em cima de mim.	[ ]	[ ]
62.	Parecia-me que outros podiam ouvir meus pensamentos como se fossem falados alto.	[ ]	[ ]
63.	Parecia-me que já tinha sonhado o que estava a viver no momento.	[ ]	[ ]
64.	Sentia-me ameaçado, sem saber exactamente de quê.	[ ]	[ ]
65.	Relações estranhas entre factos em si distantes uns dos outros tornaram-se claras para mim.	[ ]	[ ]
66.	Tinha a impressão que já não possuía mais vontade própria.	[ ]	[ ]
67.	Tinha a impressão de que os meus pensamentos eram influenciados por outras pessoas.	[ ]	[ ]
68.	Parecia-me que já não tinha mais corpo.	[ ]	[ ]

		Sim	Não
69.	Acreditava ter feito uma descoberta que viria a transformar o mundo.	[ ]	[ ]
70.	Via em completa escuridão ou com os olhos fechados cores diante de mim.	[ ]	[ ]
71.	Tinha medo, sem poder dizer exactamente porquê.	[ ]	[ ]
72.	Tinha a impressão que as pessoas me tinham inimizade.	[ ]	[ ]
73.	Sentia-me como se fosse composto de diversas pessoas, das quais, somente uma correspondia ao meu “Eu” normal.	[ ]	[ ]
74.	Tinha pensamentos que pareciam estranhos a mim mesmo.	[ ]	[ ]
75.	Parecia-me que era menor do que normalmente.	[ ]	[ ]
76.	Sentia-me como se tivesse nascido de novo.	[ ]	[ ]
77.	Tinha a impressão de estar ligado a uma força superior.	[ ]	[ ]
78.	Acreditava ouvir vozes, que vinham de mim mesmo e não do meu ambiente.	[ ]	[ ]

		Sim	Não
79.	Sentia o meu corpo desmoronar-se.	[ ]	[ ]
80.	Via coisas que eu sabia não serem reais.	[ ]	[ ]
81.	Os meus movimentos eram convulsivos e pouco naturais.	[ ]	[ ]
82.	Tinha a impressão de ser uma sobrecarga para os meus próximos.	[ ]	[ ]
83.	Sentia-me como se fosse uma marionete.	[ ]	[ ]
84.	Sentia-me sem motivo exterior muito feliz e contente.	[ ]	[ ]
85.	Acreditava sem crítica tudo o que me era dito.	[ ]	[ ]
86.	Palavras do dia-a-dia pareciam ter vários significados.	[ ]	[ ]
87.	Tinha dificuldades em distinguir entre o que eu imaginava e o que eu na realidade vivia.	[ ]	[ ]
88.	As minhas mãos movimentavam-se automaticamente sem que eu o desejasse.	[ ]	[ ]
89.	Ouvia vozes, sem que houvesse alguém perto de mim.	[ ]	[ ]

		Sim	Não
90.	Sentia-me sem motivo exterior extremamente cheio de energias.	[ ]	[ ]
91.	Tudo ao meu redor ia tão depressa, que não sabia bem o que acontecia.	[ ]	[ ]
92.	Teria podido ficar horas seguidas sentado, a contemplar qualquer coisa.	[ ]	[ ]
93.	Parecia-me maior do que normalmente.	[ ]	[ ]
94.	Ouvia vozes que repetiam o que eu tinha dito ou pensado, sem que alguém estivesse perto de mim.	[ ]	[ ]
95.	Tudo me era completamente indiferente.	[ ]	[ ]
96.	Tinha a impressão de que os outros podiam ler meus pensamentos.	[ ]	[ ]
97.	Estava em comunicação com um poder superior.	[ ]	[ ]
98.	Minha memória parecia não estar mais em ordem.	[ ]	[ ]
99.	Tinha a impressão de estar no centro dos acontecimentos do mundo.	[ ]	[ ]

		Sim	Não
100.	Via em completa escuridão ou com olhos fechados padrões regulares.	[ ]	[ ]
101.	Via em alguns objectos toda a maravilha do universo.	[ ]	[ ]
102.	Sentia-me perseguido.	[ ]	[ ]
103.	Tinha a impressão de ouvir vozes que falavam sobre mim, embora não houvesse ninguém perto de mim.	[ ]	[ ]
104.	As coisas à minha volta pareciam-me menores que habitualmente.	[ ]	[ ]
105.	Ficava durante longo tempo como rígido numa posição completamente não natural.	[ ]	[ ]
106.	Tinha a impressão que alguém me tocava embora não houvesse ninguém perto de mim.	[ ]	[ ]
107.	Tinha dificuldades de tomar mesmo a mais pequena decisão.	[ ]	[ ]
108.	Tinha a impressão que meus pensamentos eram feitos por outros.	[ ]	[ ]
109.	Sentia o ímpeto de dizer coisas obscenas.	[ ]	[ ]

		Sim	Não
110.	Sentia-me como que paralisado.	[ ]	[ ]
111.	Não conseguia recordar-me em que ano estávamos.	[ ]	[ ]
112.	Quando dizia ou pensava alguma coisa, isto se repetia dentro de mim altamente como se fosse um eco.	[ ]	[ ]
113.	Não sabia mais onde estava realmente.	[ ]	[ ]
114.	O meu “Eu” parecia deixar o corpo.	[ ]	[ ]
115.	Não conseguia recordar-me do nome de um bom conhecido.	[ ]	[ ]
116.	Sentia que estava próximo de um poder superior.	[ ]	[ ]
117.	Estava muito agressivo sem motivo exterior.	]	[ ]
118.	Sentia-me eleito por Deus.	[ ]	[ ]
119.	Algo me vinha à ideia que eu não sabia se era sonhado ou realmente experimentado.	[ ]	[ ]
120.	Via coisas estranhas, das quais agora sei, que não eram reais.	[ ]	[ ]

		Sim	Não
121.	Sentia o ímpeto de assassinar alguém.	[ ]	[ ]
122.	Tinha a impressão que podia pensar mais depressa e com mais clareza do que habitualmente.	[ ]	[ ]
123.	A falta de sentido da vida toda tornou-se-me consciente de maneira assustadora.	[ ]	[ ]
124.	Ouvia chamar meu nome, sem que houvesse alguém perto de mim.	[ ]	[ ]
125.	Podia influenciar outras pessoas ou objectos por meio de meus pensamentos.	[ ]	[ ]
126.	Ouvia vozes que falavam sobre mim, embora não houvesse ninguém ao meu redor.	[ ]	[ ]
127.	Vivia o passado, o presente e o futuro, como uma unidade.	[ ]	[ ]
128.	Coisas do dia-a-dia tinham para mim um significado especial.	[ ]	[ ]
129.	Parecia-me que o mundo à minha volta e eu éramos um só.	[ ]	[ ]

		Sim	Não
130.	Eu estava completamente desesperado.	[ ]	[ ]
131.	As coisas à minha volta pareciam-me distorcidas.	[ ]	[ ]
132.	Vinham-me tantos pensamentos à ideia que já não conseguia ordená-los.	[ ]	[ ]
133.	O tempo passava mais devagar do que habitualmente.	[ ]	[ ]
134.	Sons pareciam influenciar o que eu via.	[ ]	[ ]
135.	Ocorria-me uma melodia que eu tinha de repetir constantemente.	[ ]	[ ]
136.	Eu não podia pensar nada correctamente até ao fim; os pensamentos eram constantemente interrompidos.	[ ]	[ ]
137.	Eu estava extremamente acordado e supersensível.	[ ]	[ ]
138.	As cores do que eu via eram modificadas por sons ou ruídos.	[ ]	[ ]
139.	Tinha a impressão de que tudo o que se passava à minha volta se relacionava comigo.	[ ]	[ ]

		Sim	Não
140.	As pessoas à minha volta pareciam actores.	[ ]	[ ]
141.	Eu sentia-me isolado de tudo e de todos.	[ ]	[ ]
142.	Eu vivia a maravilha, a alegria e a paz do mundo.	[ ]	[ ]
143.	Eu queria cometer suicídio.	[ ]	[ ]
144.	Não possuía mais controlo próprio e domínio sobre mim mesmo.	[ ]	[ ]
145.	As outras pessoas podiam fazer de mim o que quisessem.	[ ]	[ ]
146.	Tinha a impressão de que já não podia mais controlar os movimentos do meu corpo.	[ ]	[ ]
147.	Tinha a impressão de que sonhava.	[ ]	[ ]
148.	Parecia-me que já não tinha mais sentimentos.	[ ]	[ ]
149.	Eu podia influenciar outros de maneira fora do comum.	[ ]	[ ]
150.	Tinha a sensação de que iria passar algo terrível.	[ ]	[ ]
151.	Não me ocorria em que mês estávamos.	[ ]	[ ]

		Sim	Não
152.	Sentia-me influenciado pela corrente eléctrica, raios ou hipnose.	[ ]	[ ]
153.	Tinha medo de mim mesmo.	[ ]	[ ]
154.	Tinha a impressão de estar sendo observado através de câmaras escondidas.	[ ]	[ ]
155.	Sentia que tinha que morrer.	[ ]	[ ]
156.	Parecia-me haver uma parede invisível entre mim e o meu ambiente.	[ ]	[ ]
157.	Observava-me a mim mesmo como a uma pessoa estranha.	[ ]	[ ]
158.	Tinha a impressão de um vazio total na cabeça.	[ ]	[ ]

MUITO OBRIGADO PELA SUA COLABORAÇÃO

APPENDIX 19

Box Plots for
Shapiro Wilk Test
in Chapter V, Section 5.3.

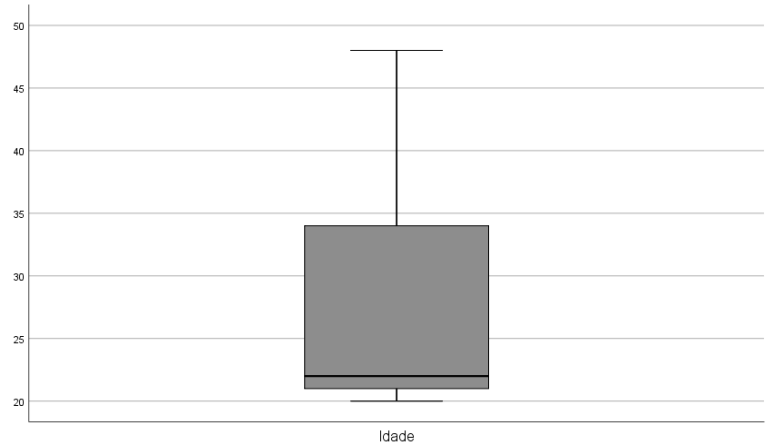


Figure A19.1. Age Distribution in Pilot Sample

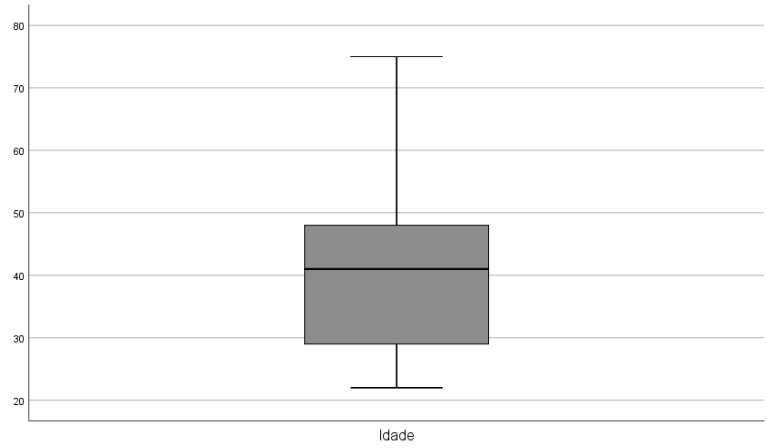


Figure A19.2. Age Distribution in Main Study Sample

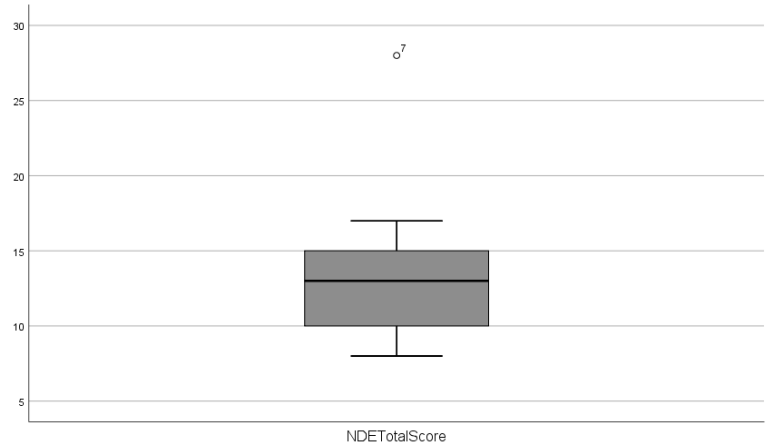


Figure A19.3. NDE Scale (Greyson, 1983) Distribution in Pilot Sample

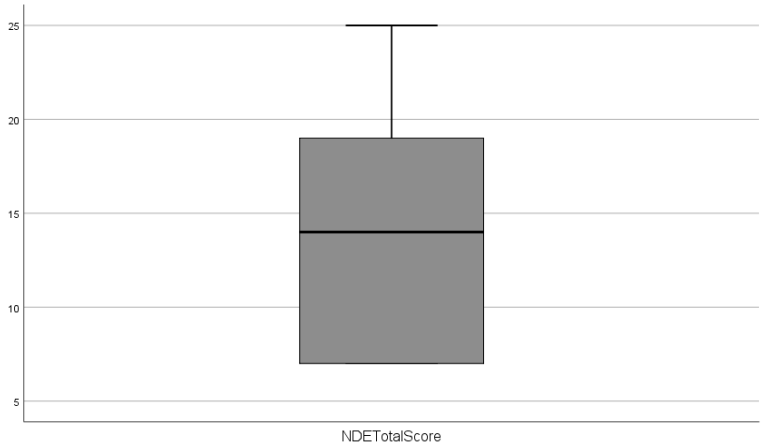


Figure A19.4. NDE Scale (Greyson, 1983) Distribution in Main Sample

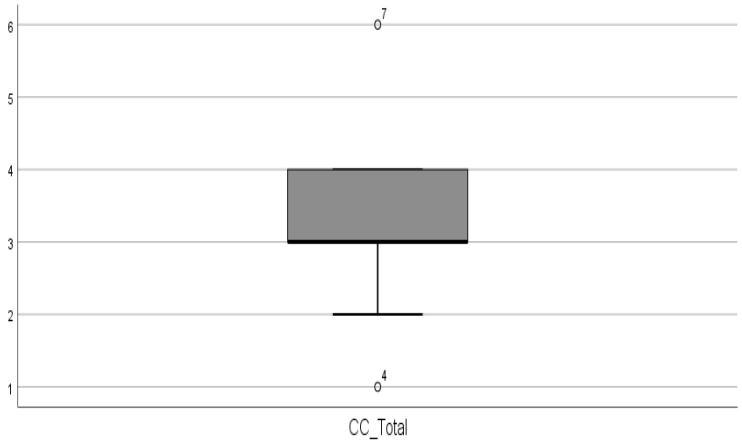


Figure A19.5. Cognitive Component of the NDE Scale (Greyson, 1983) Distribution in Pilot Sample

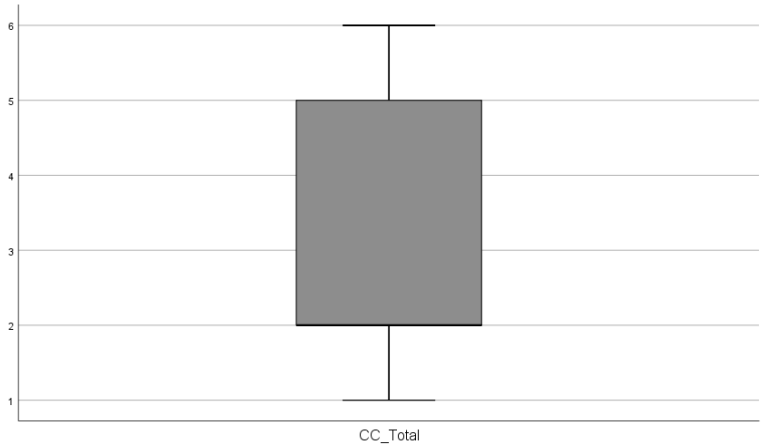


Figure A19.6. Cognitive Component of the NDE Scale (Greyson, 1983) Distribution in Main Sample

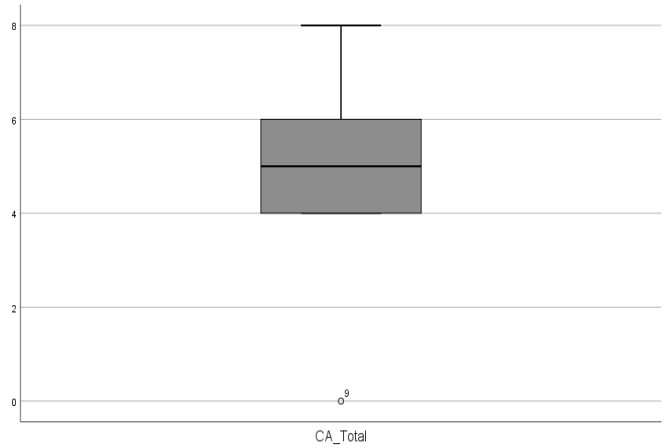


Figure A19.7. NDE Scale (Greyson, 1983) Affective Component Distribution in Pilot Sample

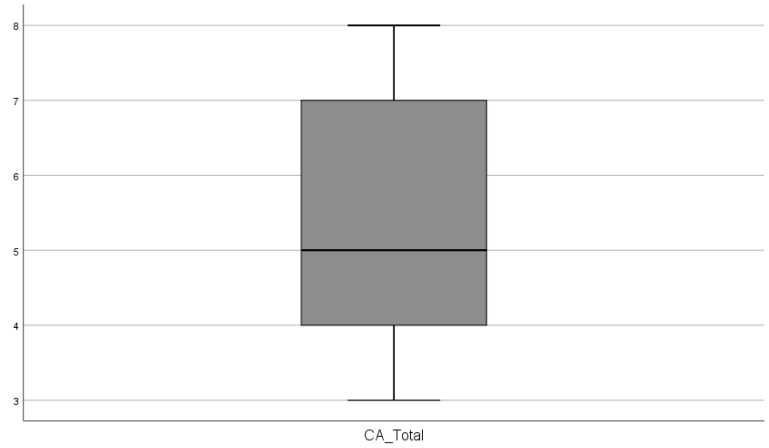


Figure A19.8. NDE Scale (Greyson, 1983) Affective Component Distribution in Main Sample

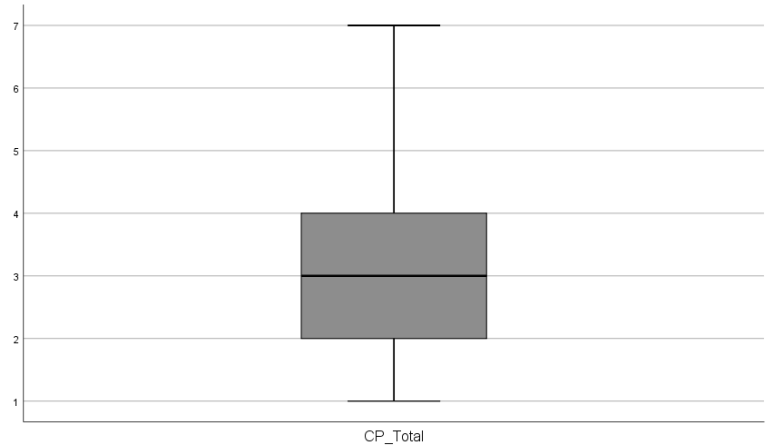


Figure A19.9. NDE Scale (Greyson, 1983) Paranormal Component Distribution in Pilot Sample

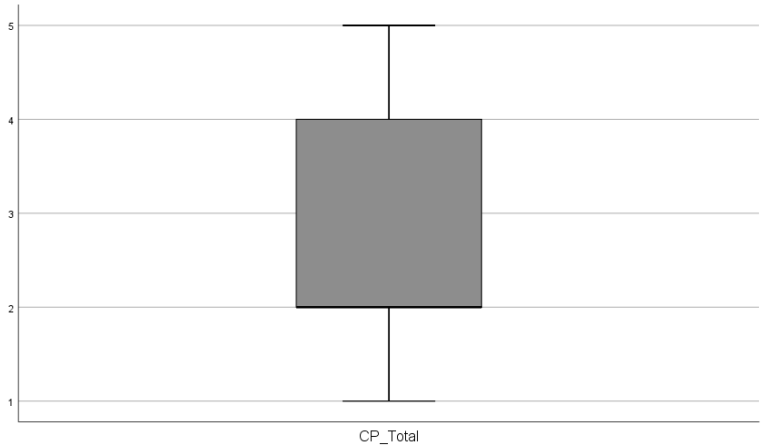


Figure A19.10. NDE Scale (Greyson, 1983) Paranormal Component Distribution in Main Sample

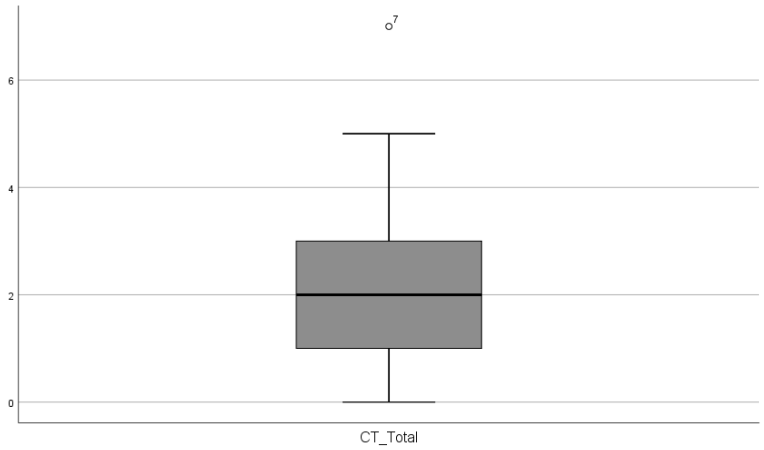


Figure A19.11 NDE Scale (Greyson, 1983) Transcendental Component Distribution in Pilot Sample

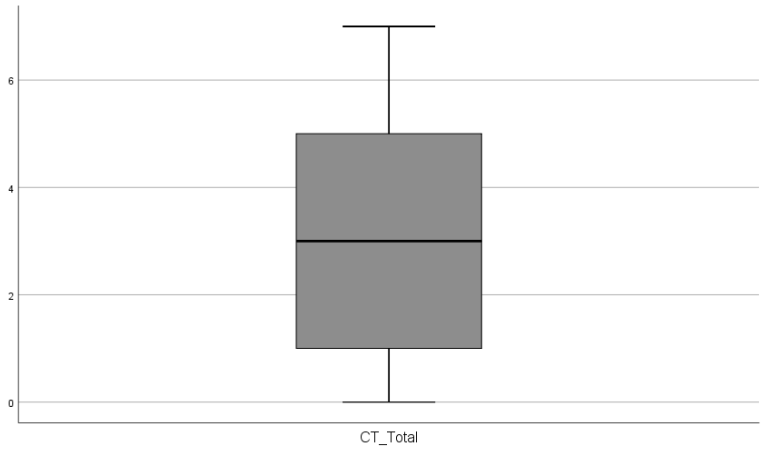


Figure A19.12 NDE Scale (Greyson, 1983) Transcendental Component Distribution in Main Sample

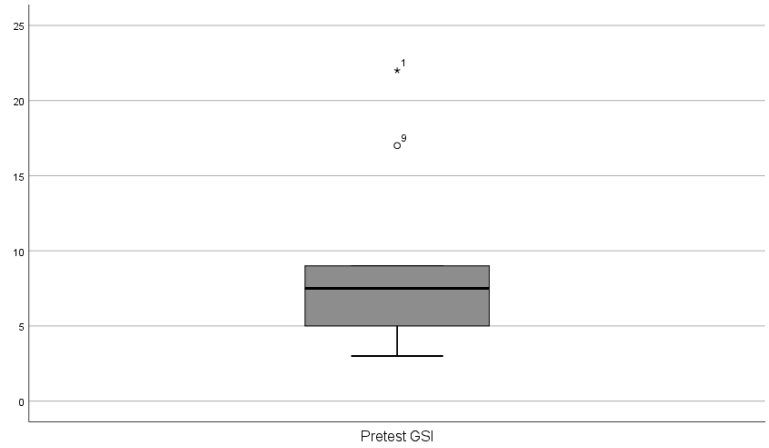


Figure A19.13 BSI-18 (Derogatis, 2001) GSI Component Pre-test Distribution in Pilot Sample

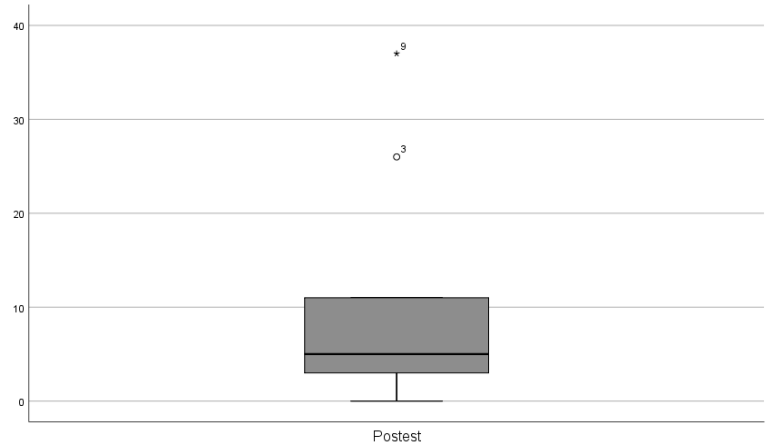


Figure A19.14 BSI-18 (Derogatis, 2001) GSI Component Post-test Distribution in Pilot Sample

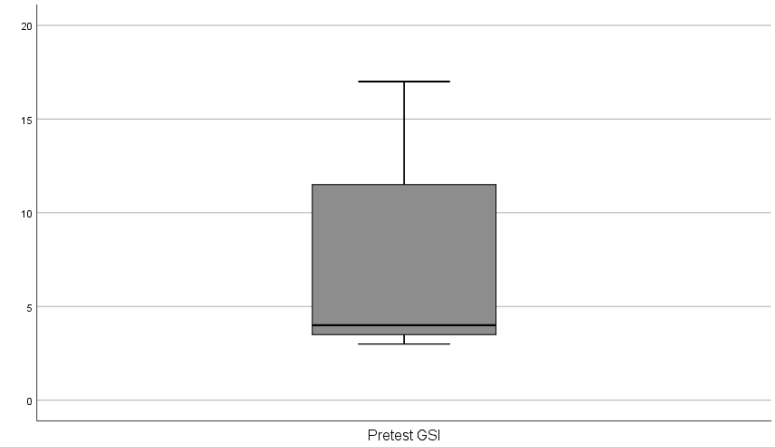


Figure A19.15 BSI-18 (Derogatis, 2001) GSI Component Pre-test Distribution in Main Sample

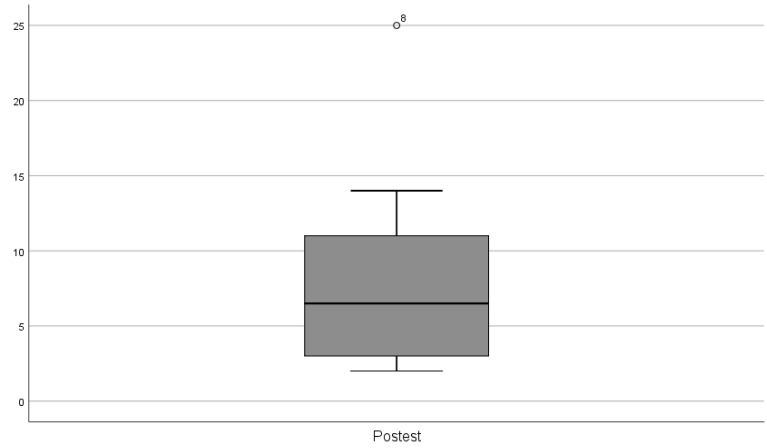


Figure A19.16 BSI-18 (Derogatis, 2001) GSI Component Post-test Distribution in Main Sample

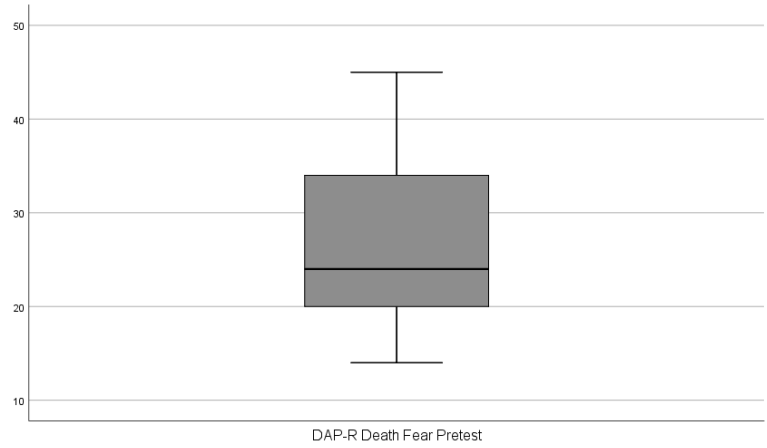


Figure A19.17 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Pre-test Distribution in Pilot Sample

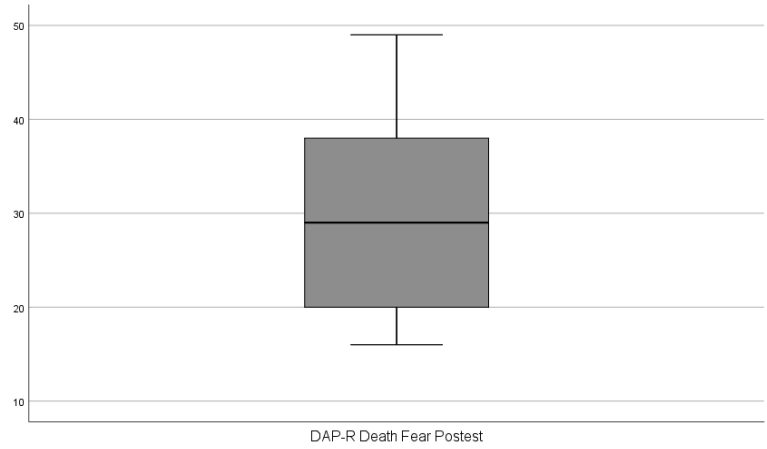


Figure A19.18 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Post-test Distribution in Pilot Sample

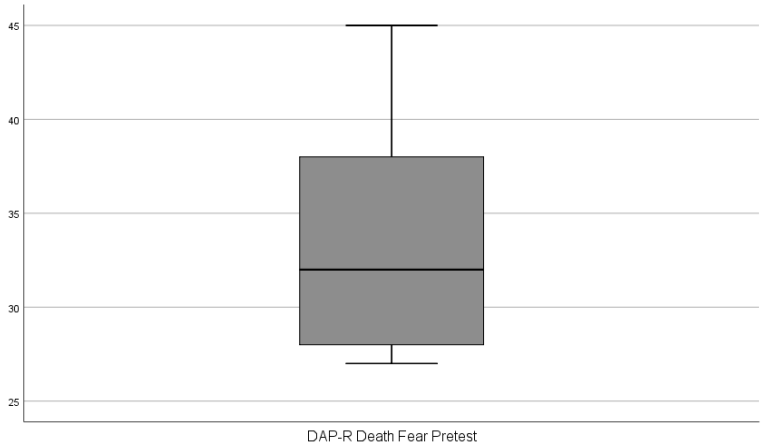


Figure A19.19 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Pre-test Distribution in Main Sample

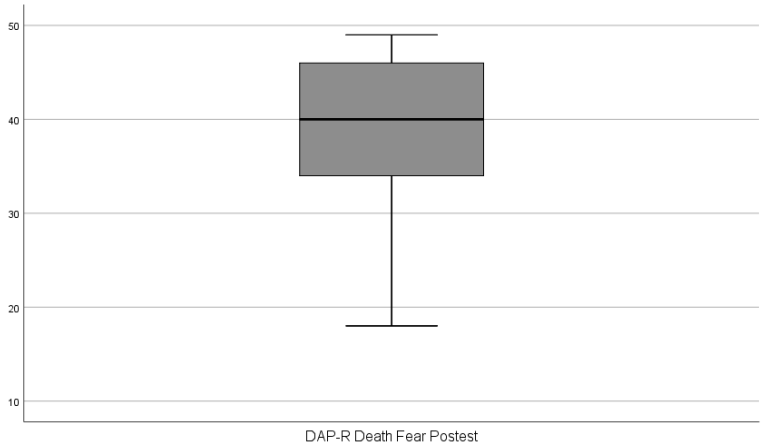


Figure A19.20 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Post-test Distribution in Main Sample

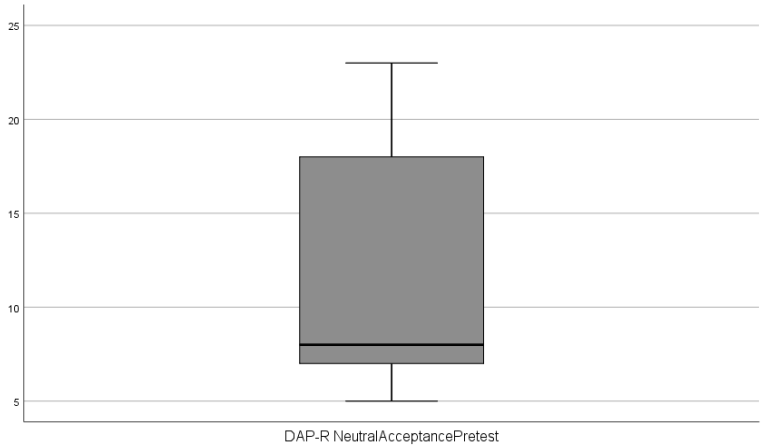


Figure A19.21 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Pre-test Distribution in Pilot Sample

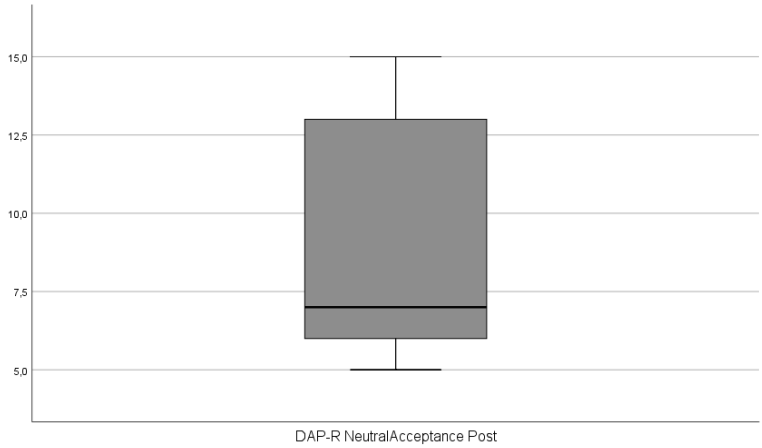


Figure A19.22 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Post-test Distribution in Pilot Sample

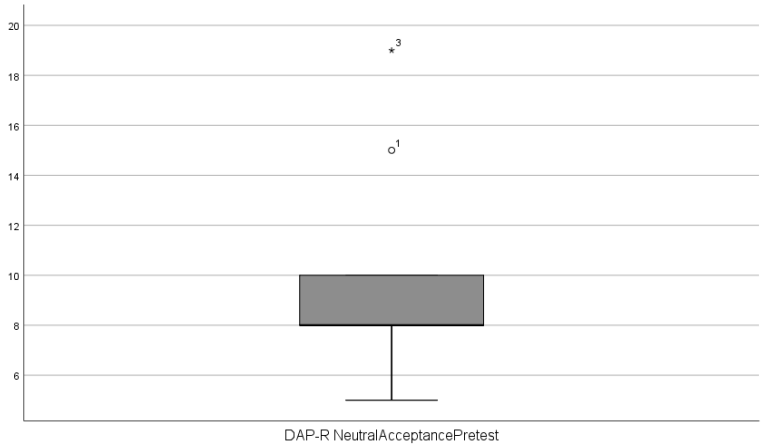


Figure A19.23 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Pre-test Distribution in Main Sample

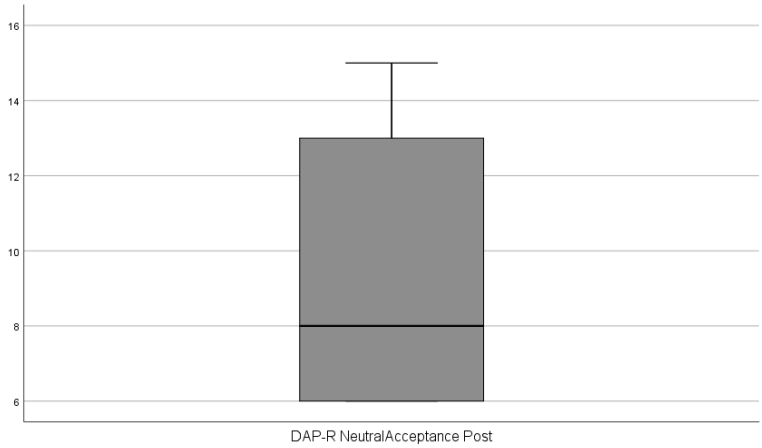


Figure A19.24 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Post-test Distribution in Main Sample

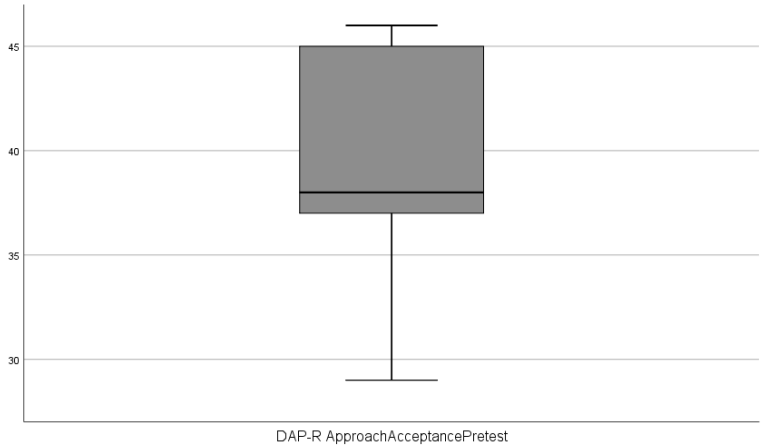


Figure A19.25 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Pre-test Distribution in Pilot Sample

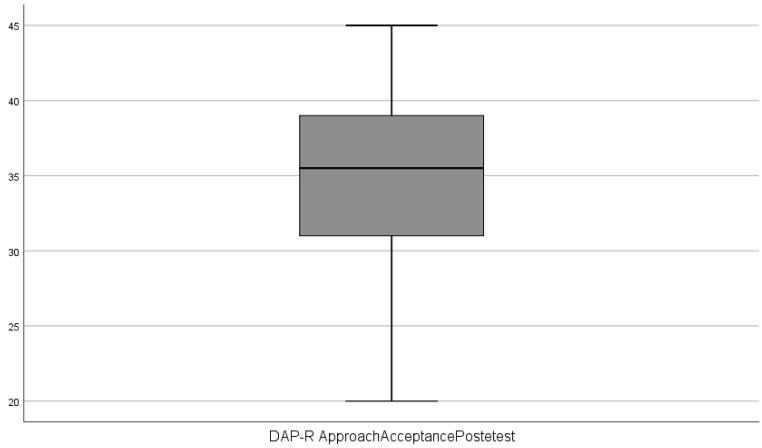


Figure A19.26 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Post-test Distribution in Pilot Sample

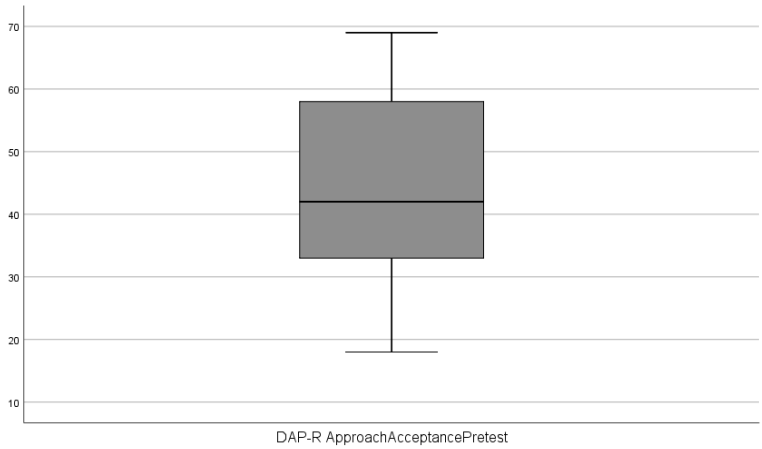


Figure A19.27 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Pre-test Distribution in Main Sample

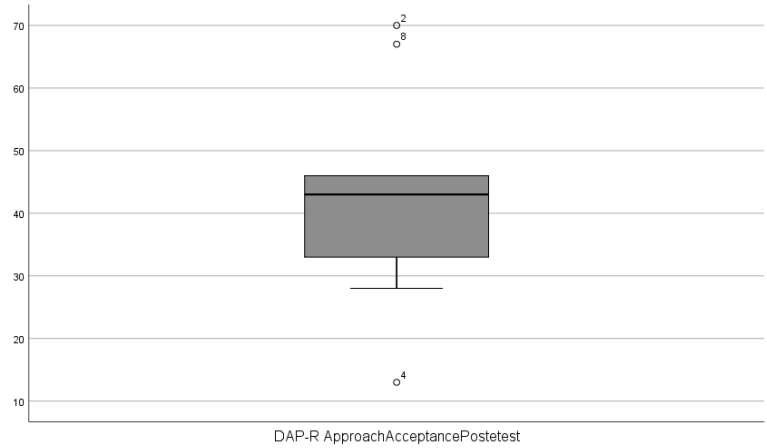


Figure A19.28 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Post-test Distribution in Main Sample

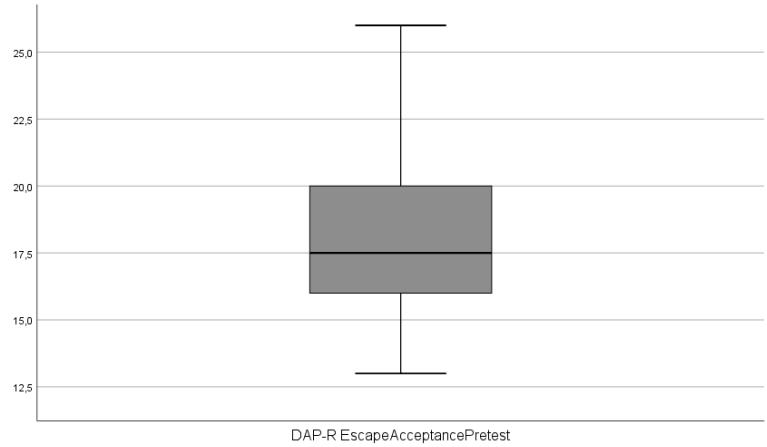


Figure A19.29 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Pre-test Distribution in Pilot Sample

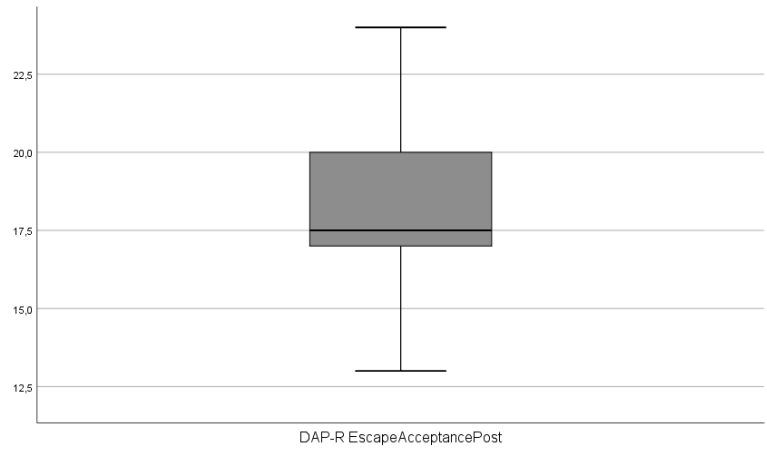


Figure A19.30 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Post-test Distribution in Pilot Sample

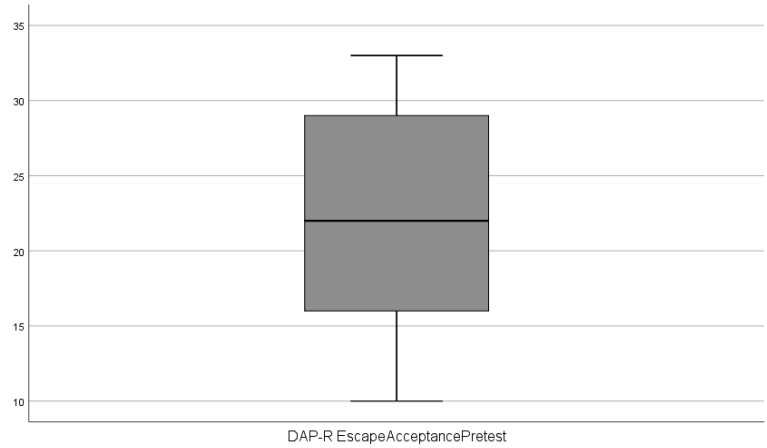


Figure A19.31 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Pre-test Distribution in Main Sample

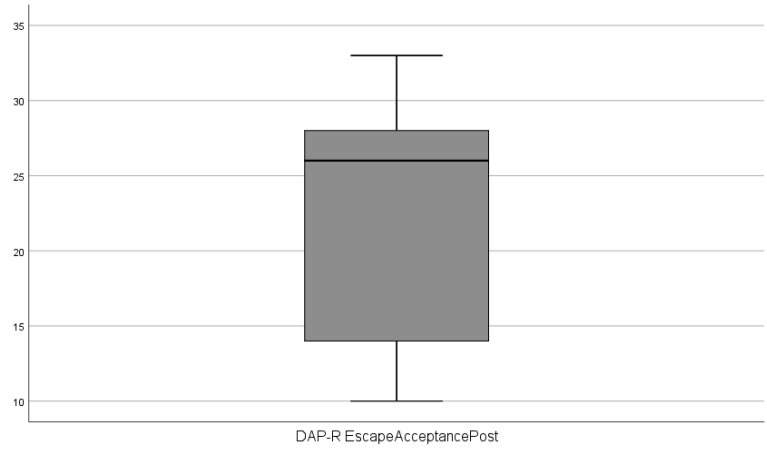


Figure A19.32 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Post-test Distribution in Main Sample

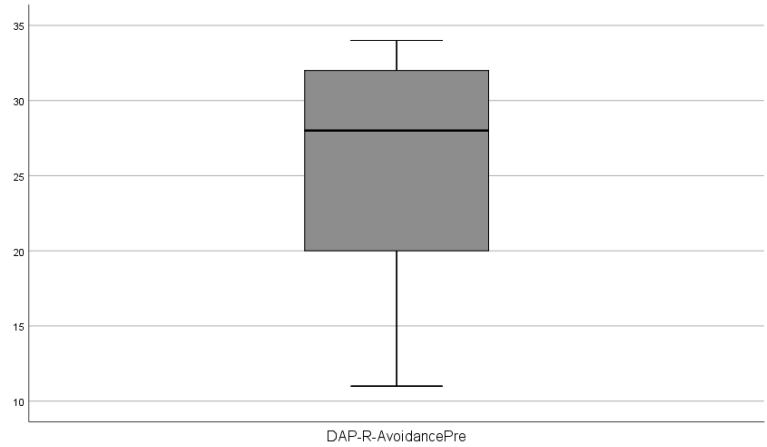


Figure A19.33 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Pre-test Distribution in Pilot Sample

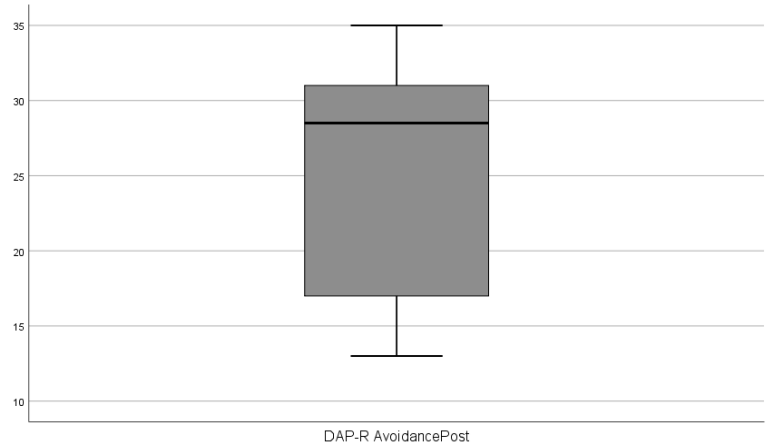


Figure A19.34 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Post-test Distribution in Pilot Sample

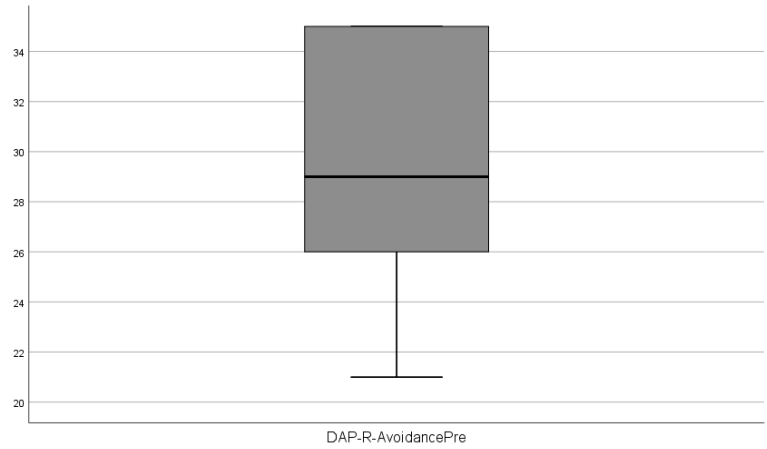


Figure A19.35 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Pre-test Distribution in Main Sample

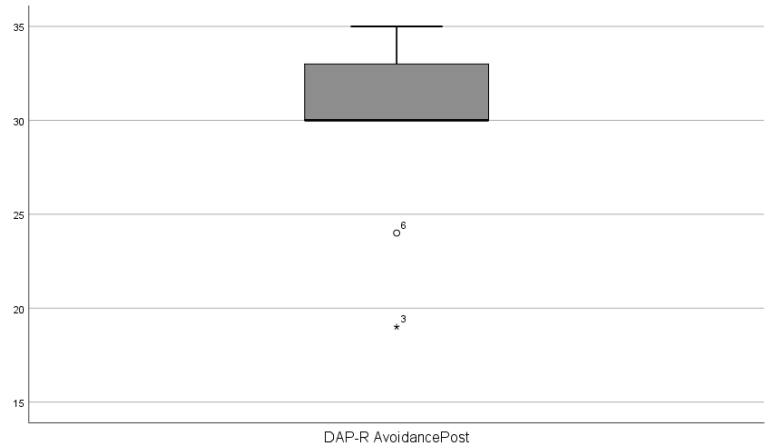


Figure A19.36 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Post-test Distribution in Main Sample

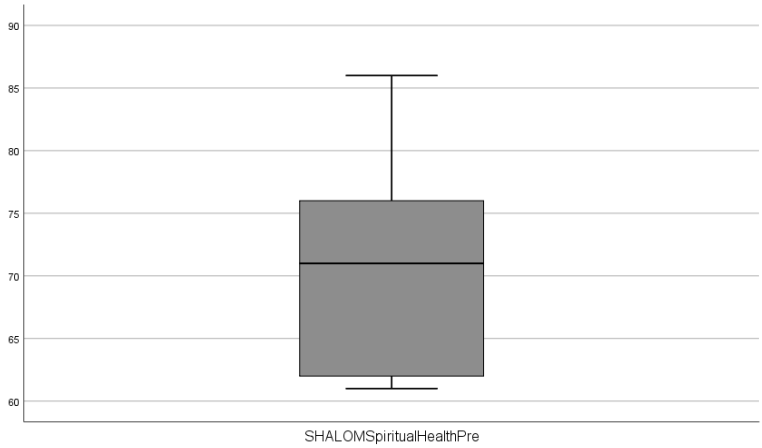


Figure A19.37 SHALOM (Fisher, 2010) Spiritual Health Component Pre-test Distribution in Pilot Sample

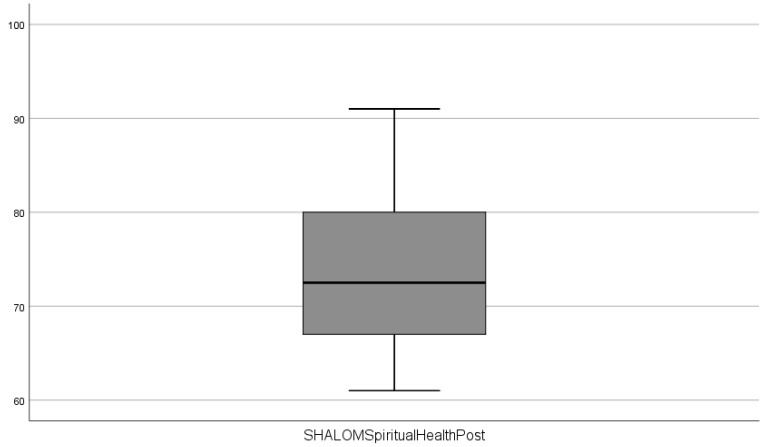


Figure A19.38 SHALOM (Fisher, 2010) Spiritual Health Component Post-test Distribution in Pilot Sample

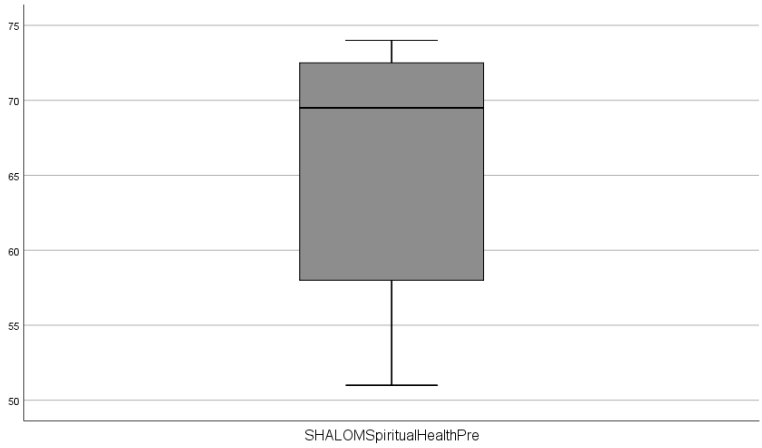


Figure A19.39 SHALOM (Fisher, 2010) Spiritual Health Component Pre-test Distribution in Main Sample

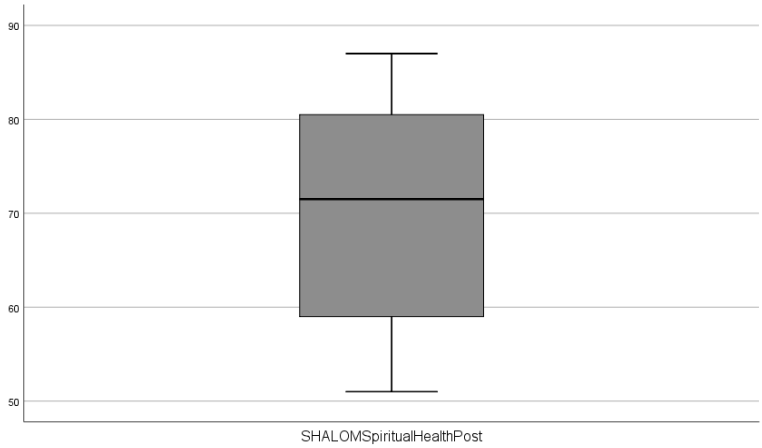


Figure A19.40 SHALOM (Fisher, 2010) Spiritual Health Component Post-test Distribution in Main Sample

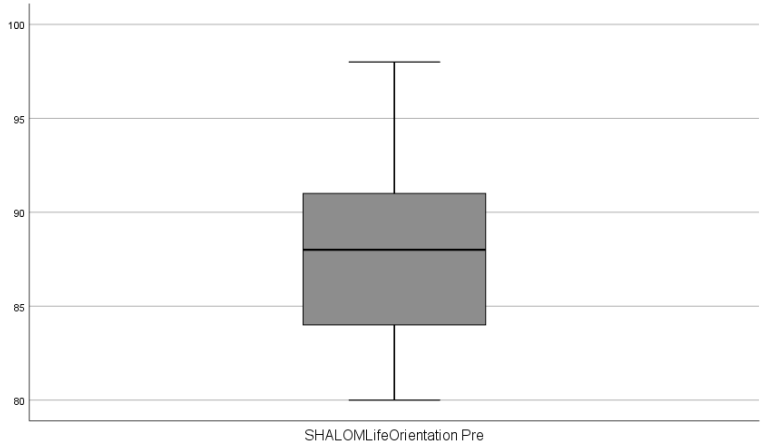


Figure A19.41 SHALOM (Fisher, 2010) Life Orientation Component Pre-test Distribution in Pilot Sample

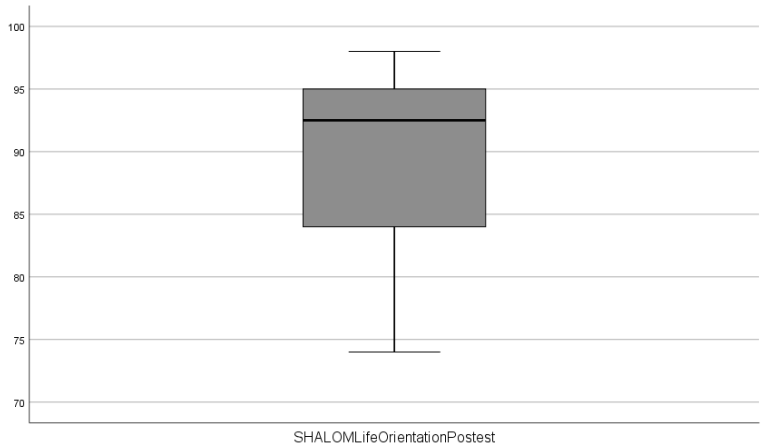


Figure A19.42 SHALOM (Fisher, 2010) Life Orientation Component Post-test Distribution in Pilot Sample

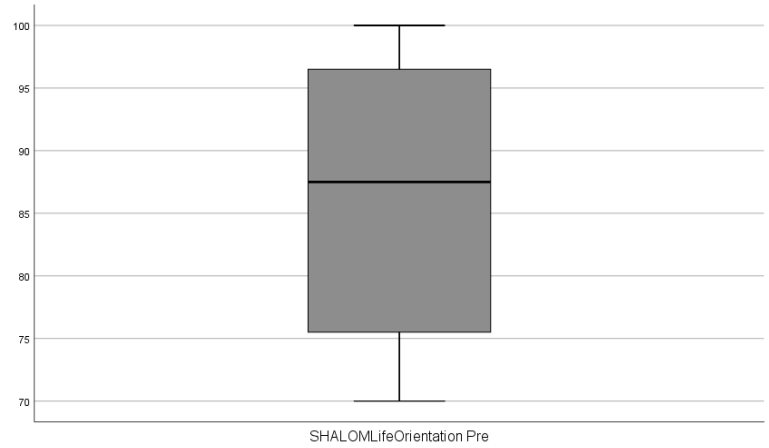


Figure A19.43 SHALOM (Fisher, 2010) Life Orientation Component Pre-test Distribution in Main Sample

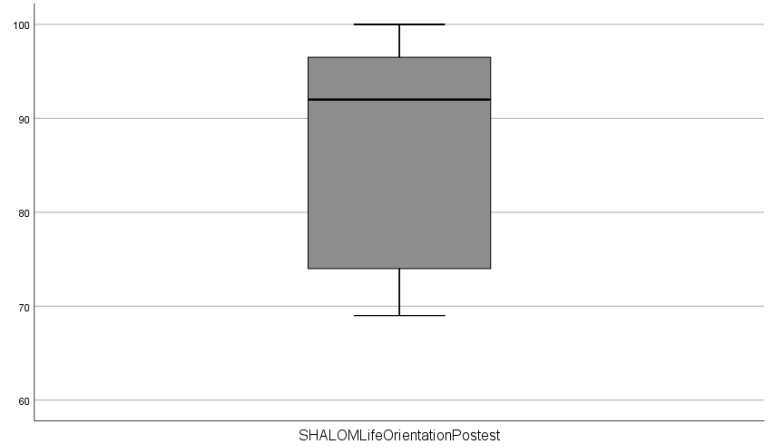


Figure 19.44 SHALOM (Fisher, 2010) Life Orientation Component Pre-test Distribution in Main Sample

APPENDIX 20

Histograms for Mann-Whitney
in Chapter V, Section 5.3.

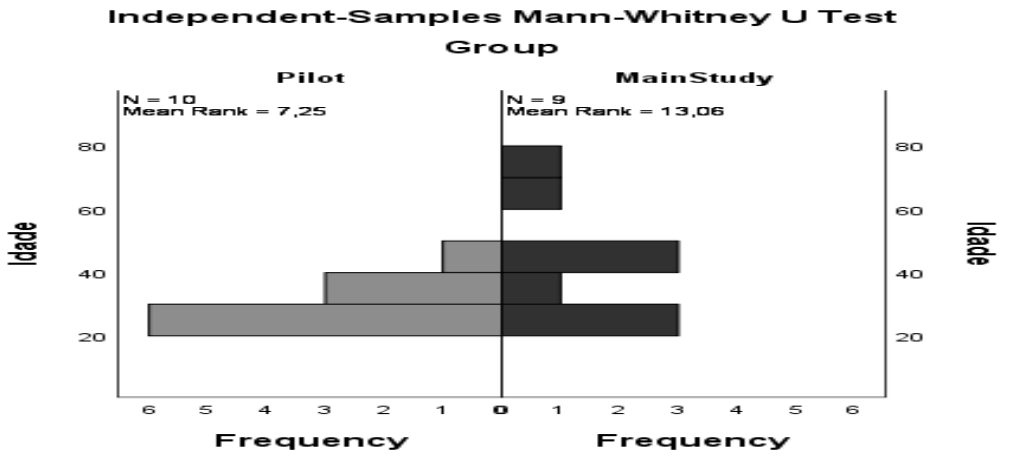


Figure A20.1 Age Distribution between Independent Samples

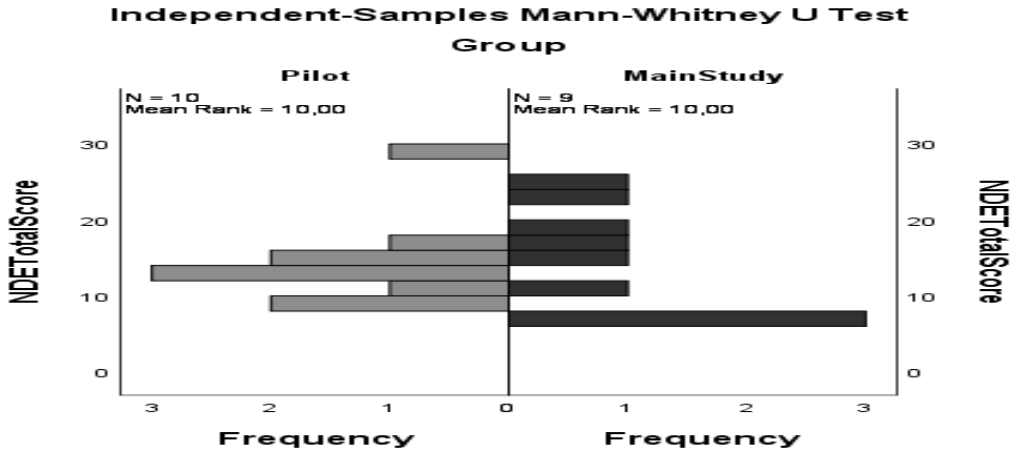


Figure A20.02 NDE Scale (Greyson, 1983) Total Score Distribution between Samples

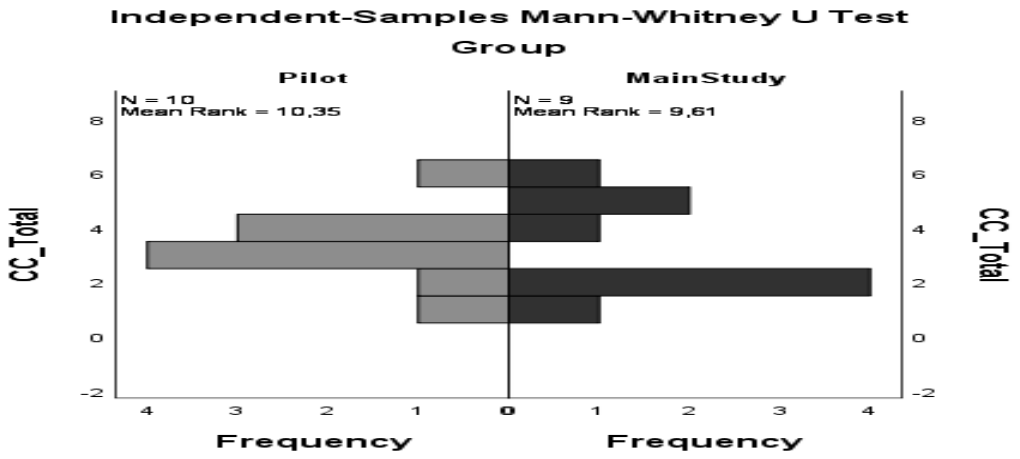


Figure A20.03 NDE Scale (Greyson, 1983) Cognitive Component Distribution between Samples

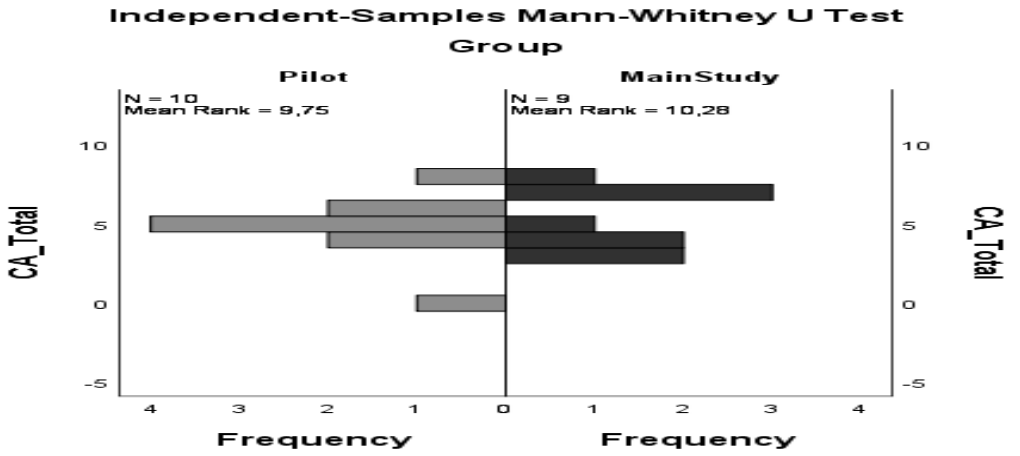


Figure A20.04 NDE Scale (Greyson, 1983) Affective Component Distribution between Samples

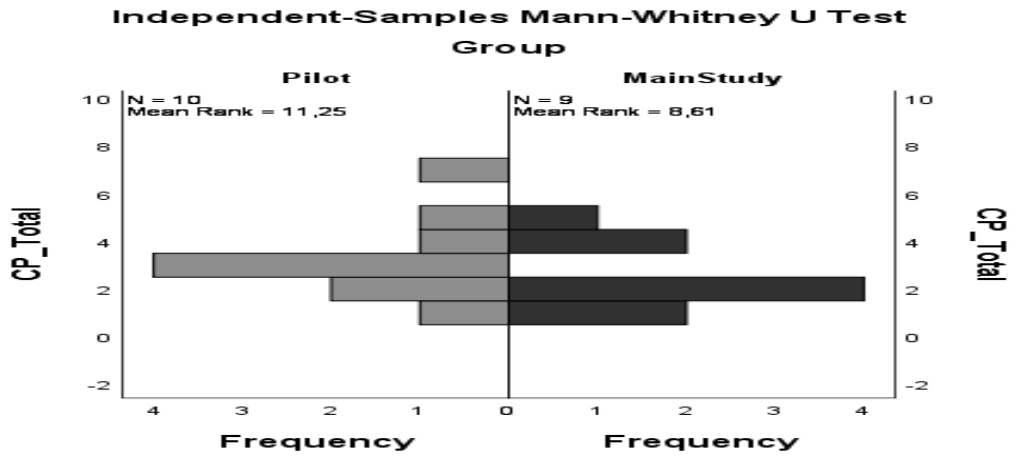


Figure A20.05 NDE Scale (Greyson, 1983) Paranormal Component Distribution between Samples

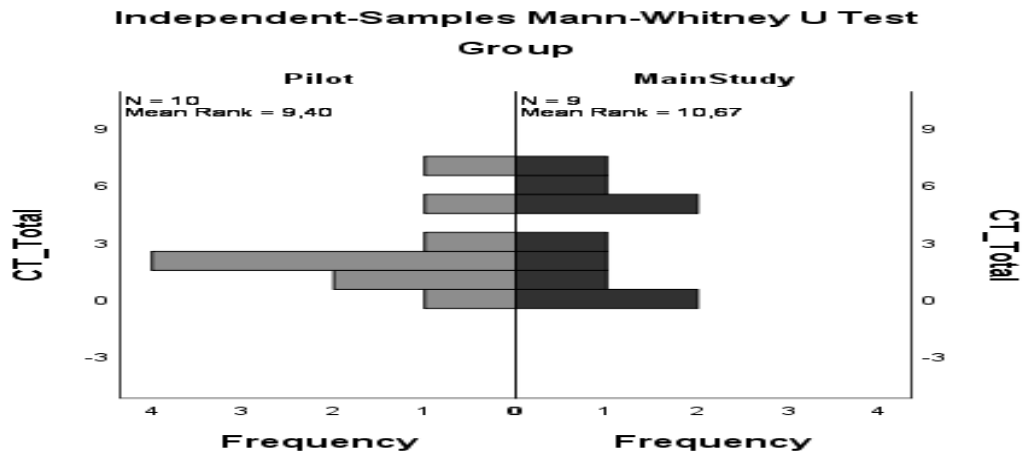


Figure A20.06 NDE Scale (Greyson, 1983) Transcendental Component Distribution between Samples

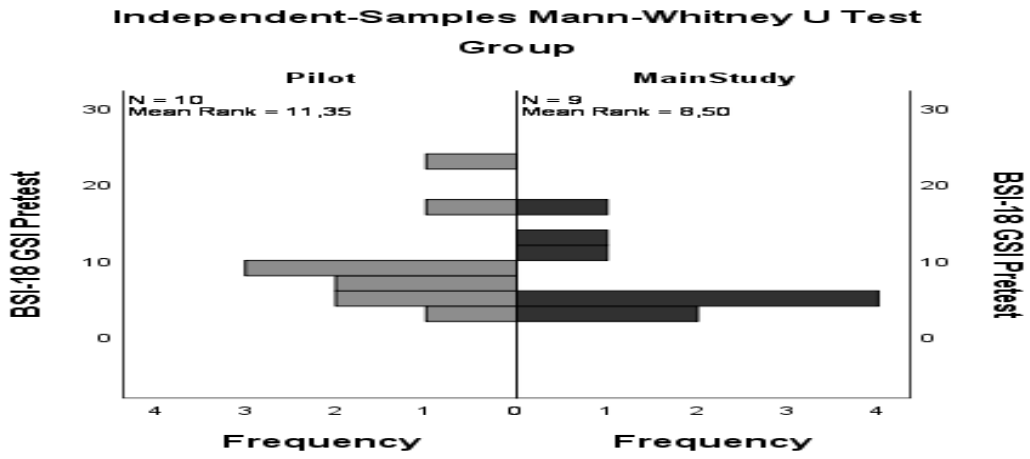


Figure A20.7 BSI-18 (Derogatis, 2001) GSI Component Pre-test Distribution between Samples

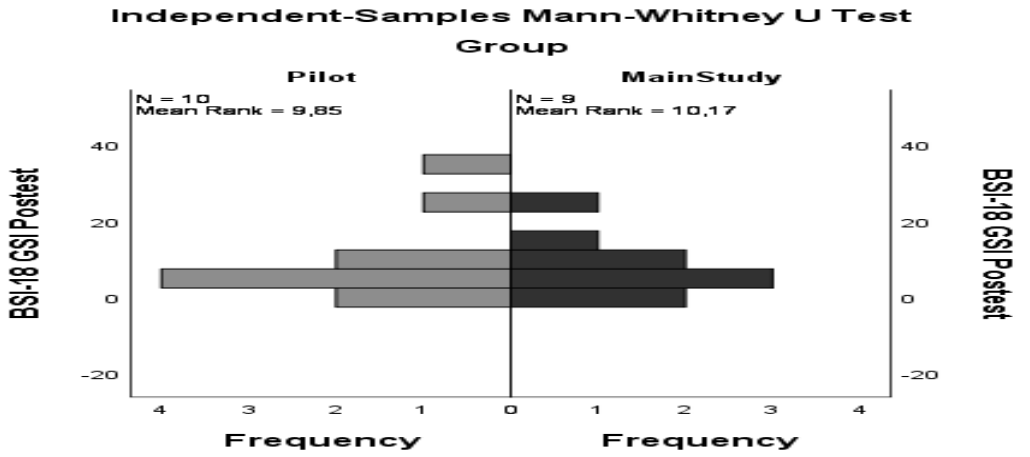


Figure A20.8 BSI-18 (Derogatis, 2001) GSI Component Post-test Distribution between Samples

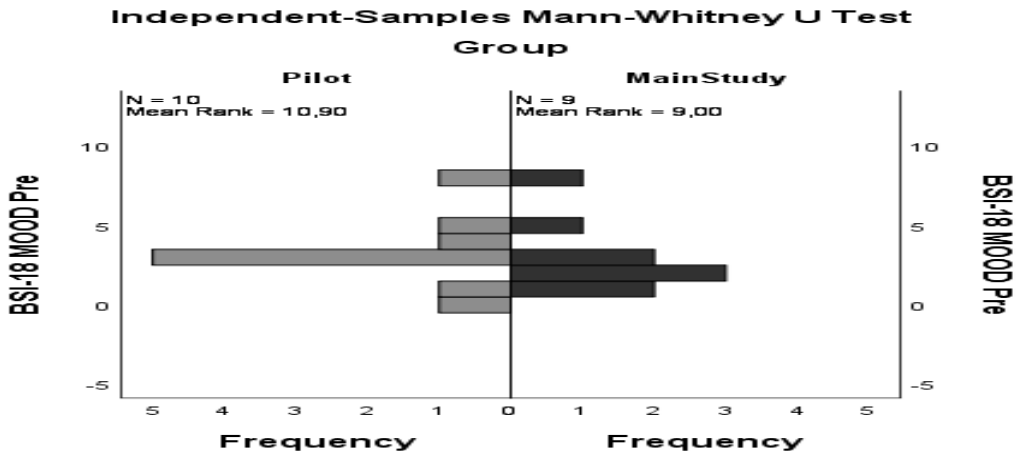


Figure A20.9 BSI-18 (Derogatis, 2001) Mood Component Pre-test Distribution between Samples

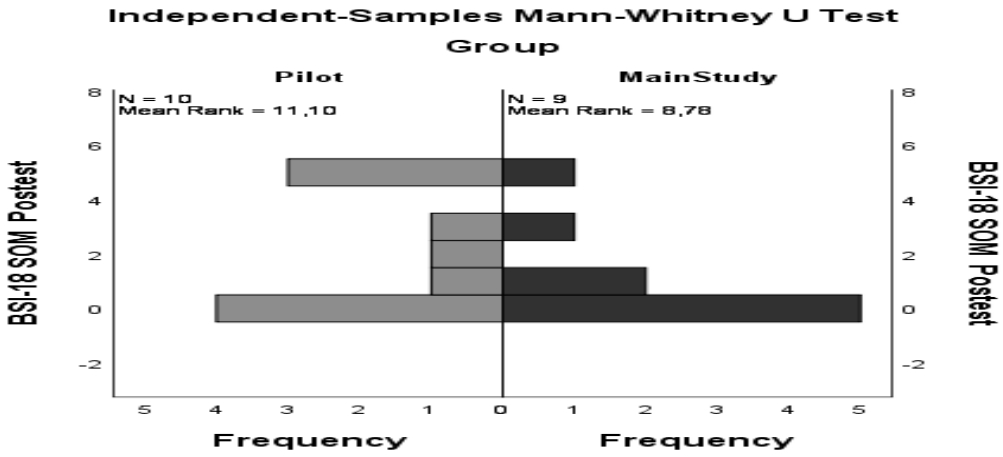


Figure A20.10 BSI-18 (Derogatis, 2001) Mood Component Post-test Distribution between Samples

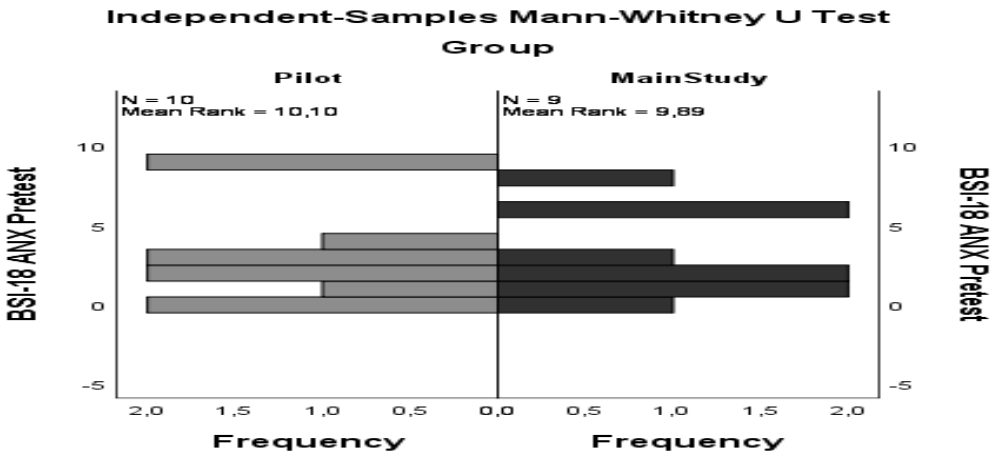


Figure A20.11 BSI-18 (Derogatis, 2001) Anxiety Component Pre-test Distribution between Samples

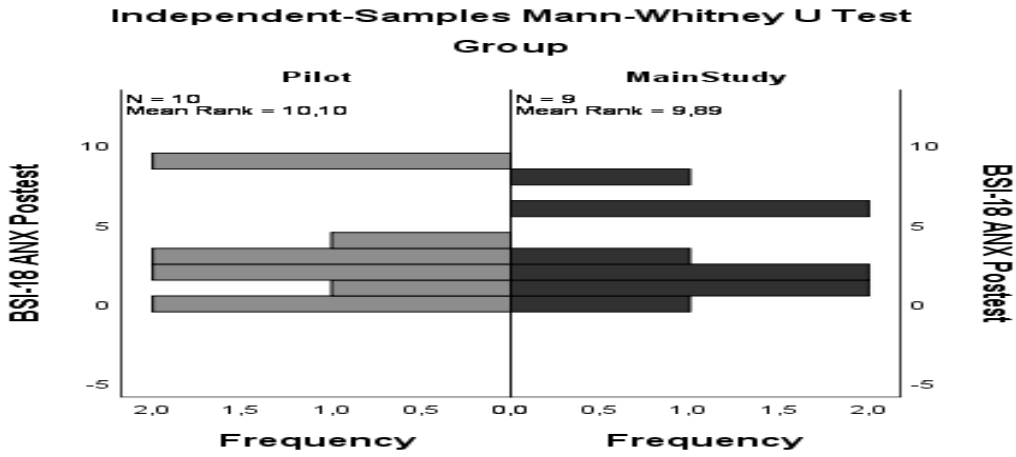


Figure A20.12 BSI-18 (Derogatis, 2001) Anxiety Component Post-test Distribution between Samples

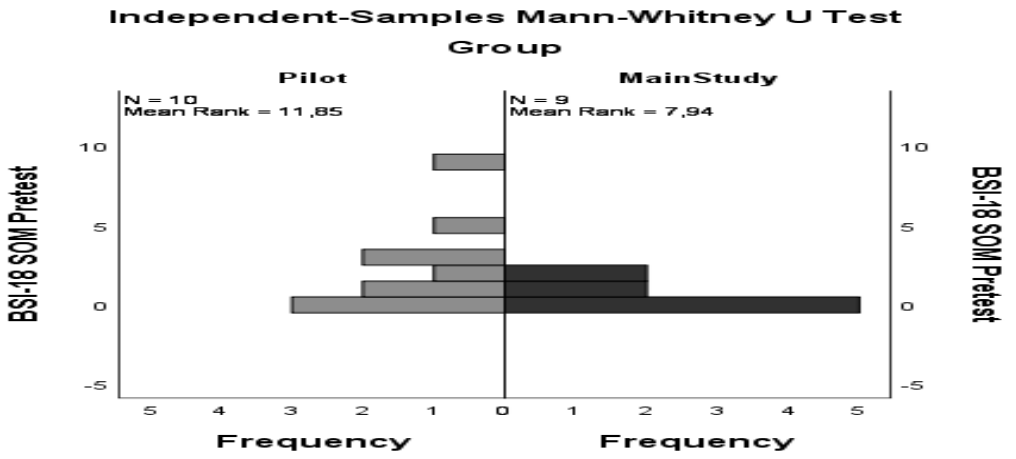


Figure A20.13 BSI-18 (Derogatis, 2001) Somatization Component Pre-test Distribution between Samples

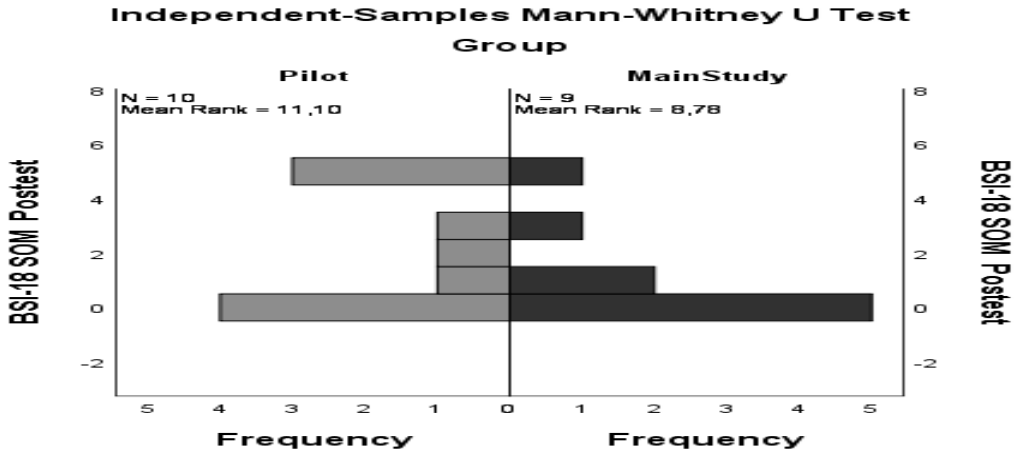


Figure A20.14 BSI-18 (Derogatis, 2001) Somatization Component Post-test Distribution between Samples

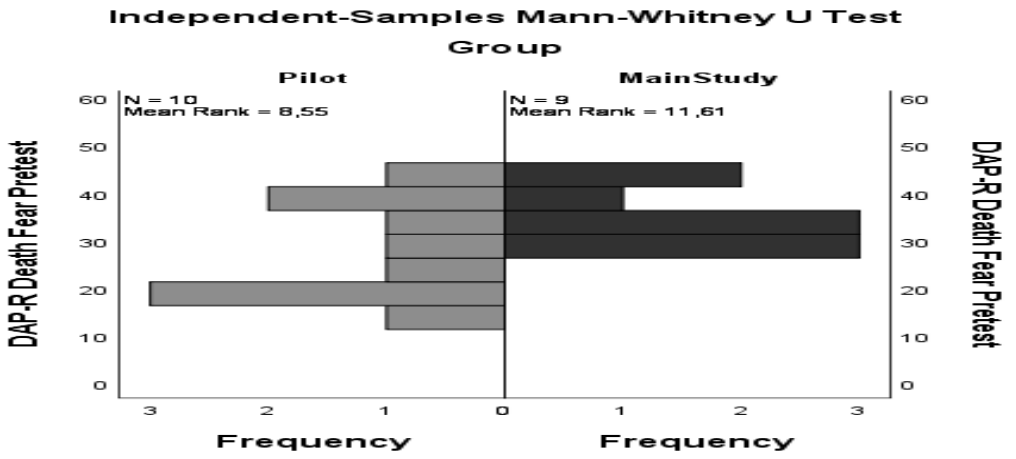


Figure A20.15 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Pre-test Distribution between Samples

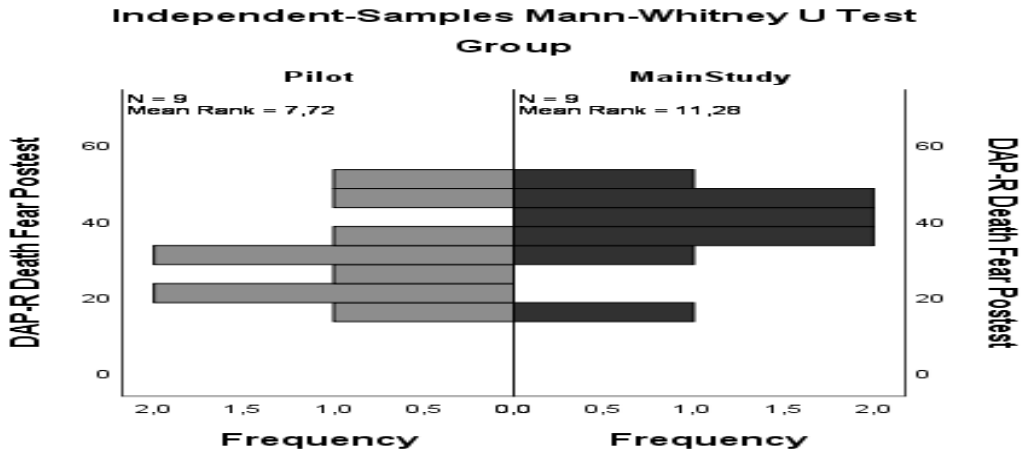


Figure A20.16 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Post-test Distribution between Samples

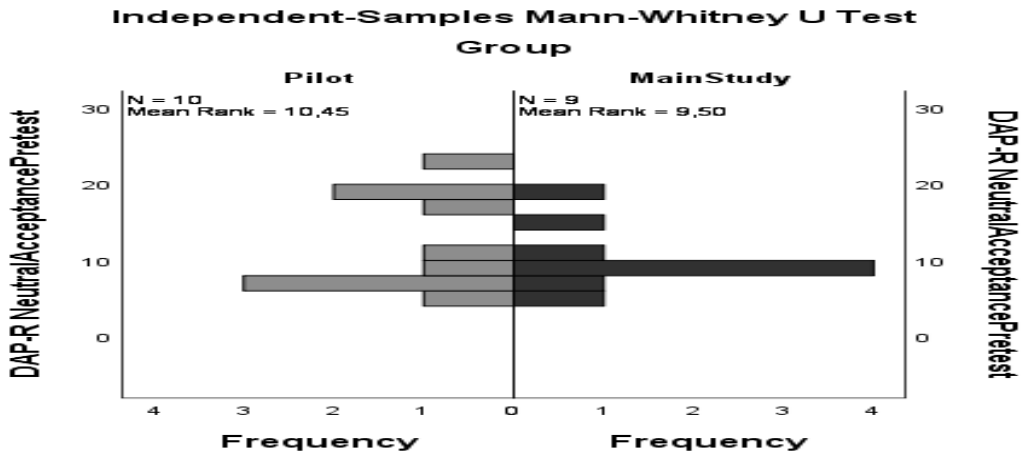


Figure A20.17 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Pre-test Distribution between Samples

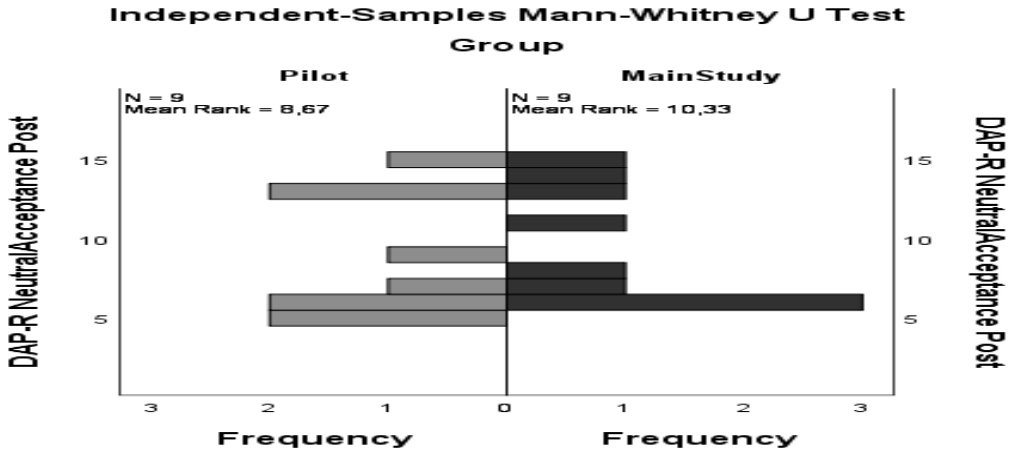


Figure A20.18 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Post-test Distribution between Samples

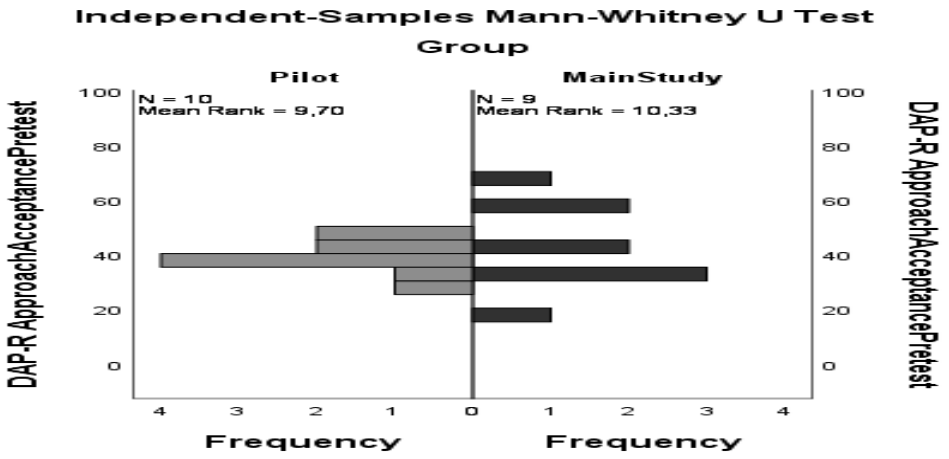


Figure A20.19 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Pre-test Distribution between Samples

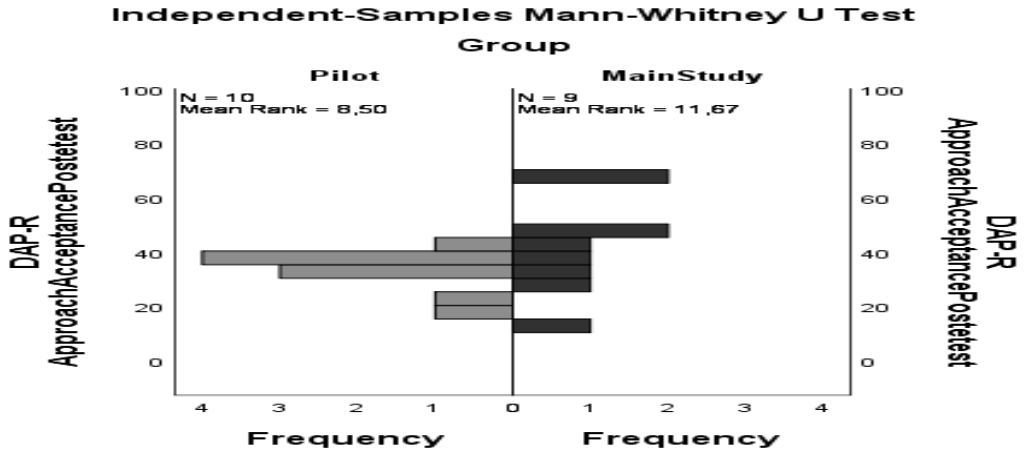


Figure A20.20 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Post-test Distribution between Samples

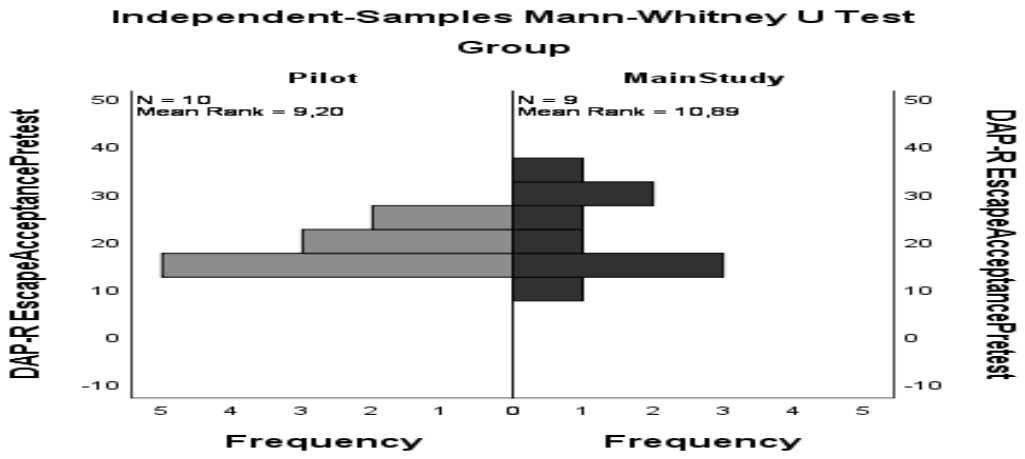


Figure A20.21 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Pre-test Distribution between Samples

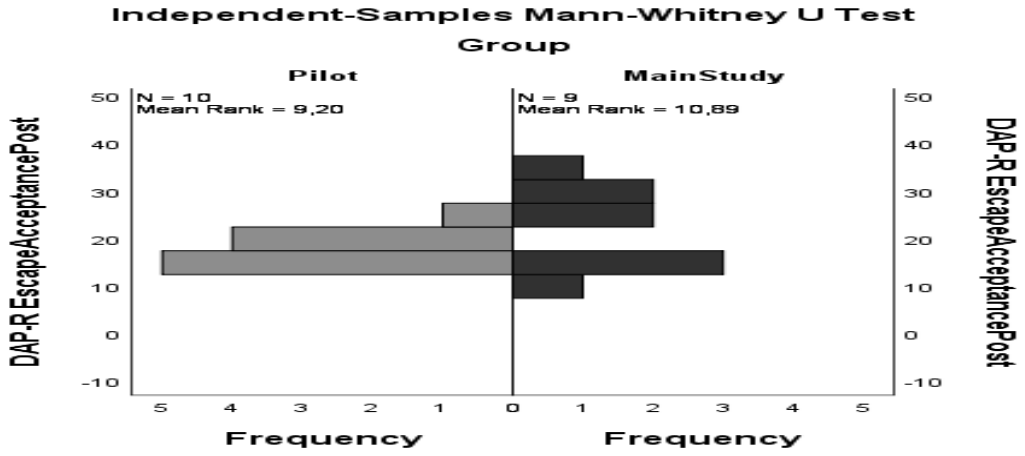


Figure A20.22 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Post-test Distribution between Samples

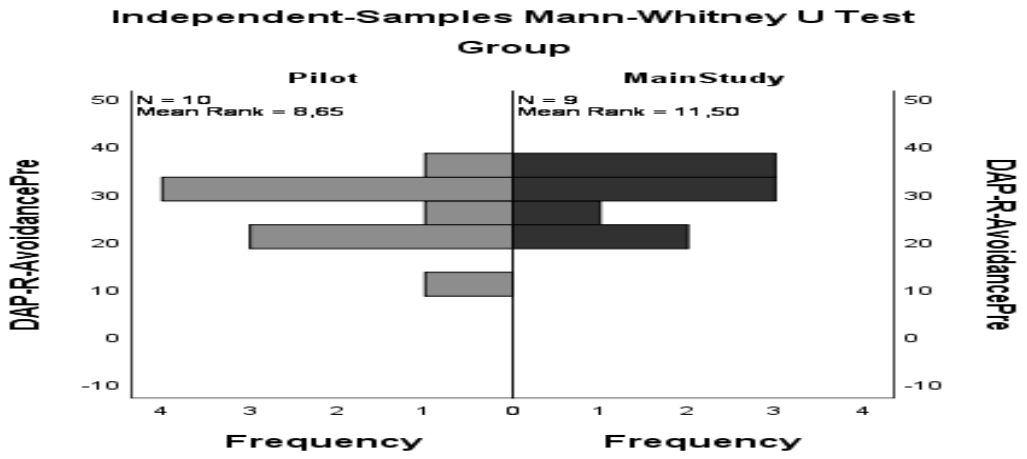


Figure A20.23 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Pre-test Distribution between Samples

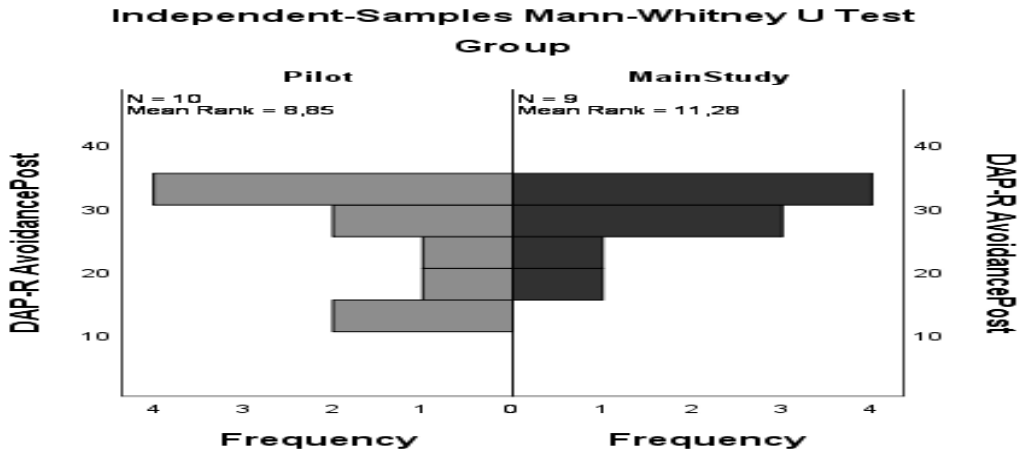


Figure A20.24 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Post-test Distribution between Samples

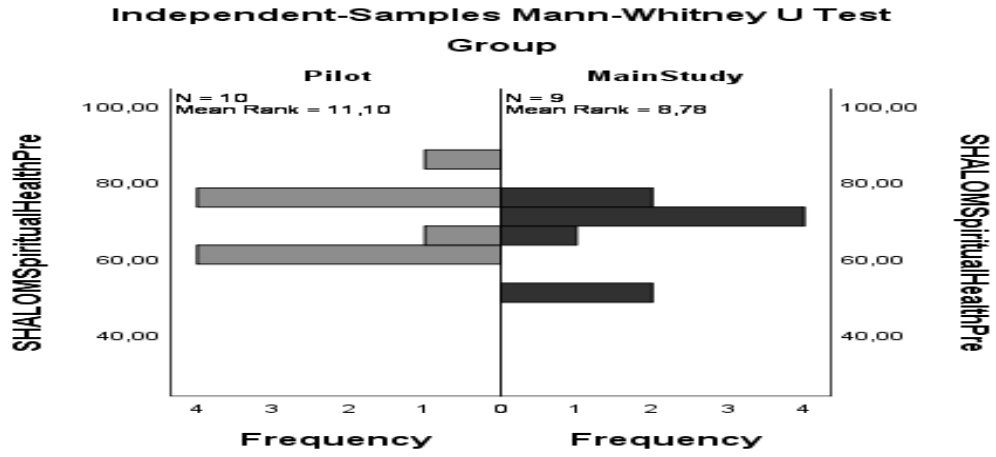


Figure A20.23 SHALOM (Fisher, 2010) Spiritual Health Pre-test Distribution between Samples

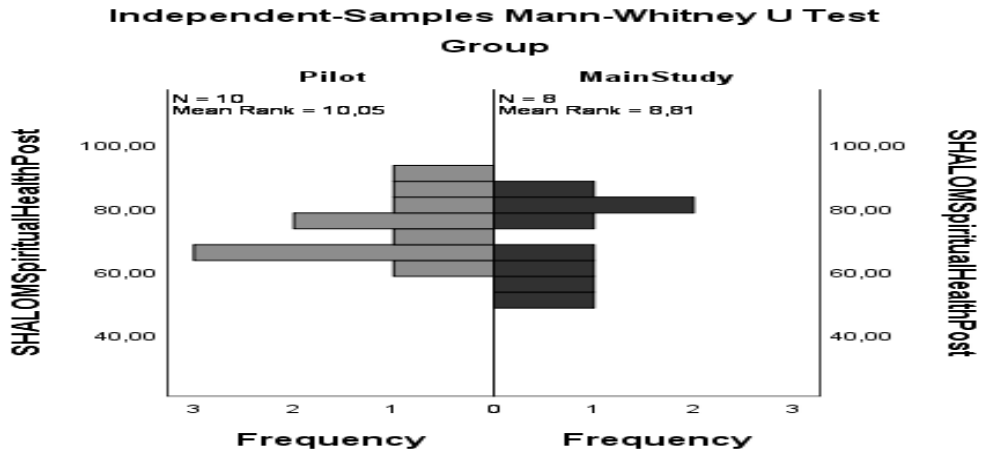


Figure A20.24- SHALOM (Fisher, 2010) Spiritual Health Post-test Distribution between Samples

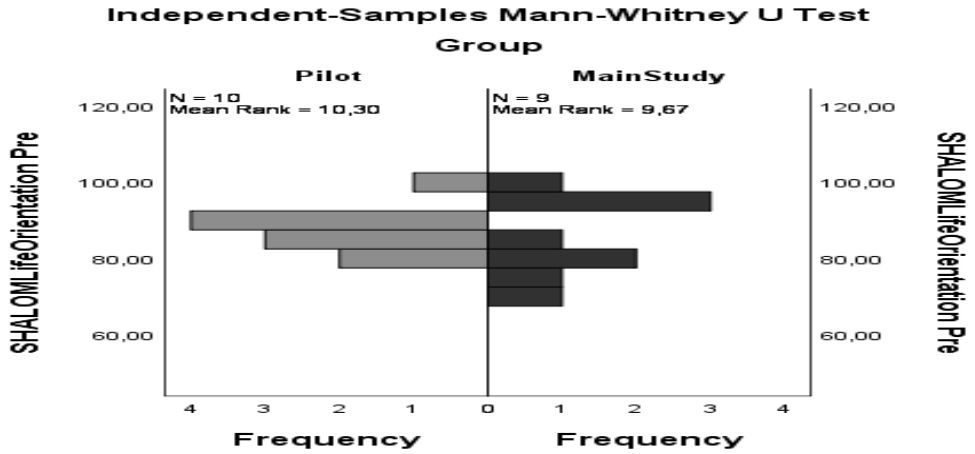


Figure A20.25 SHALOM (Fisher, 2010) Life Orientation Component Pre-test Distribution between Samples

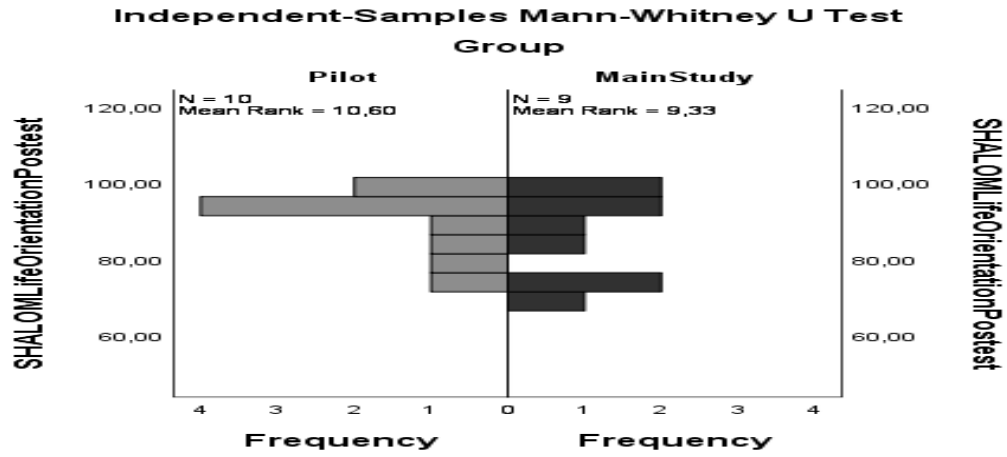


Figure A20.26. SHALOM (Fisher, 2010) Life Orientation Post-test Distribution between Samples

APPENDIX 21

Histograms for Wilcoxon Signed-Rank Test
and remaining distribution charts
for DAP-R and SHALOM
in Chapter V, Sections 5.4.2. to 5.4.4

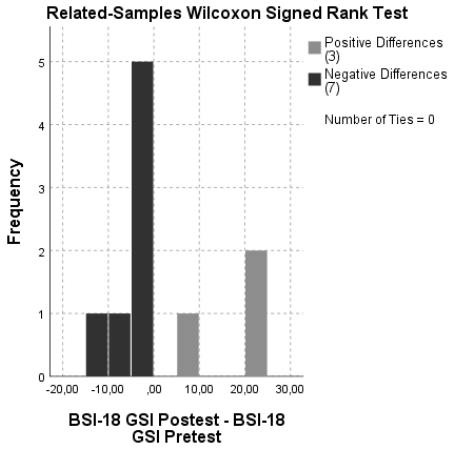


Figure A21.1. BSI (Derogatis, 2001) GSI Component Pre and Post-test Differences between Paired Groups

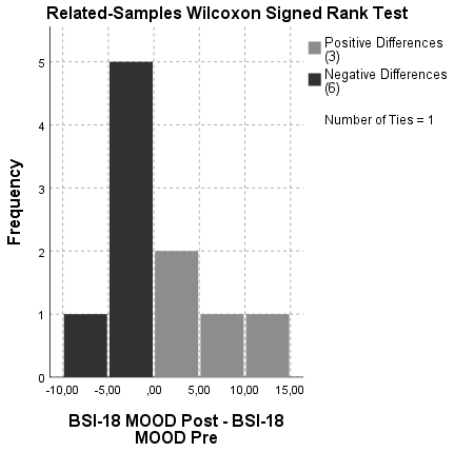


Figure A21.2. BSI (Derogatis, 2001) Mood Component Pre and Post-test Differences between Paired Groups

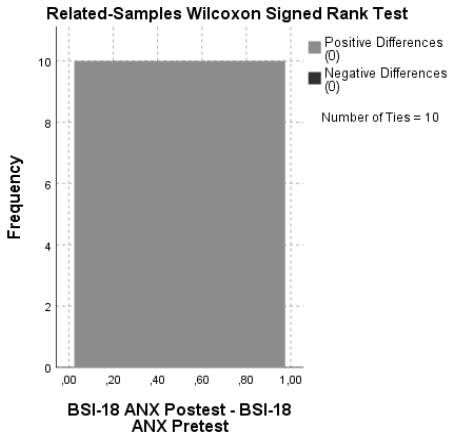


Figure A21.3. BSI (Derogatis, 2001) Anxiety Component Pre and Post-test Differences between Paired Groups

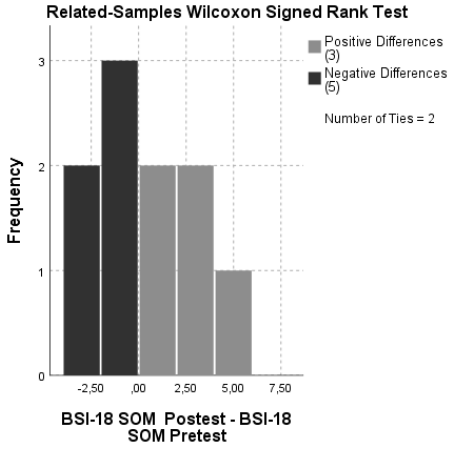


Figure A21.4. BSI (Derogatis, 2001) Somatization Component Pre and Post-test Differences between Paired Groups

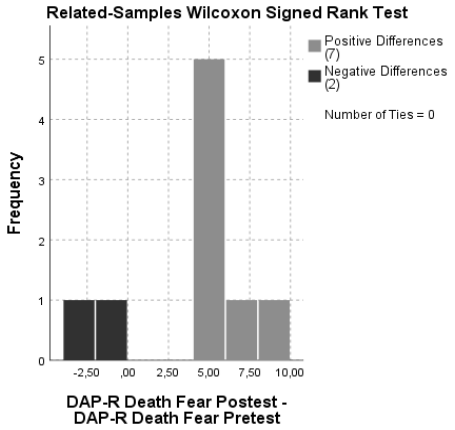


Figure A21.5. DAP-R (Wong, Reker & Gesser, 1994) Death Fear Pre and Post-test Differences between Paired Groups

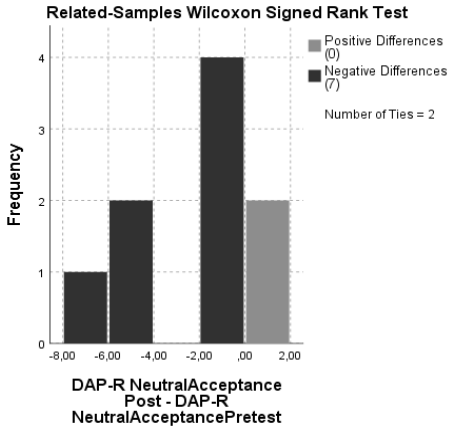


Figure A21.6. DAP-R (Wong, Reker & Gesser, 1994) Neutral Acceptance Pre and Post-test Differences between Paired Groups

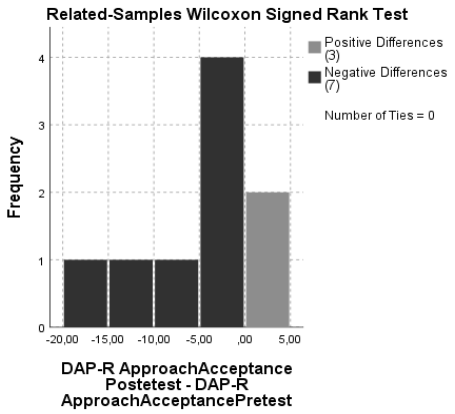


Figure A21.7. DAP-R (Wong, Reker & Gesser, 1994) Approach Acceptance Pre and Post-test Differences between Paired Groups

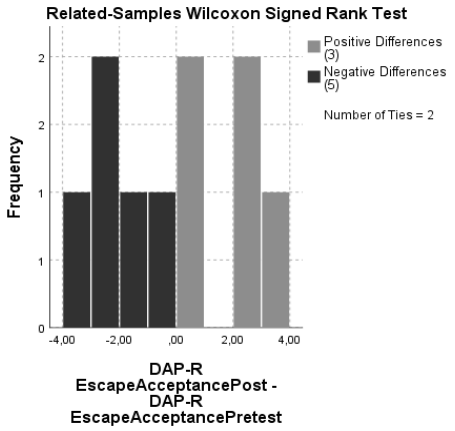


Figure A21.8. DAP-R (Wong, Reker & Gesser, 1994) Escape Acceptance Pre and Post-test Differences between Paired Groups

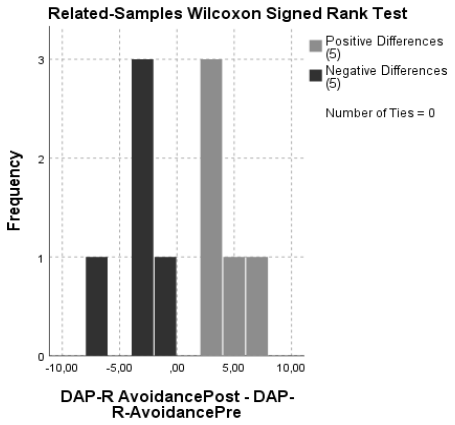


Figure A21.9. DAP-R (Wong, Reker & Gesser, 1994) Avoidance Component Pre and Post-test Differences between Paired Groups

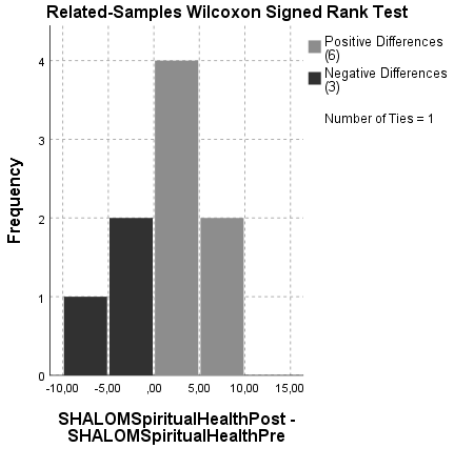


Figure A21.10. SHALOM (Fisher, 2010) Spiritual Health Component Pre and Post-test Differences between Paired Groups

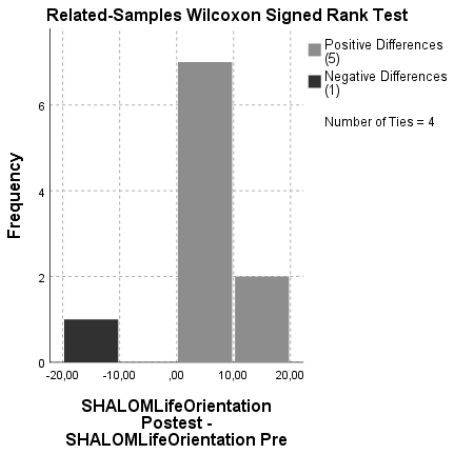


Figure A21.11. SHALOM (Fisher, 2010) Life Orientation Component Pre and Post-test Differences between Paired Groups

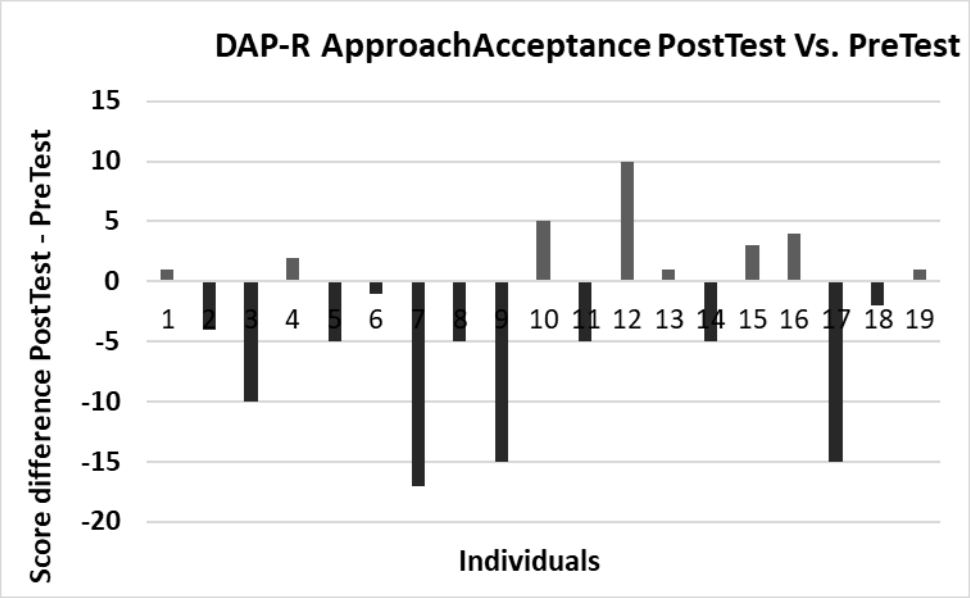


Figure A21.12. Differences between pre and post-test distributions in the Approach Acceptance component of DAP-R (Wong, Reker & Gesser, 1994) for Study I

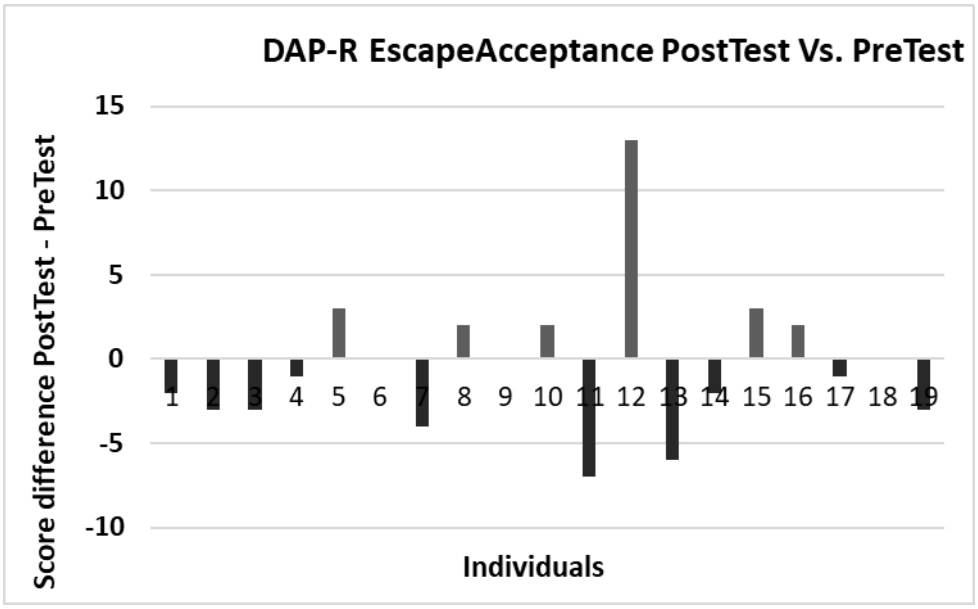


Figure A21.13. Differences between pre and post-test distributions in the Escape Acceptance component of DAP-R (Wong, Reker & Gesser, 1994) for Study I

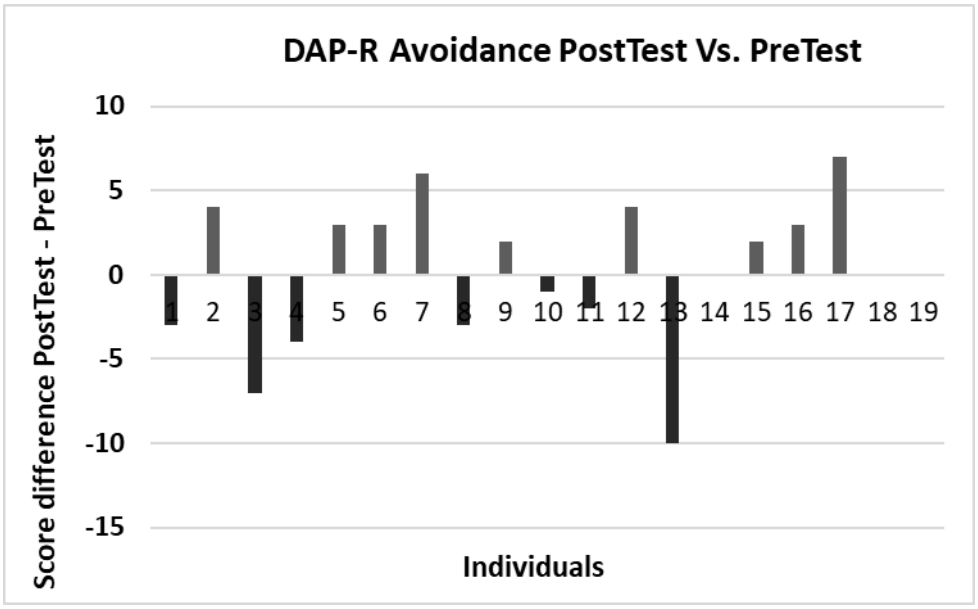


Figure A21.14. Differences between pre and post-test distributions in the Avoidance component of DAP-R (Wong, Reker & Gesser, 1994) for Study I

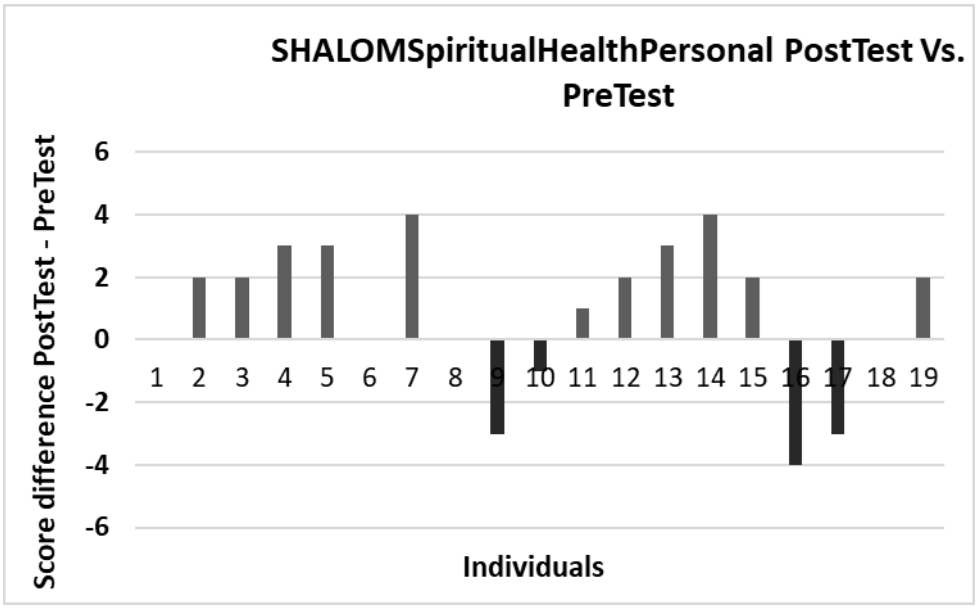


Figure A21.15. Differences between pre and post-test distributions in the ~~Personal~~ dimension of Spiritual Health of SHALOM (Fisher, 2010) for Study I

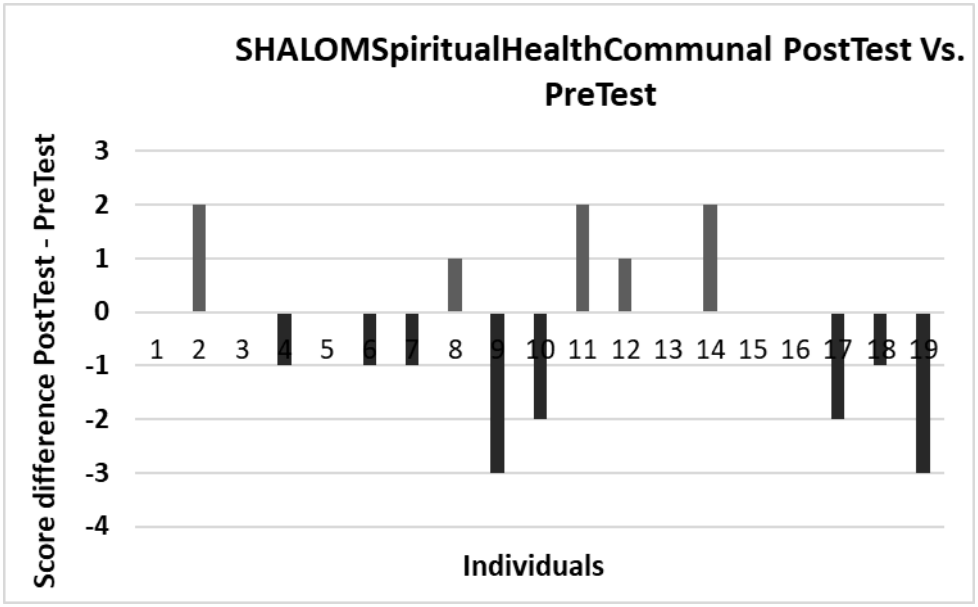


Figure A21.16. Differences between pre and post-test distributions in the Communal dimension of Spiritual Health of SHALOM (Fisher, 2010) for Study I

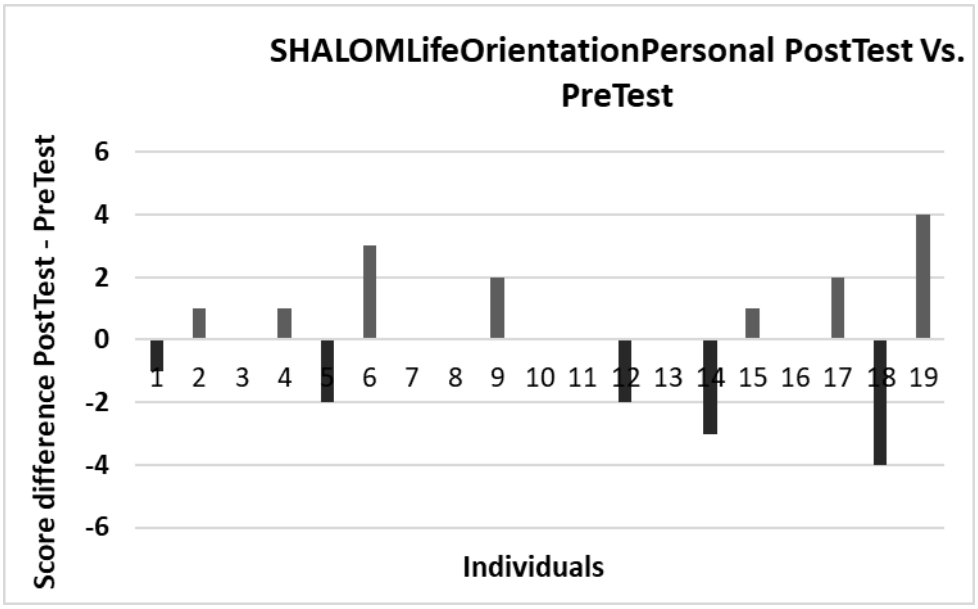


Figure A21.17. Differences between pre and post-test distributions in the Personal dimension of Life Orientation of SHALOM (Fisher, 2010) for Study I

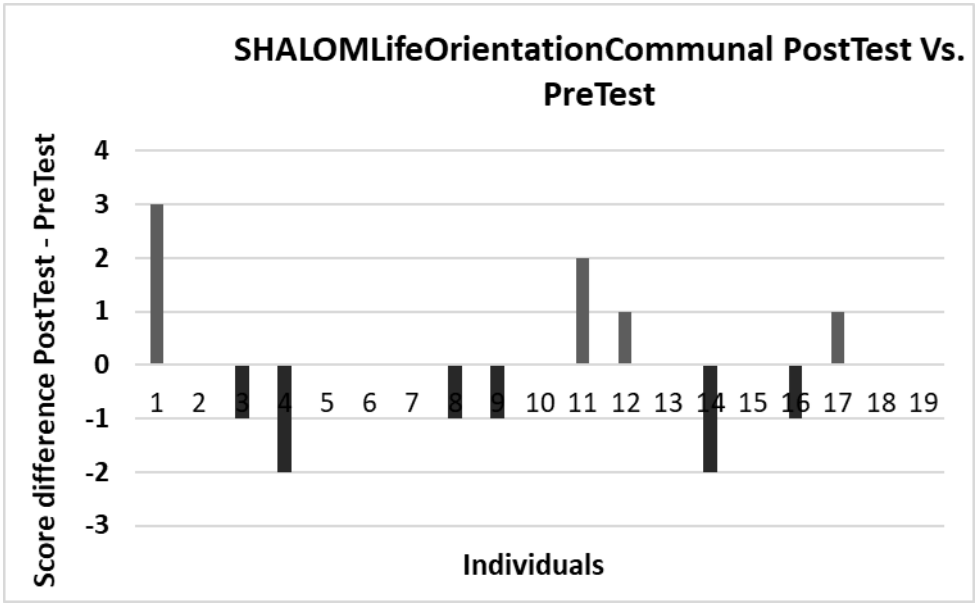


Figure A21.18. Differences between pre and post-test distributions in the Communal dimension of Life Orientation of SHALOM (Fisher, 2010) for Study I

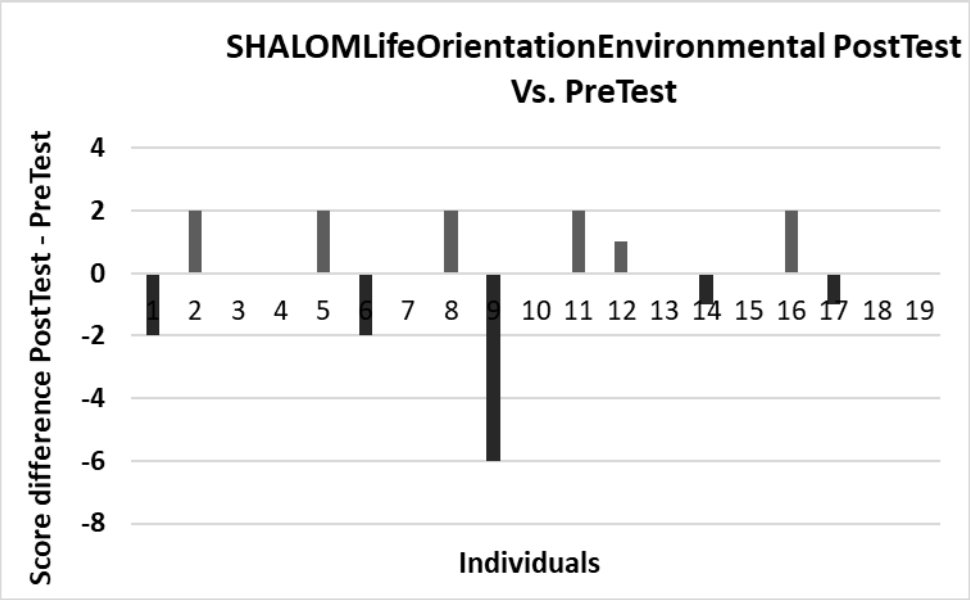


Figure A21.19. Differences between pre and post-test distributions in the Environmental dimension of Life Orientation of SHALOM (Fisher, 2010) for Study I

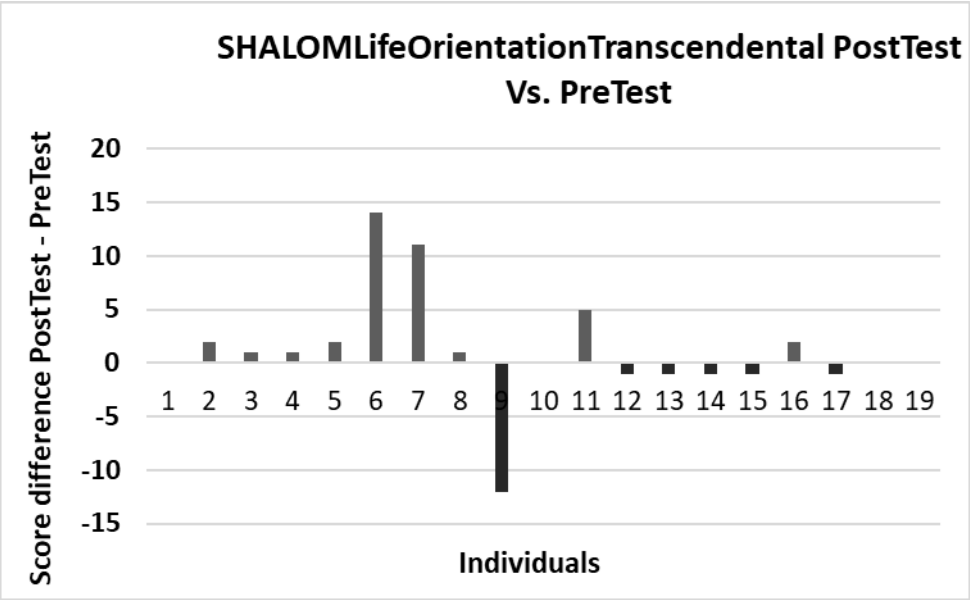


Figure A21.20. Differences between pre and post-test distributions in the Transcendental dimension of Life Orientation of SHALOM (Fisher, 2010) for Study I

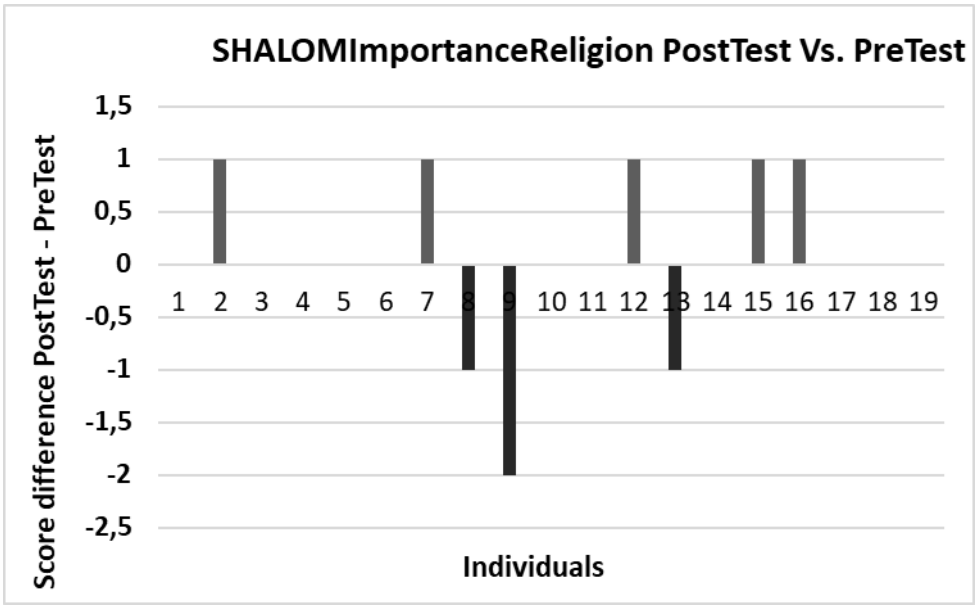


Figure A21.21. Differences between pre and post-test distributions in the Importance of Religion component of SHALOM (Fisher, 2010) for Study I

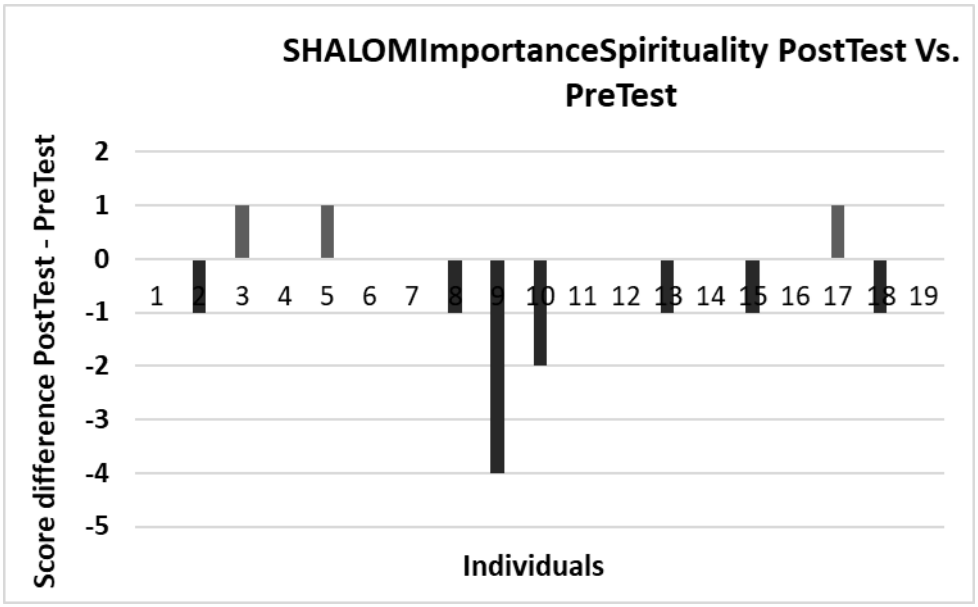


Figure A21.22. Differences between pre and post-test distributions in the Importance of Religion component of SHALOM (Fisher, 2010) for Study I

APPENDIX 22

Box Plots for
Shapiro Wilk Test
in Chapter VIII, Section 8.7.2

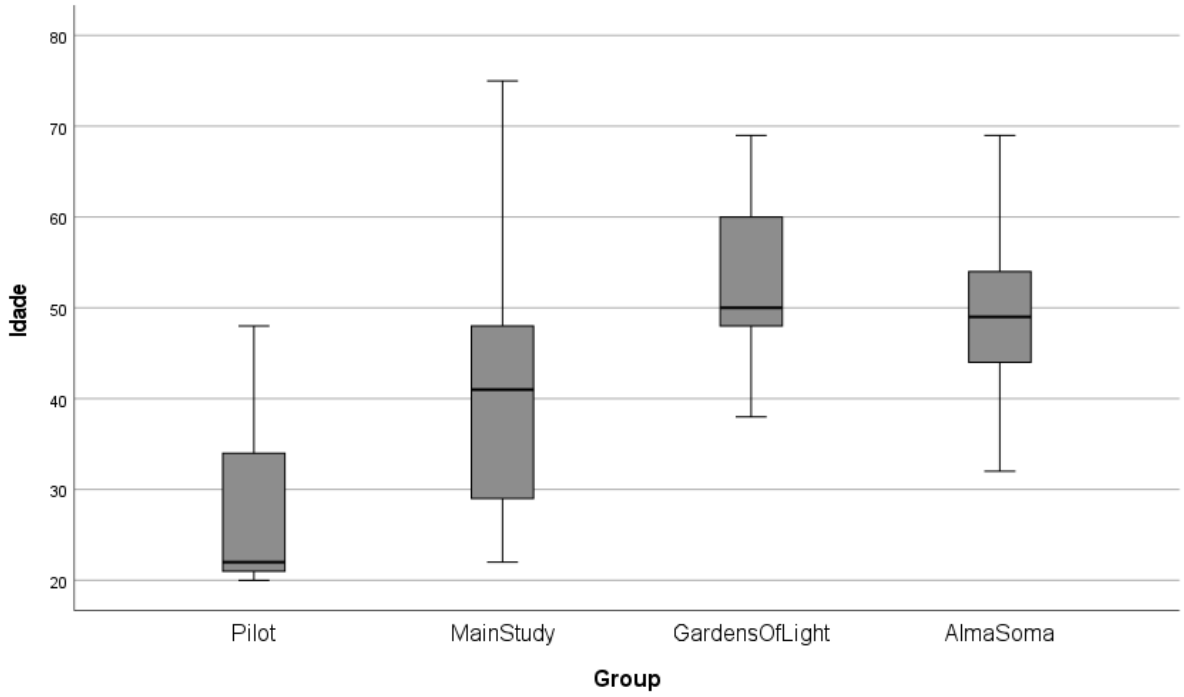


Figure A22.1. Age Distribution in All Groups

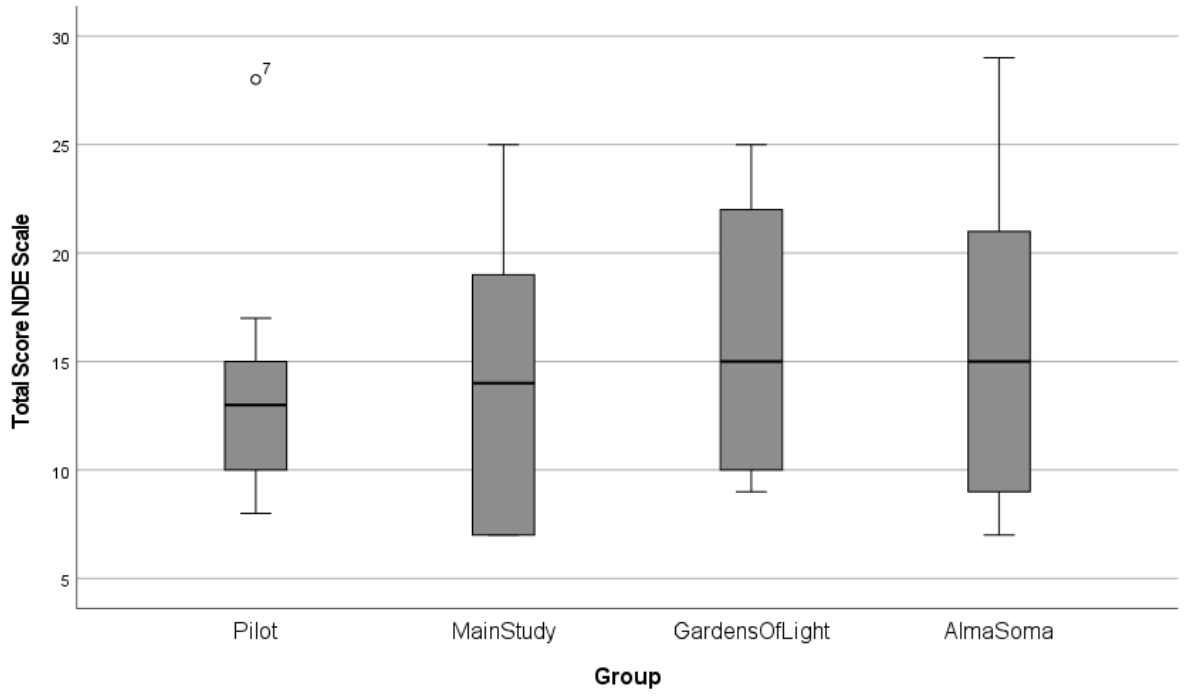


Figure A22.2. NDE Scale (Greyson, 1983) Distribution in Pilot Sample

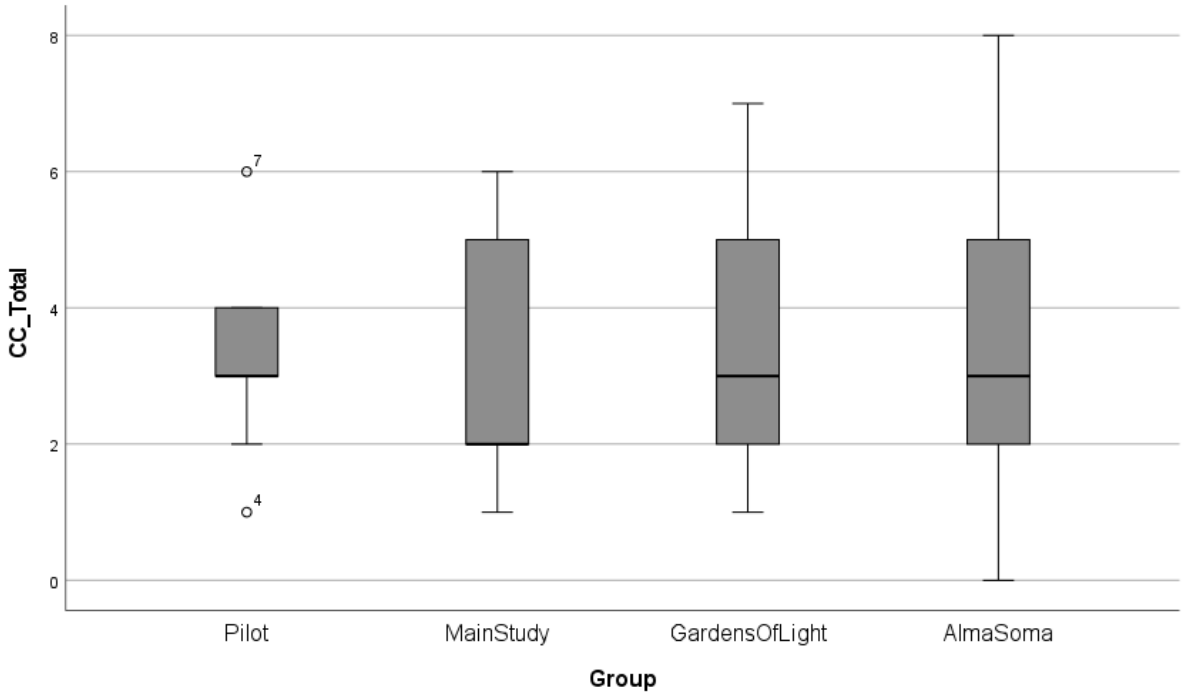


Figure A22.3. Cognitive Component of the NDE Scale (Greyson, 1983) Distribution in All Groups

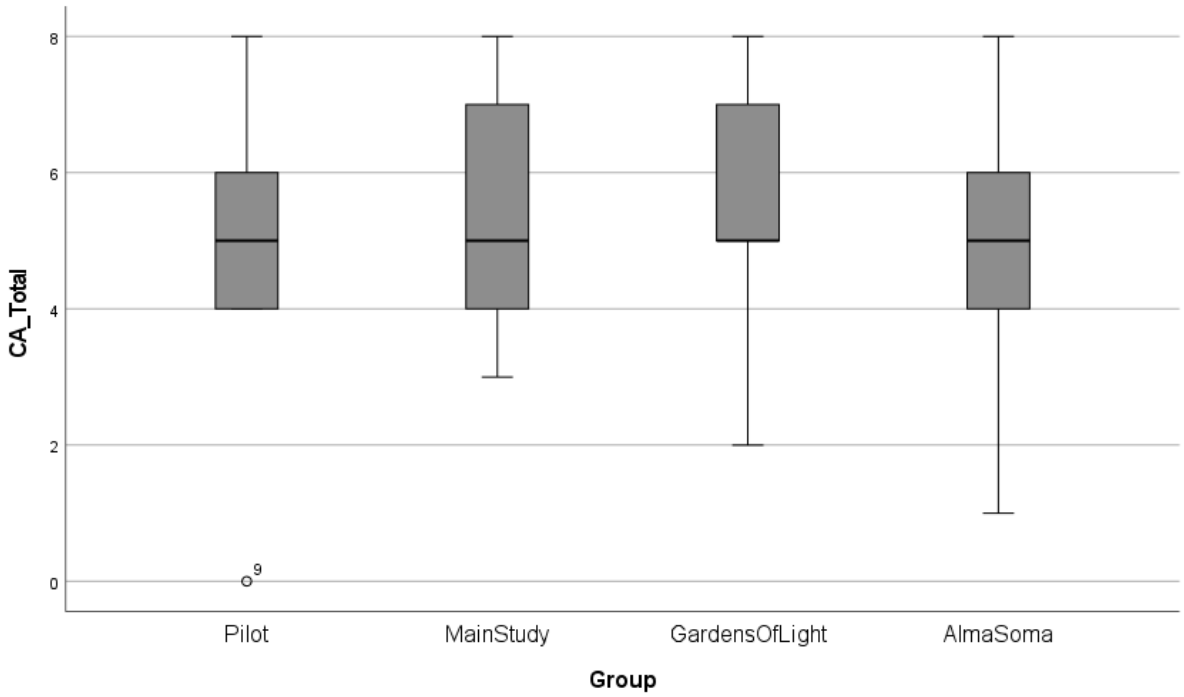


Figure A22.4. NDE Scale (Greyson, 1983) Affective Component Distribution in All Groups

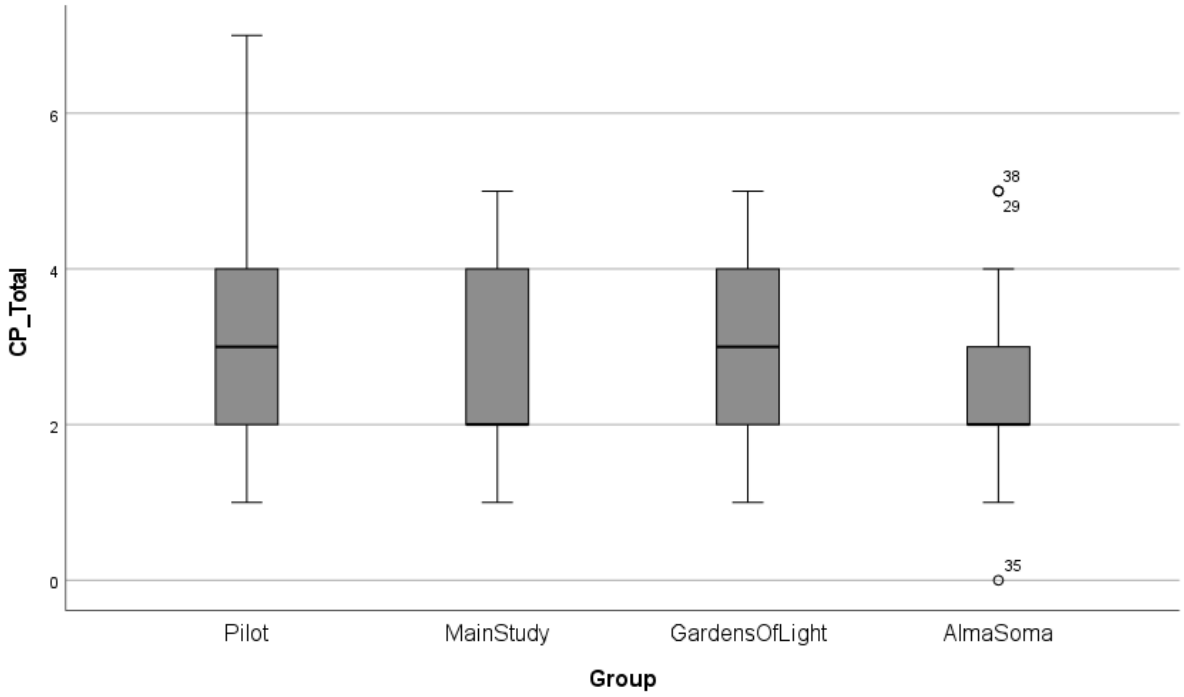


Figure A22.5. NDE Scale (Greyson, 1983) Paranormal Component Distribution in All Groups

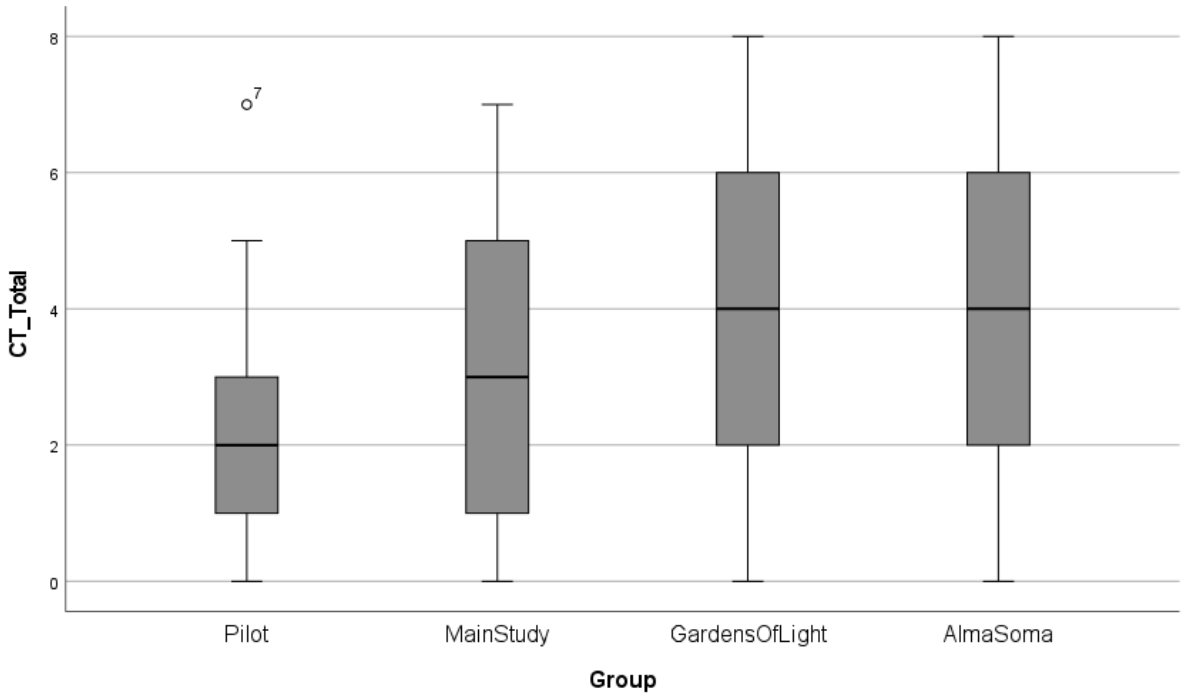


Figure A22.6. NDE Scale (Greyson, 1983) Transcendental Component Distribution in All Groups

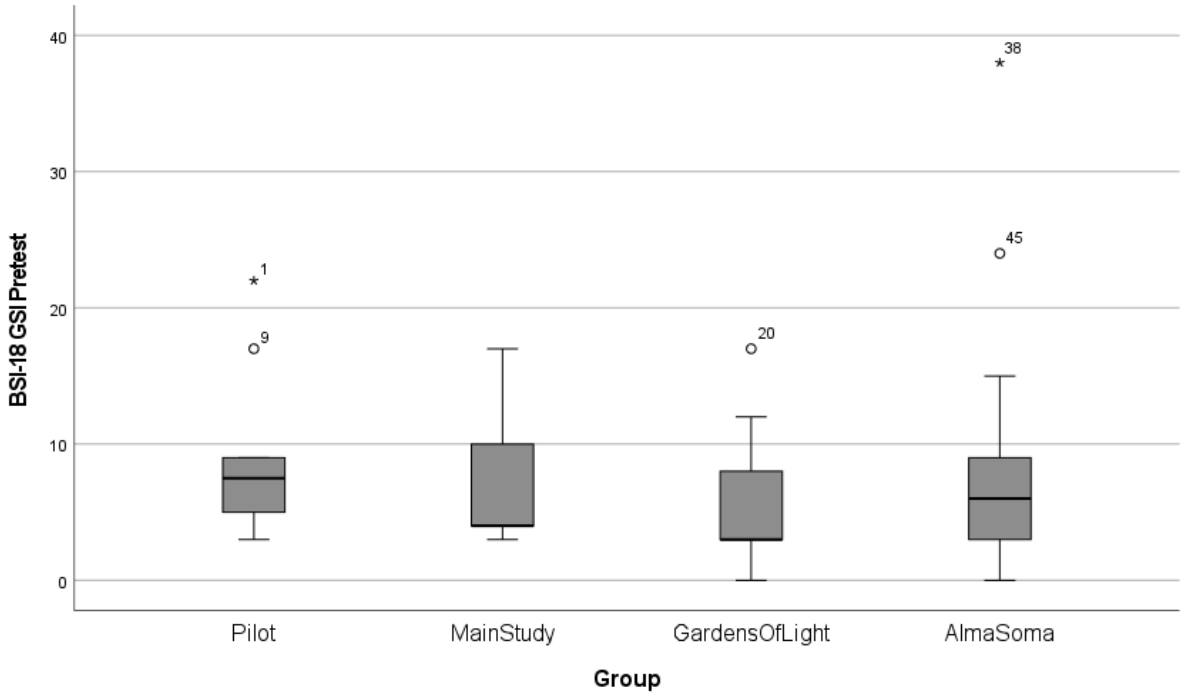


Figure A22.7 BSI-18 (Derogatis, 2001) GSI Pre-test Distribution in All Groups

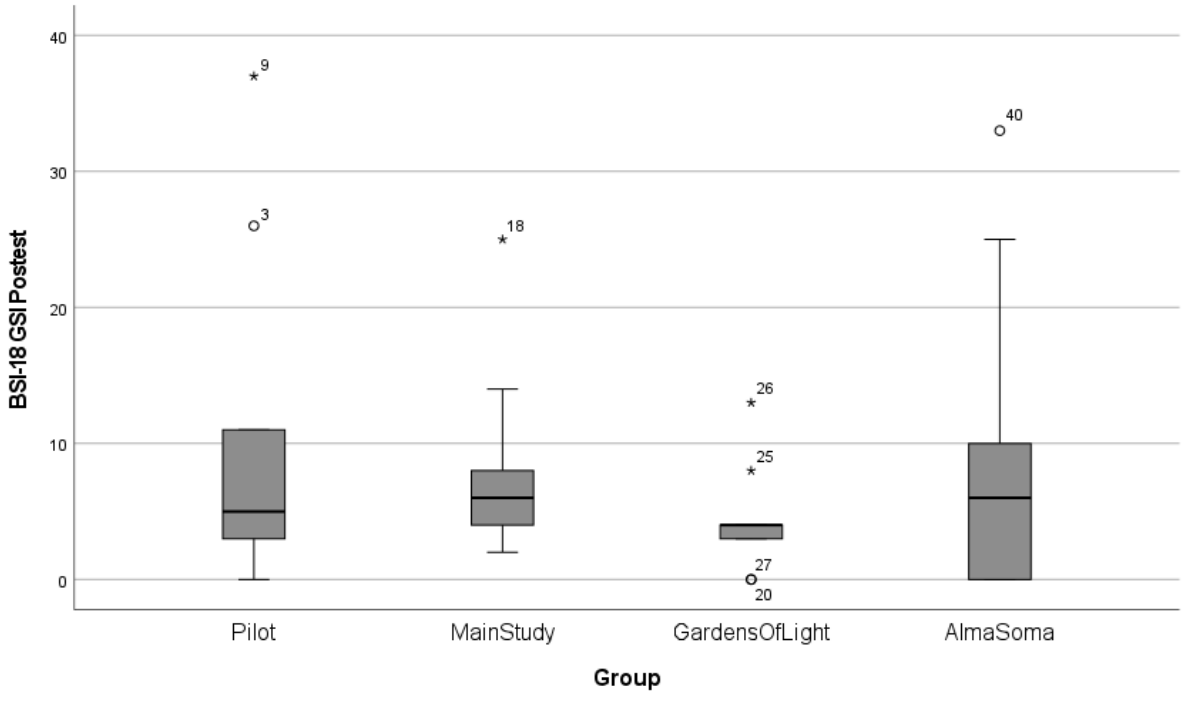


Figure A22.8 BSI-18 (Derogatis, 2001) GSI Post-test Distribution in All Groups

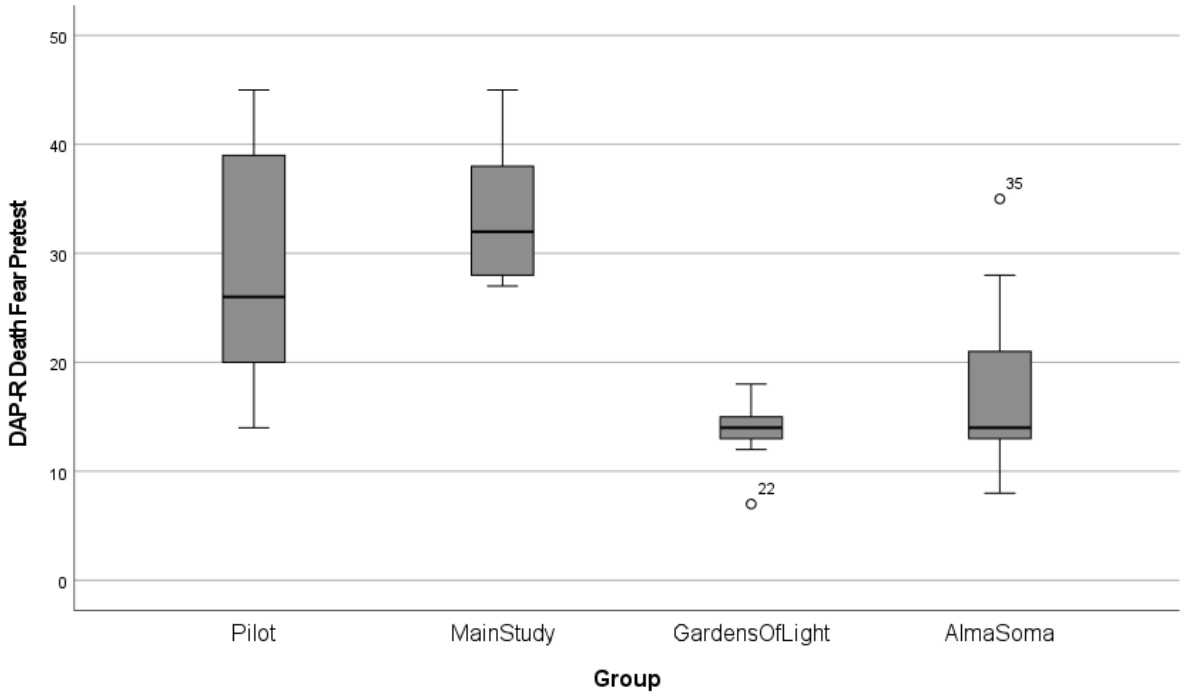


Figure A22.9 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Pre-test Distribution in All Groups

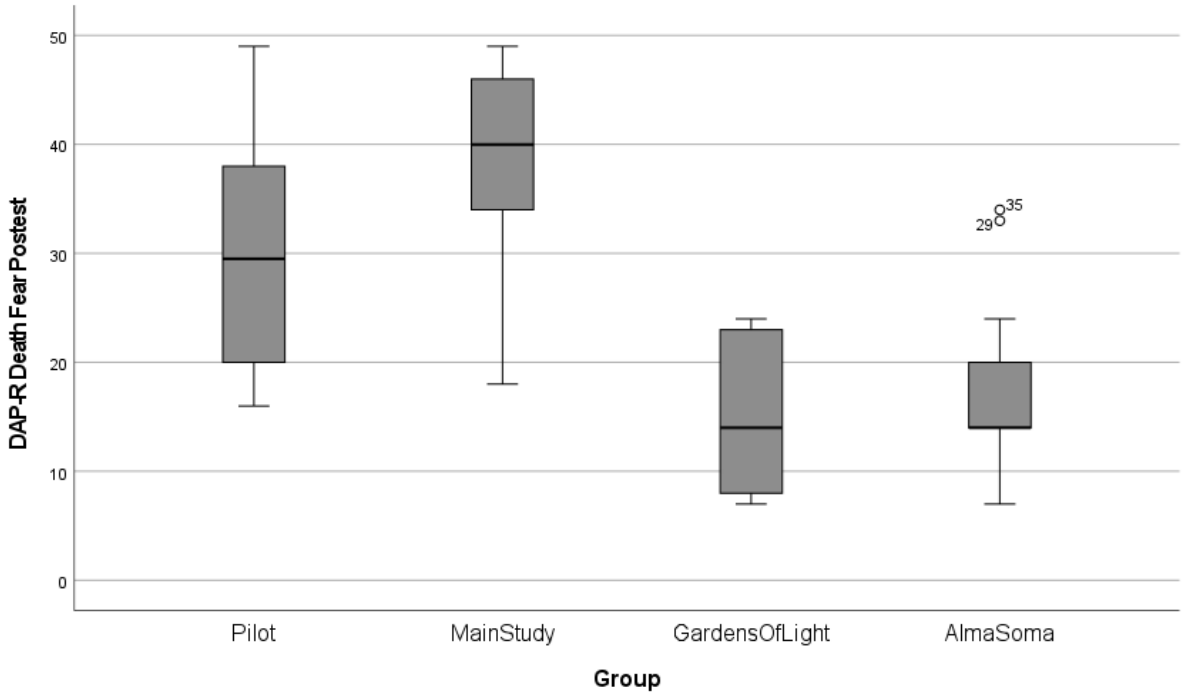


Figure A22.10 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Post-test Distribution in All Groups

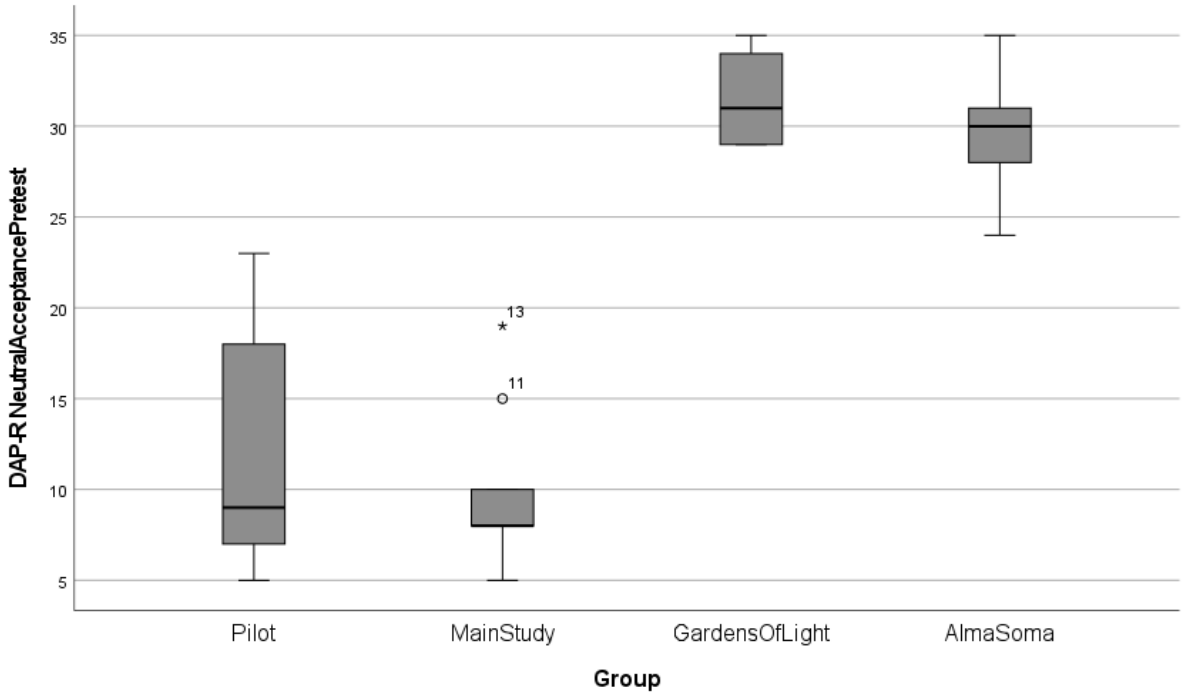


Figure A22.11 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Pre-test Distribution in All Groups

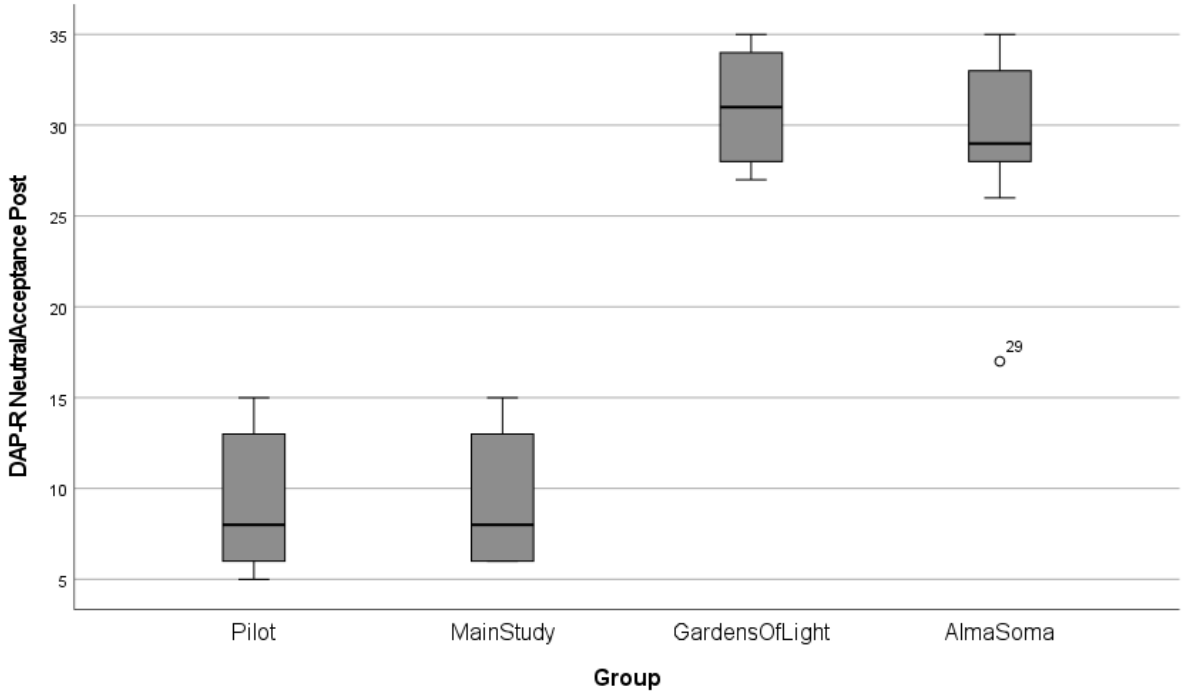


Figure A22.12 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Post-test Distribution in All Groups

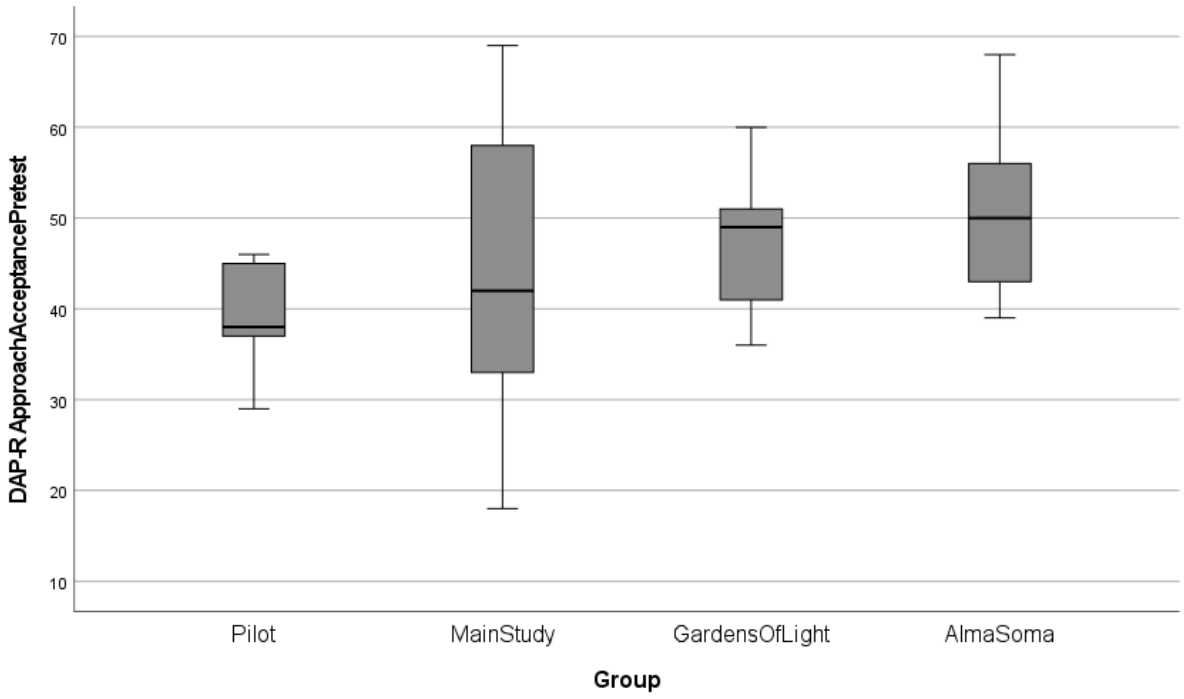


Figure A22.13 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Pre-test Distribution in All Groups

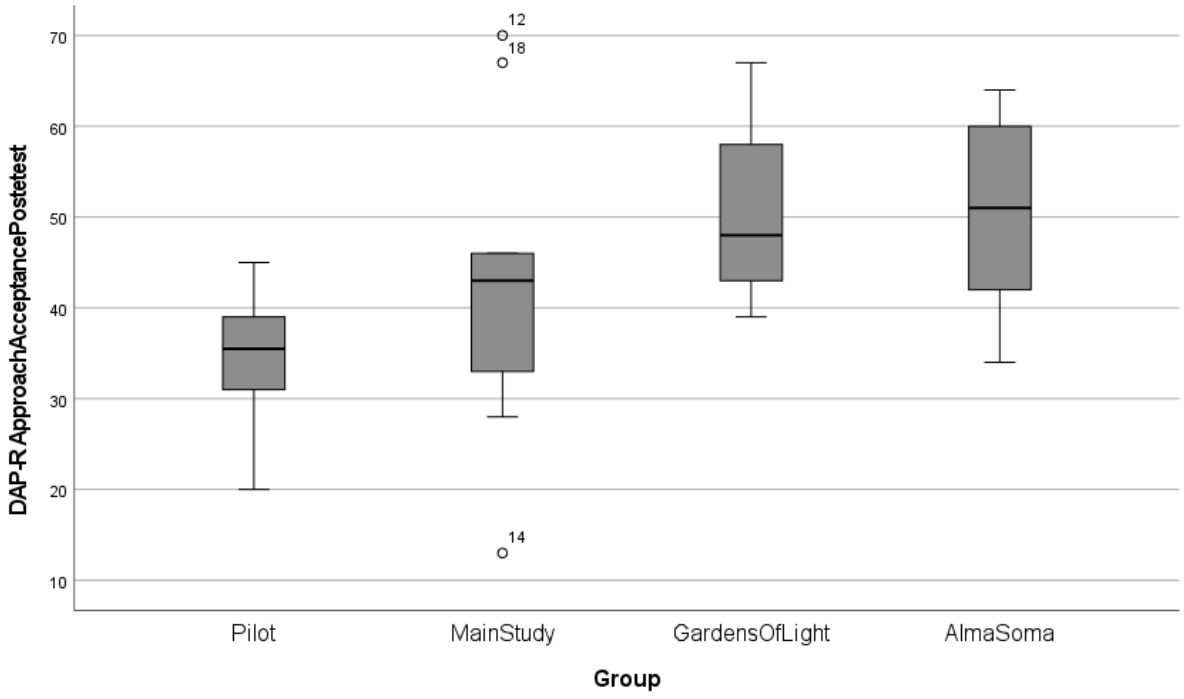


Figure A22.14 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Post-test Distribution in All Groups

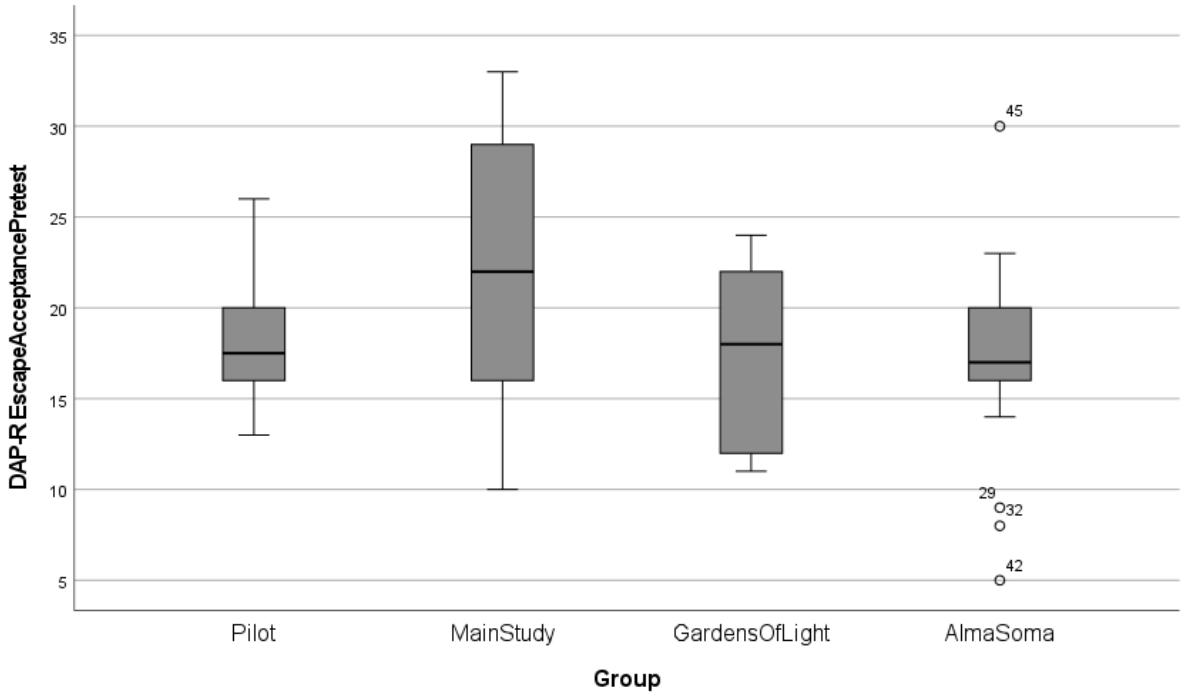


Figure A22.15 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Pre-test Distribution in All Groups

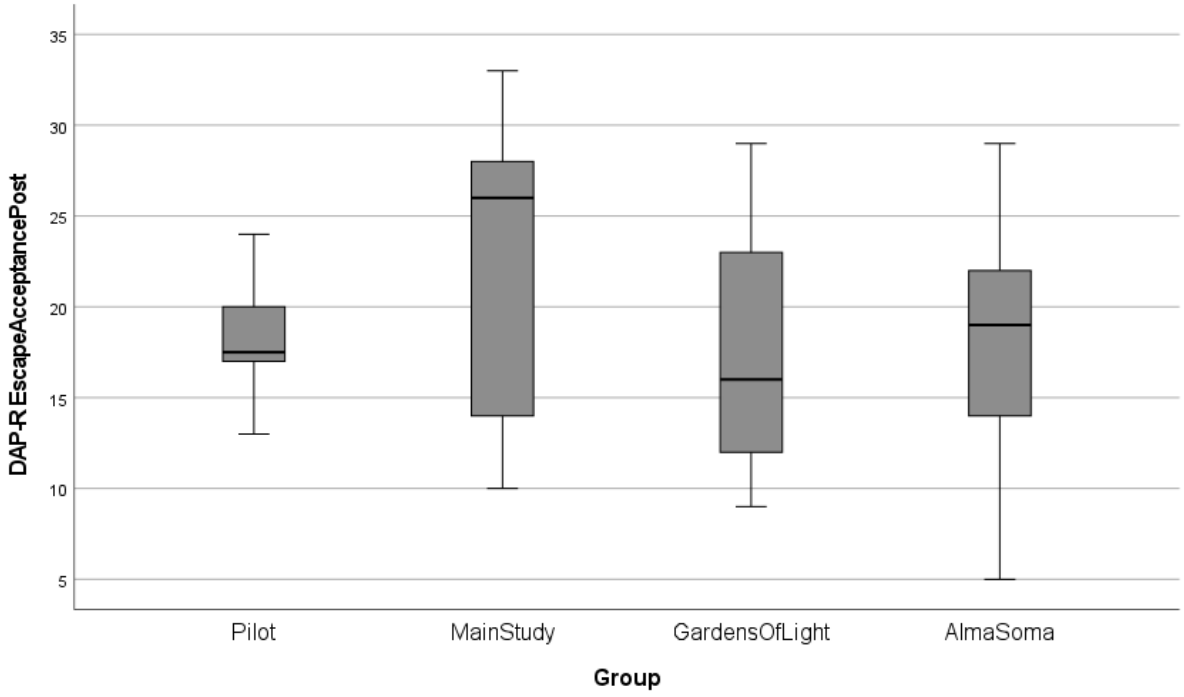


Figure A22.16 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Post-test Distribution in All Groups

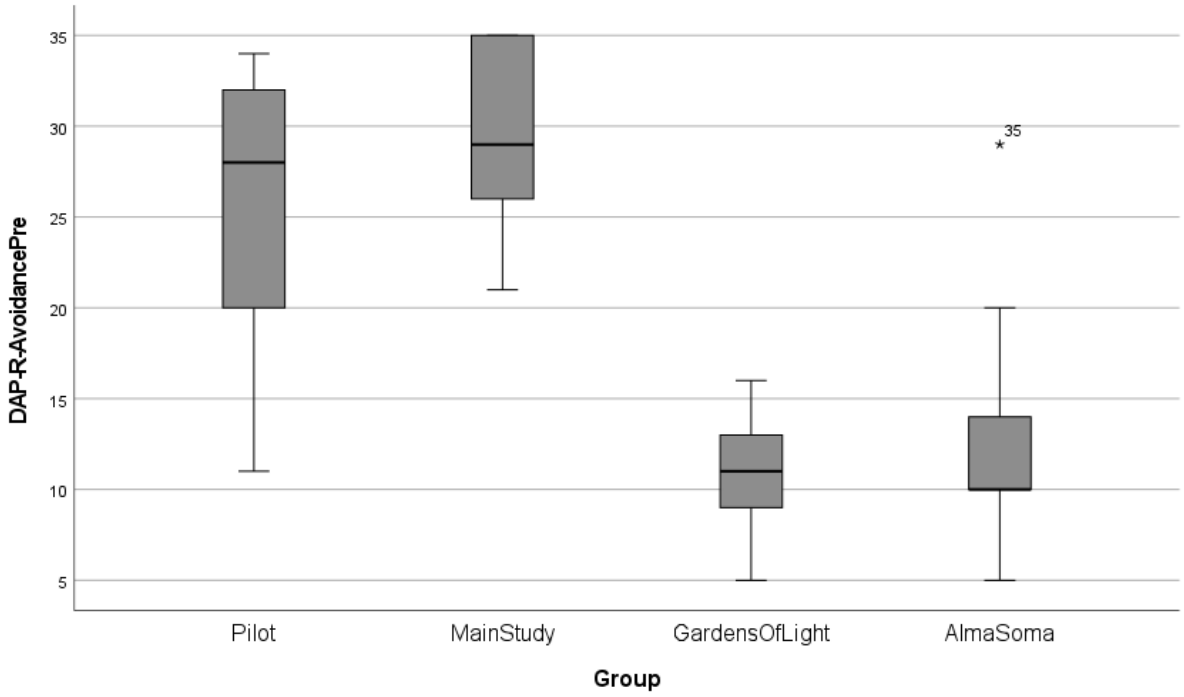


Figure A22.17 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Pre-test Distribution in All Groups

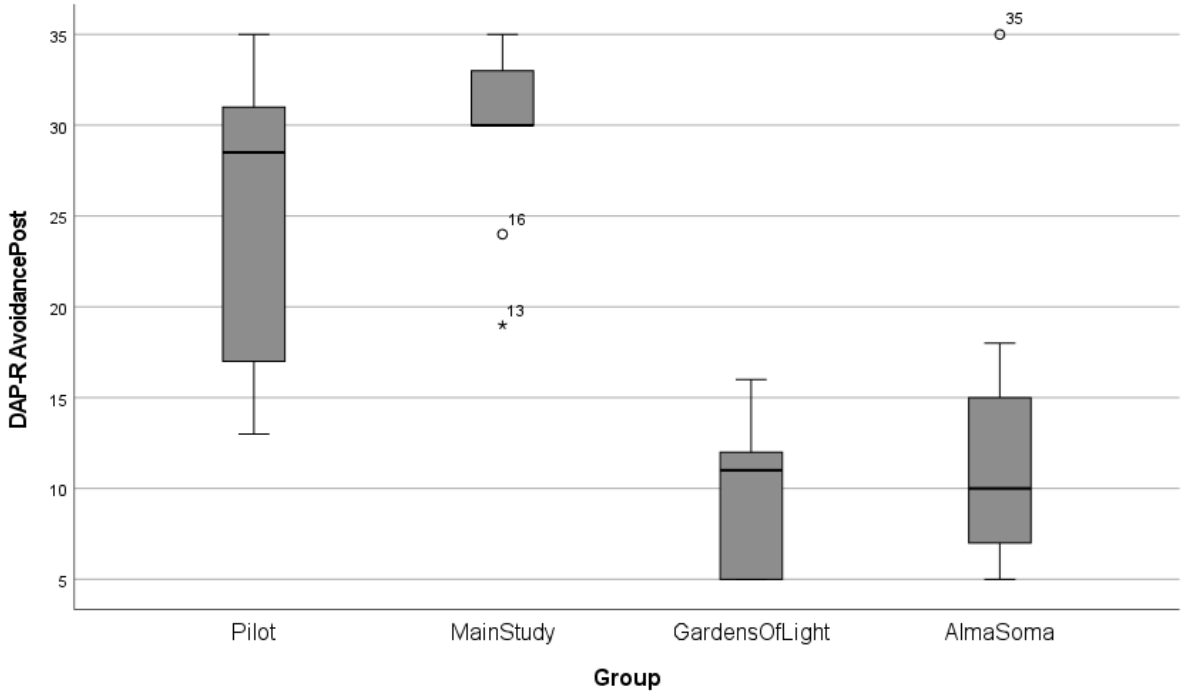


Figure A22.18 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Post-test Distribution in All Groups

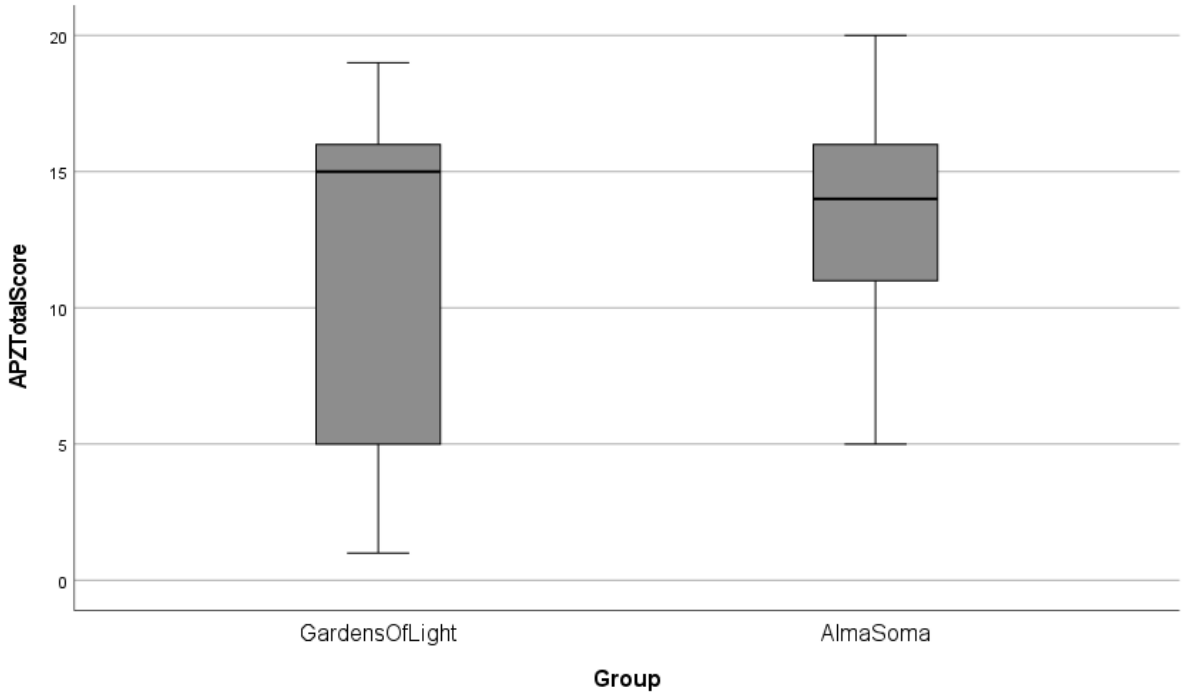


Figure A22.19 APZ Questionnaire (Dittrich, 1998) Total Score in All Groups

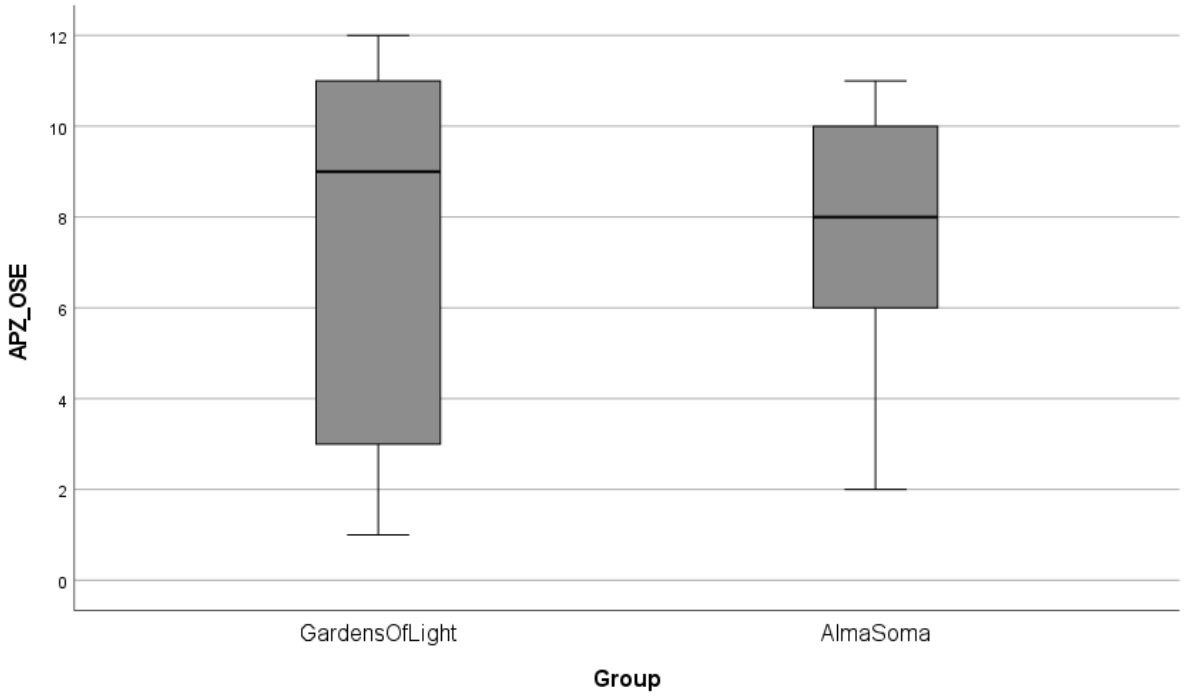


Figure A22.20 APZ Questionnaire (Dittrich, 1998) OSE Score in All Groups

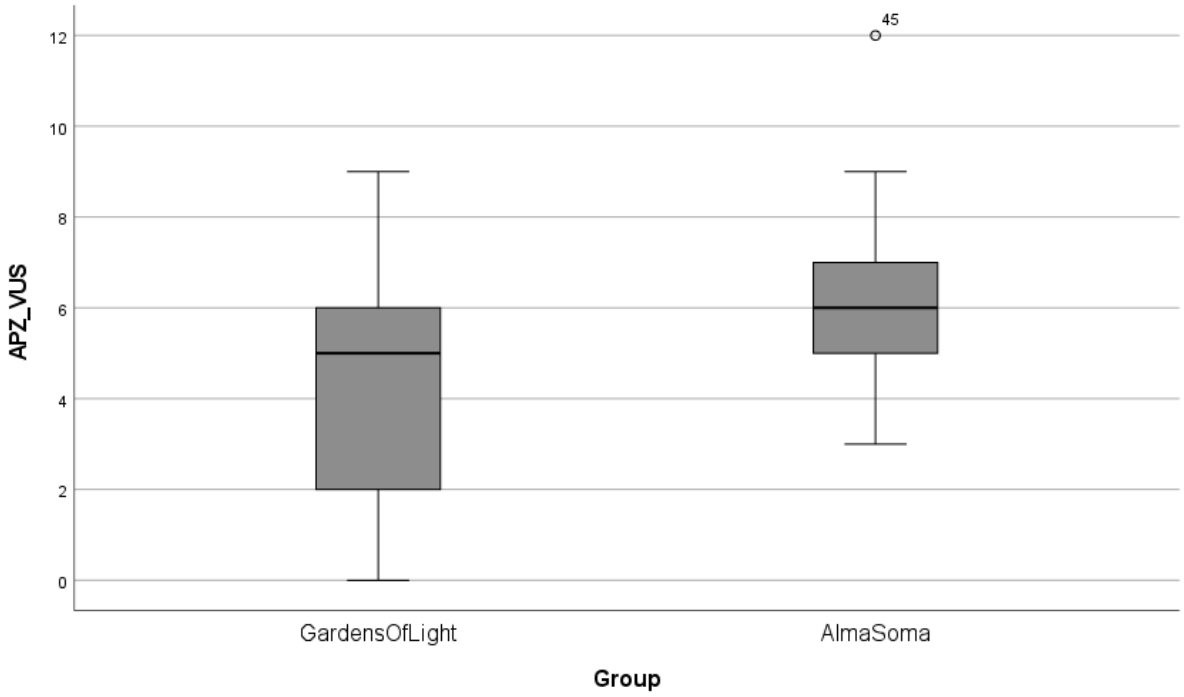


Figure A22.21 APZ Questionnaire (Dittrich, 1998) VUS Score in All Groups

APPENDIX 23

(Histograms for Mann-Whitney
in Chapter VIII, Section 8.7.2)

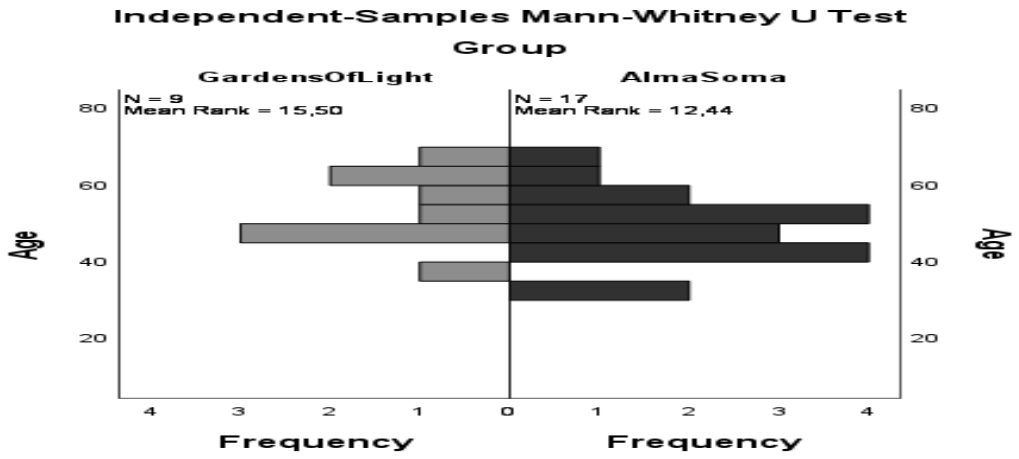


Figure A23.1 Age Distribution between Independent Samples

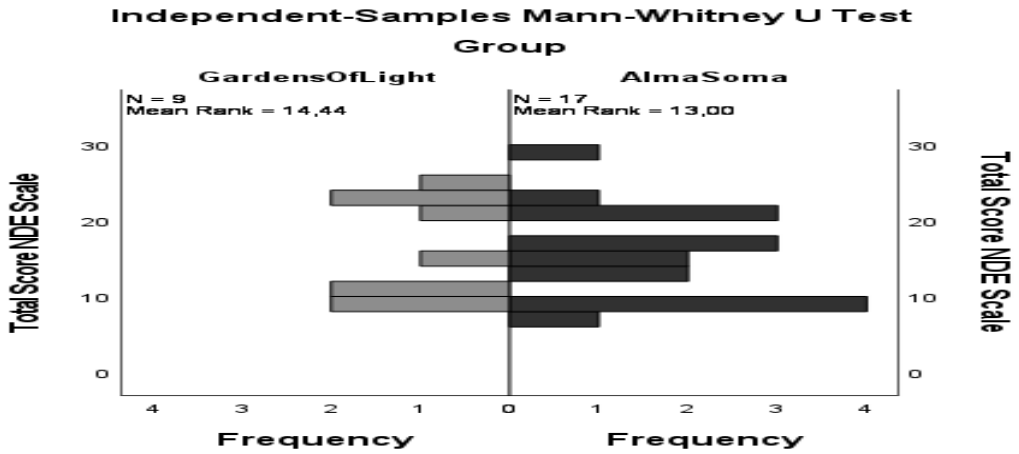


Figure A23.02 NDE Scale (Greyson, 1983) Total Score Distribution between Samples

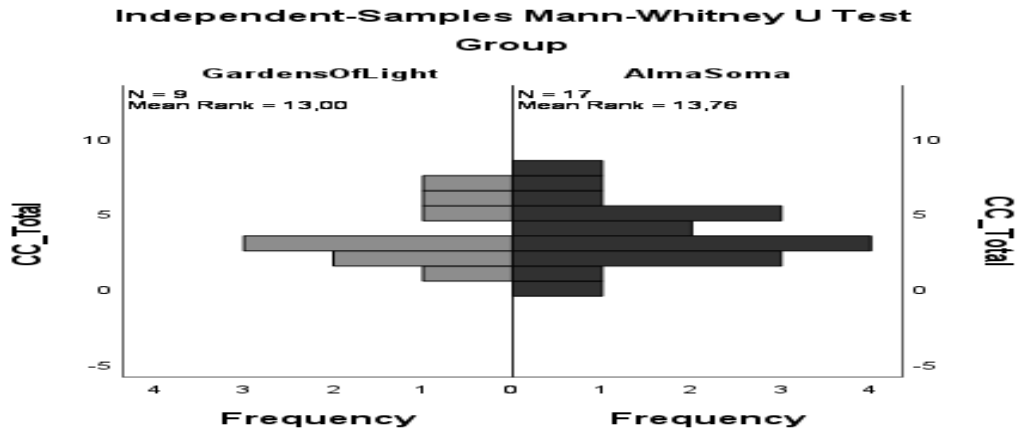


Figure A23.03 NDE Scale (Greyson, 1983) Cognitive Component Distribution between Samples

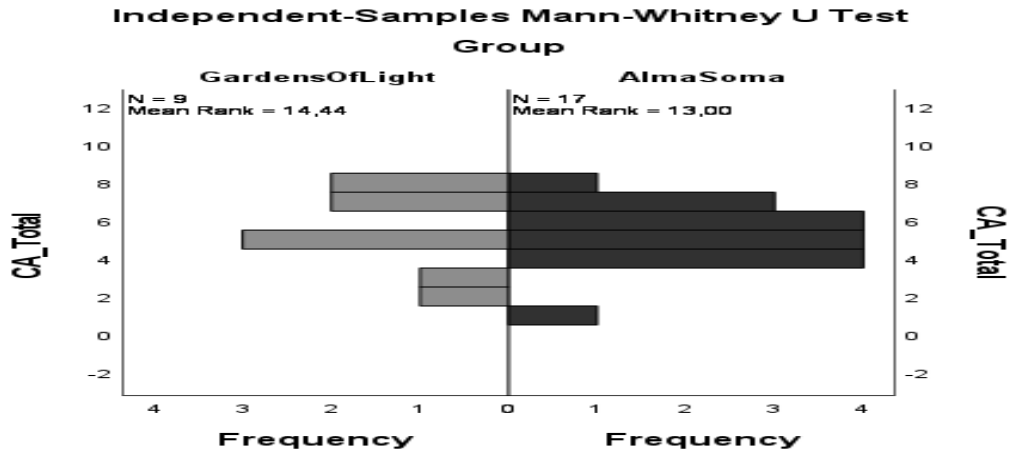


Figure A23.04 NDE Scale (Greyson, 1983) Affective Component Distribution between Samples

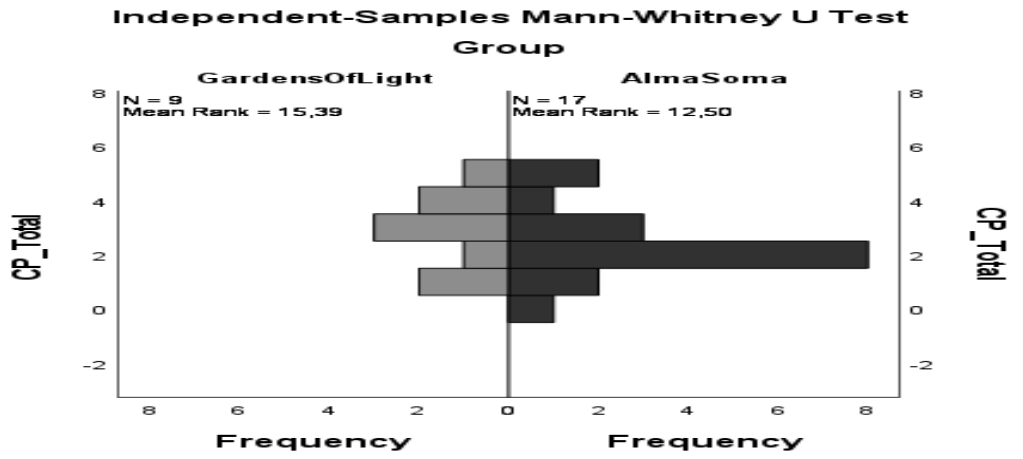


Figure A23.05 NDE Scale (Greyson, 1983) Paranormal Component Distribution between Samples

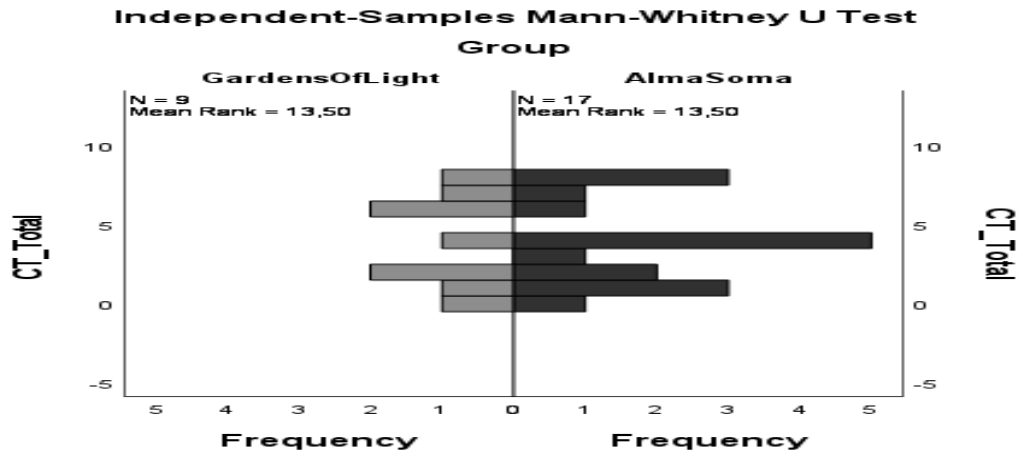


Figure A23.06 NDE Scale (Greyson, 1983) Transcendental Component Distribution between Samples

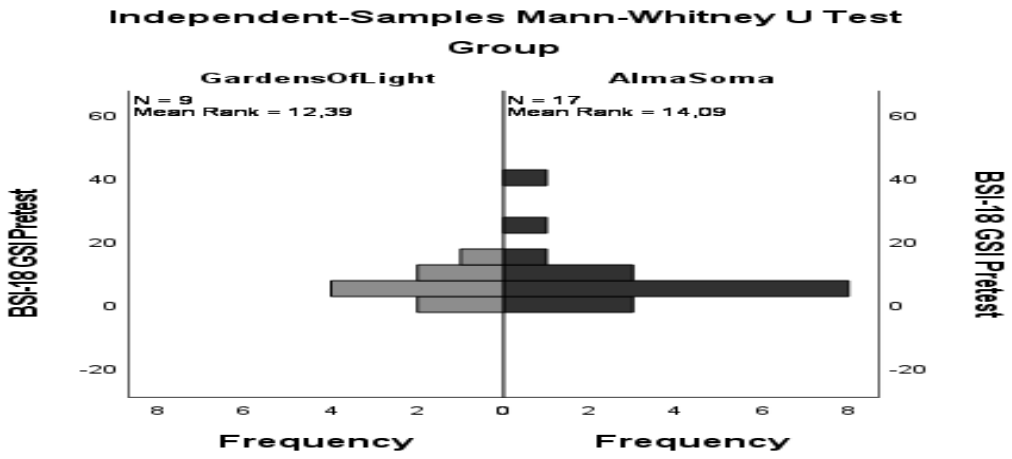


Figure A23.7 BSI-18 (Derogatis, 2001) GSI Component Pre-test Distribution between Samples

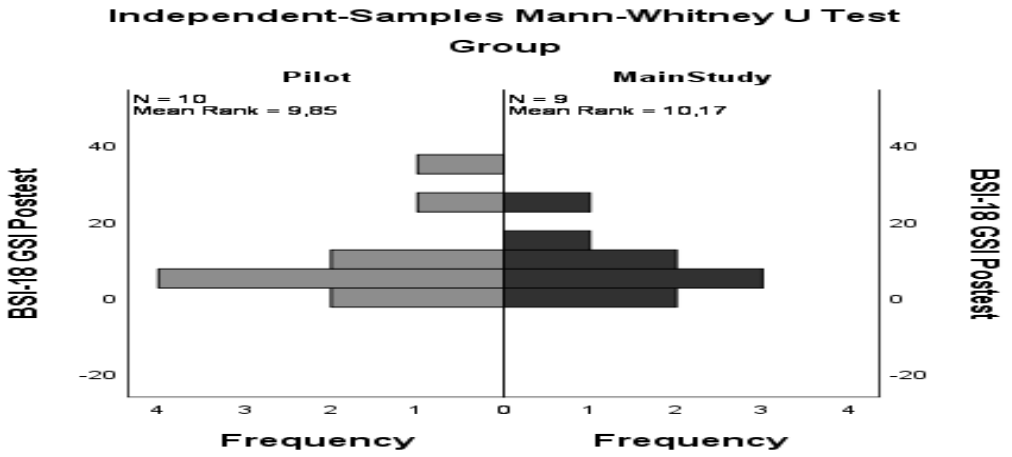


Figure A23.8 BSI-18 (Derogatis, 2001) GSI Component Post-test Distribution between Samples

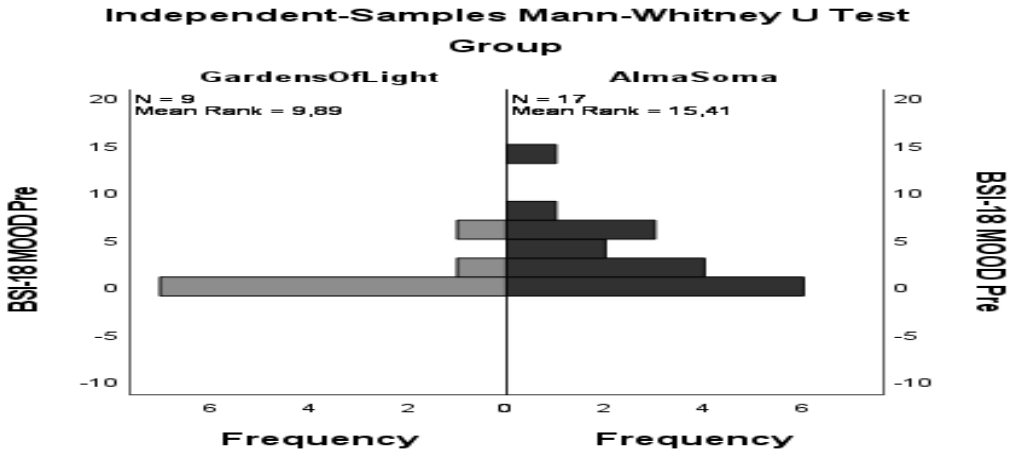


Figure A23.9 BSI-18 (Derogatis, 2001) Mood Component Pre-test Distribution between Samples

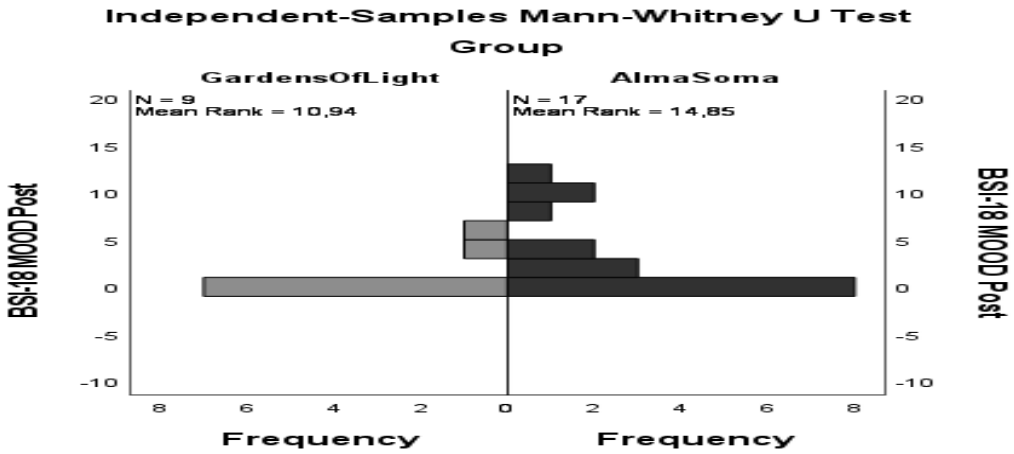


Figure A23.10 BSI-18 (Derogatis, 2001) Mood Component Post-test Distribution between Samples

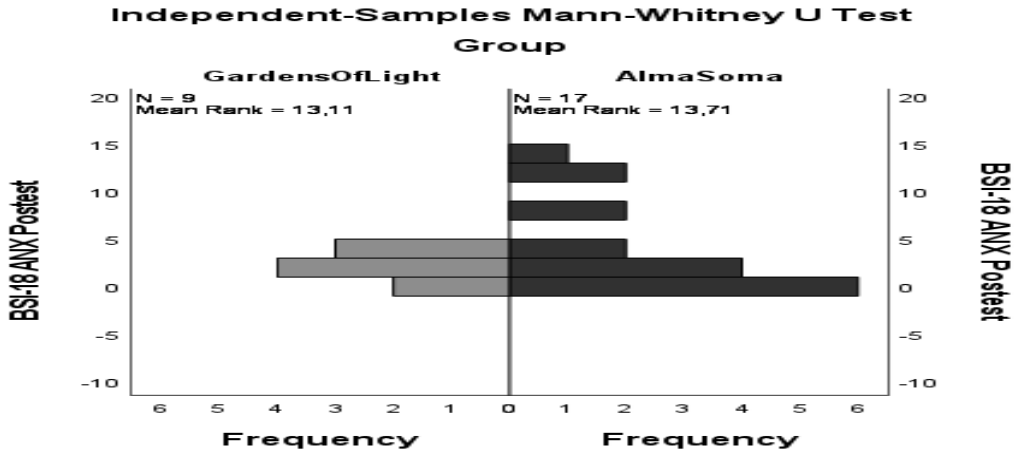


Figure A23.11 BSI-18 (Derogatis, 2001) Anxiety Component Pre-test Distribution between Samples

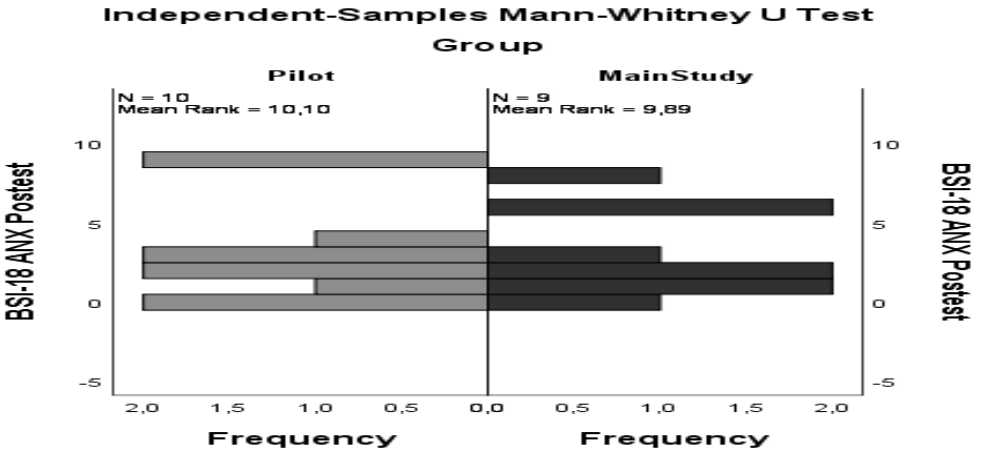


Figure A23.12 BSI-18 (Derogatis, 2001) Anxiety Component Post-test Distribution between Samples

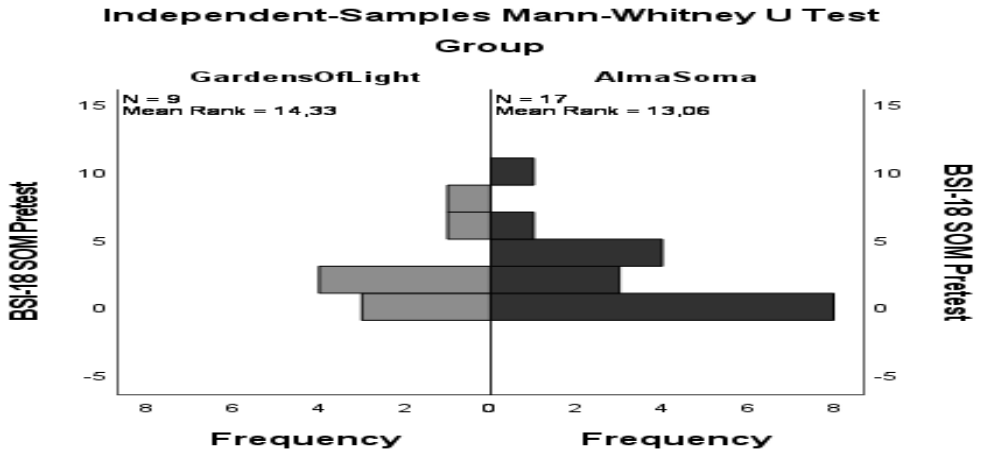


Figure A23.13 BSI-18 (Derogatis, 2001) Somatization Component Pre-test Distribution between Samples

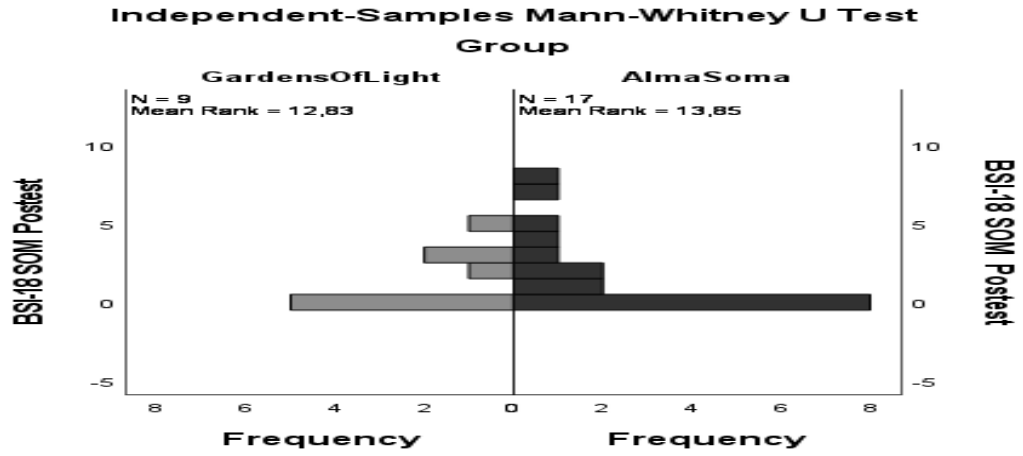


Figure A23.14 BSI-18 (Derogatis, 2001) Somatization Component Post-test Distribution between Samples

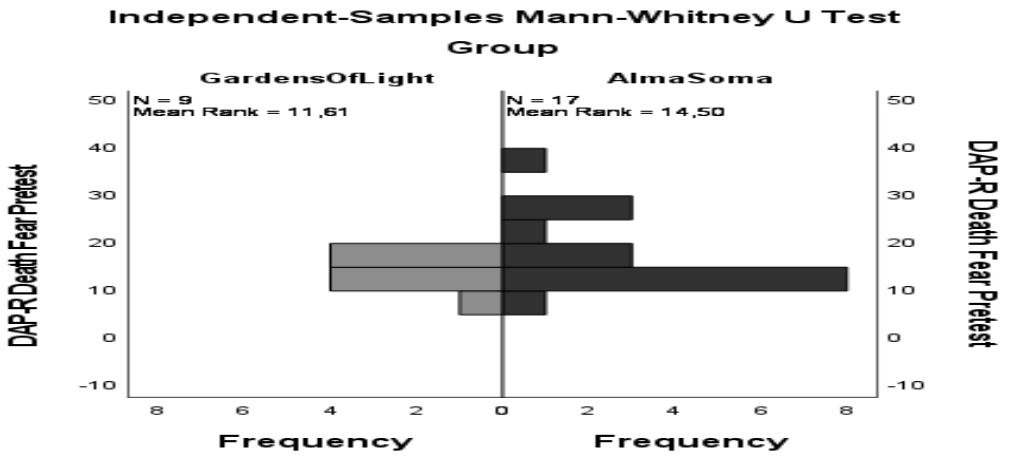


Figure A23.15 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Pre-test Distribution between Samples

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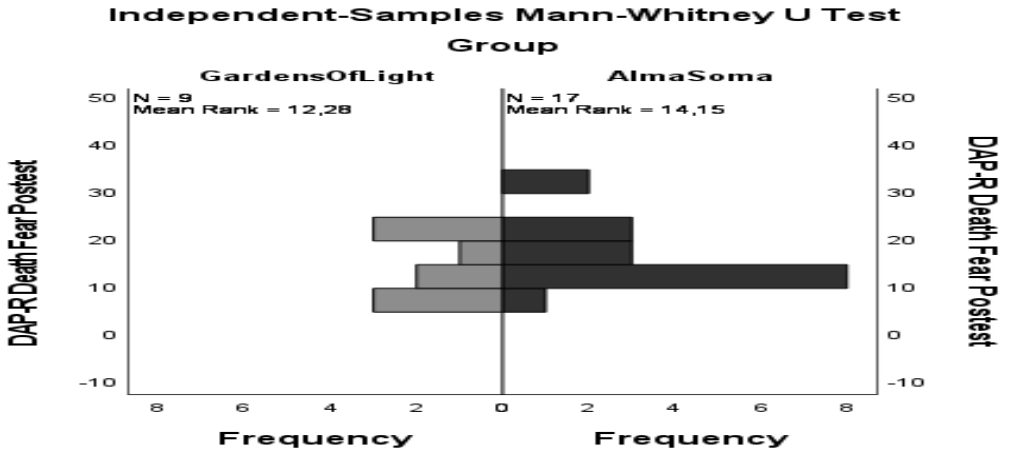


Figure A23.16 DAP-R (Wong, Reker and Gesser, 1994) Death Fear Post-test Distribution between Samples

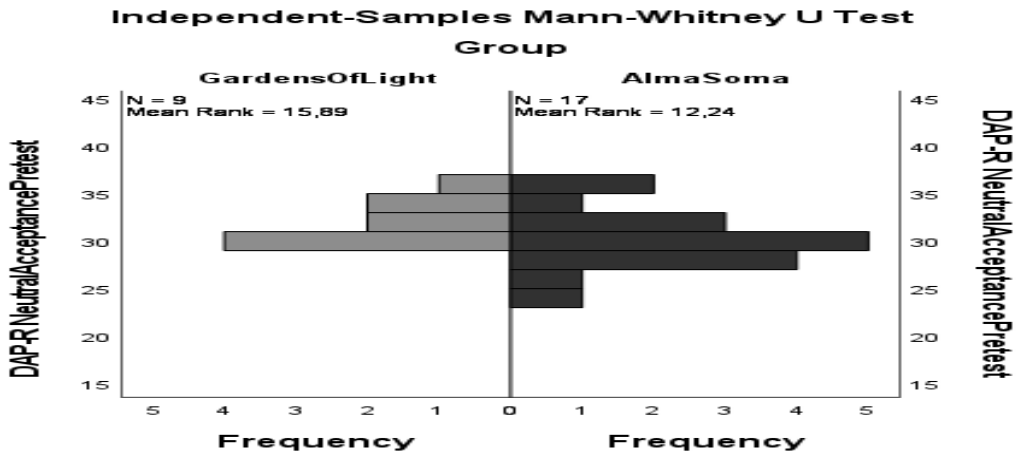


Figure A23.17 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Pre-test Distribution between Samples

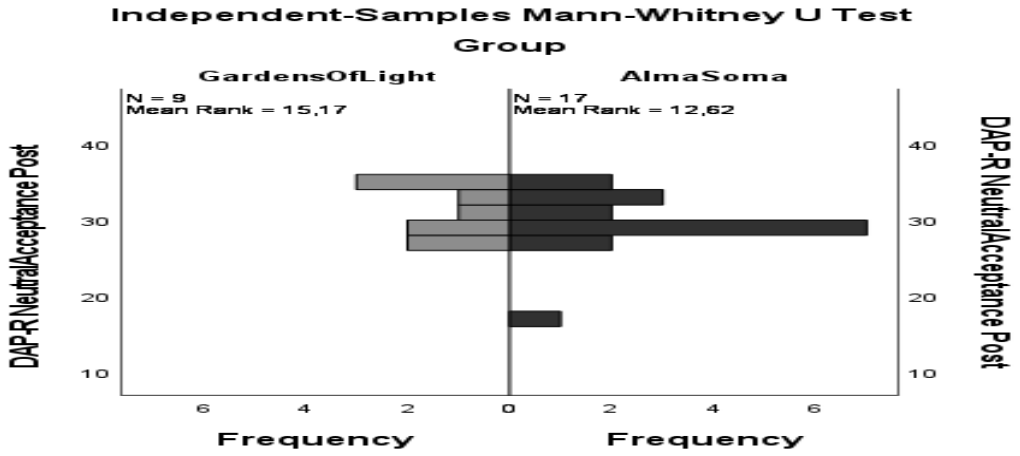


Figure A23.18 DAP-R (Wong, Reker and Gesser, 1994) Neutral Acceptance Post-test Distribution between Samples

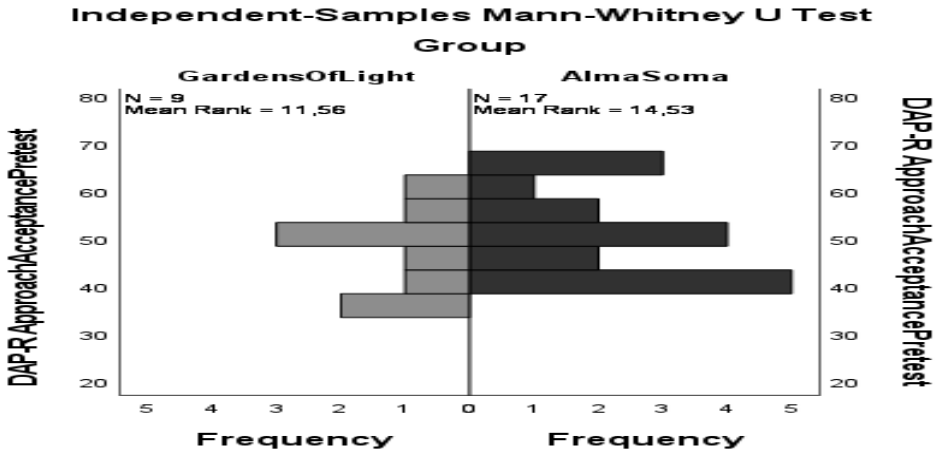


Figure A23.19 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Pre-test Distribution between Samples

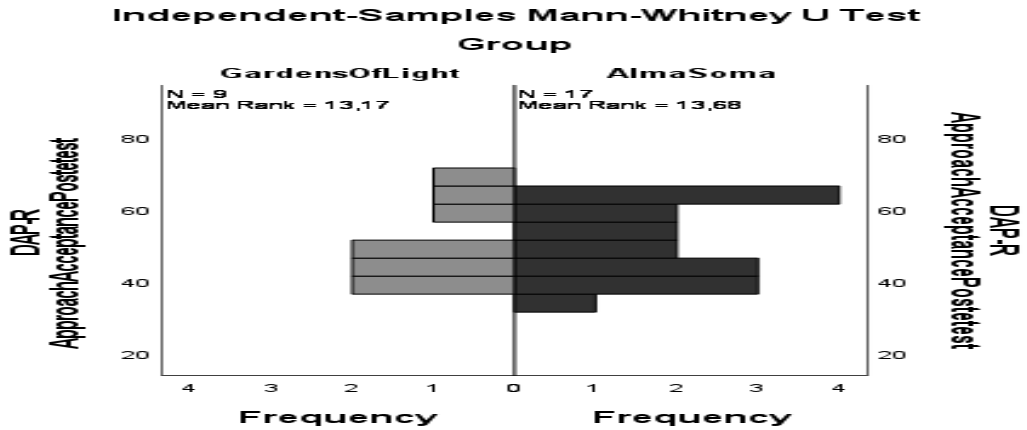


Figure A23.20 DAP-R (Wong, Reker and Gesser, 1994) Approach Acceptance Post-test Distribution between Samples

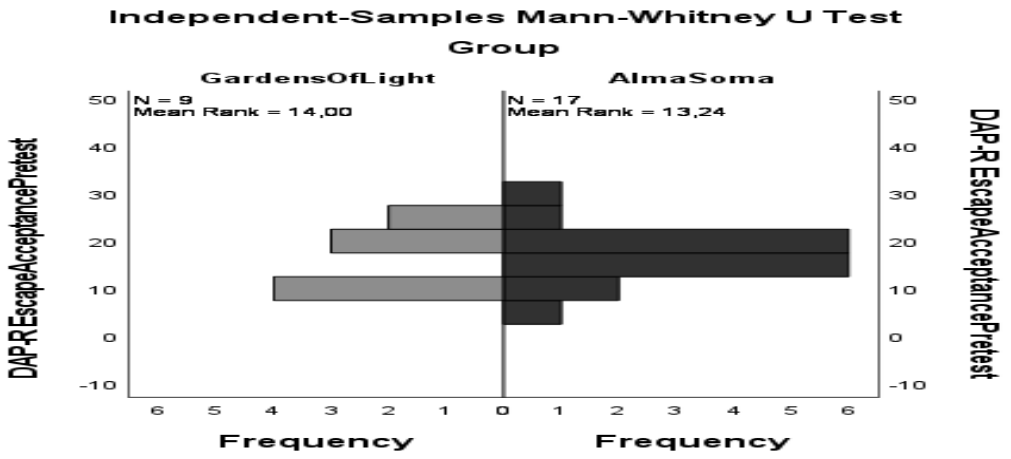


Figure A23.21 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Pre-test Distribution between Samples

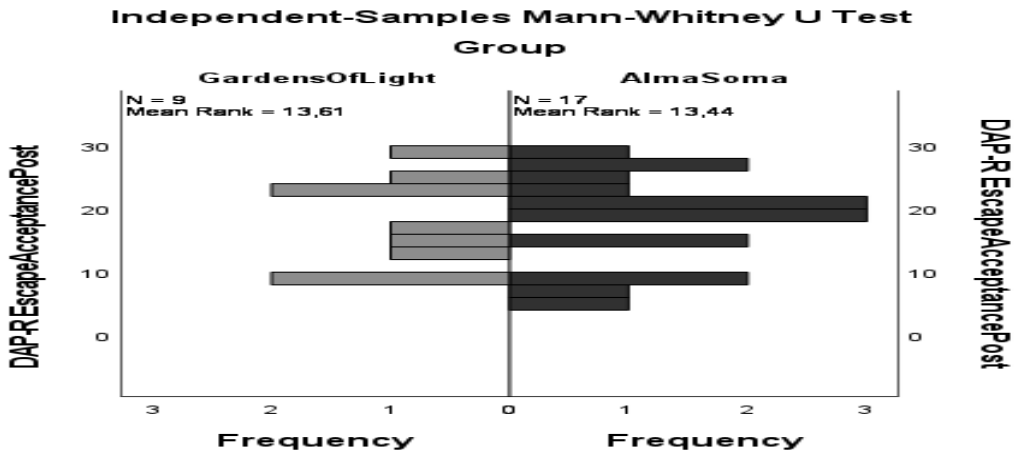


Figure A23.22 DAP-R (Wong, Reker and Gesser, 1994) Escape Acceptance Post-test Distribution between Samples

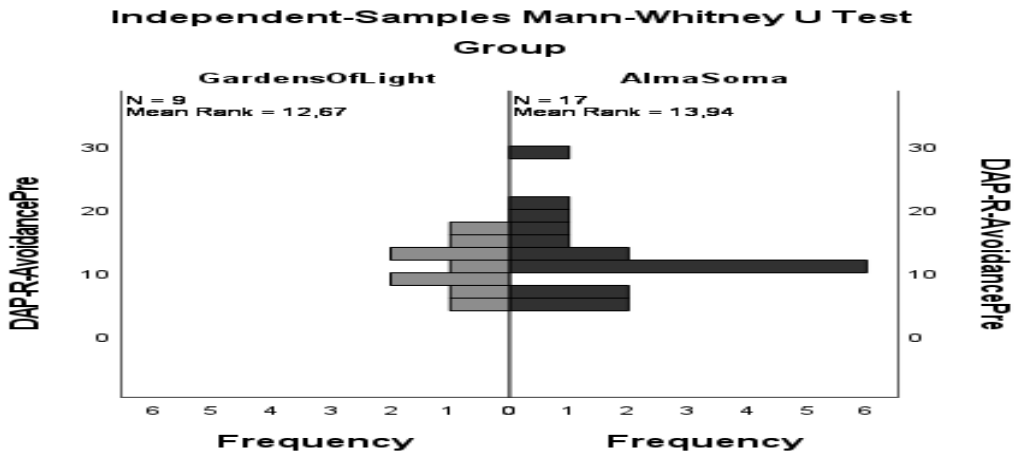


Figure A23.23 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Pre-test Distribution between Samples

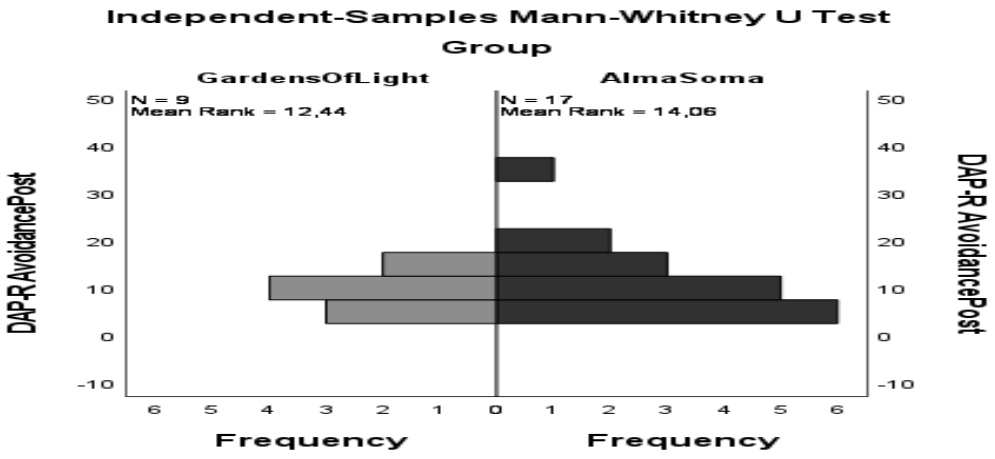


Figure A23.24 DAP-R (Wong, Reker and Gesser, 1994) Avoidance Post-test Distribution between Samples

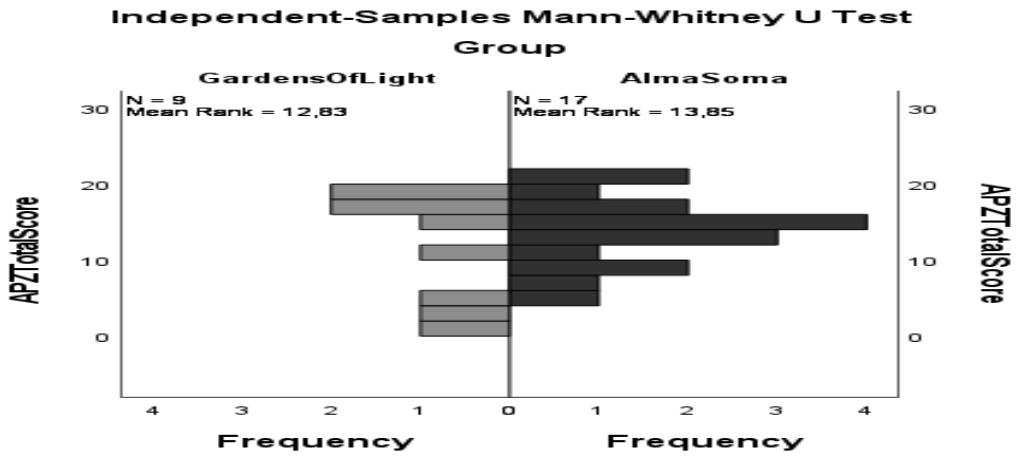


Figure A23.23 APZ (Dittrich, 1998) Total Score Distribution between Samples

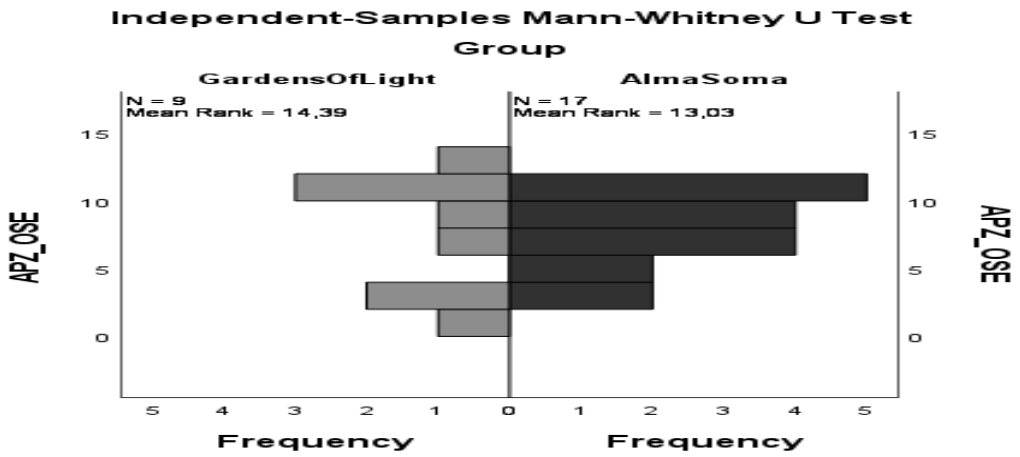


Figure A23.24 APZ (Dittrich, 1998) OSE Scale Distribution between Samples

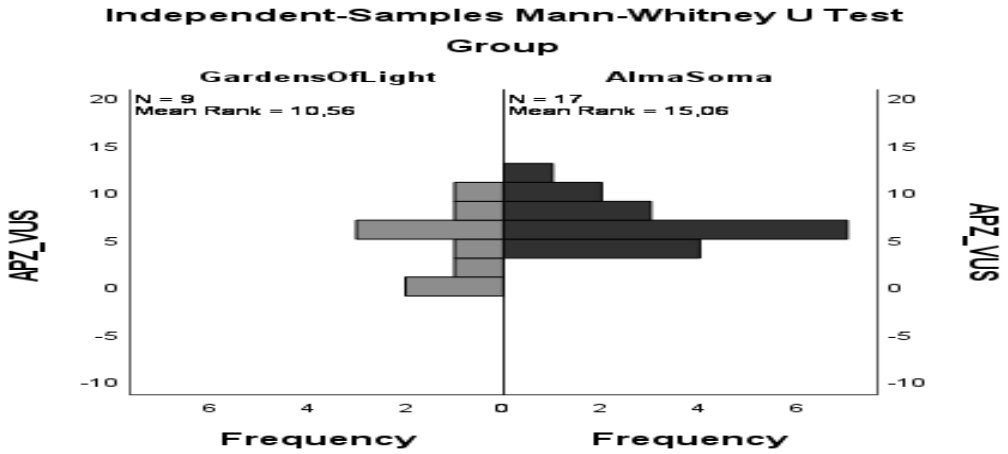


Figure A23.25 APZ (Dittrich, 1998) VUS Scale Distribution between Samples

APPENDIX 24

(Histograms for Chapter VIII, Section 8.8.)

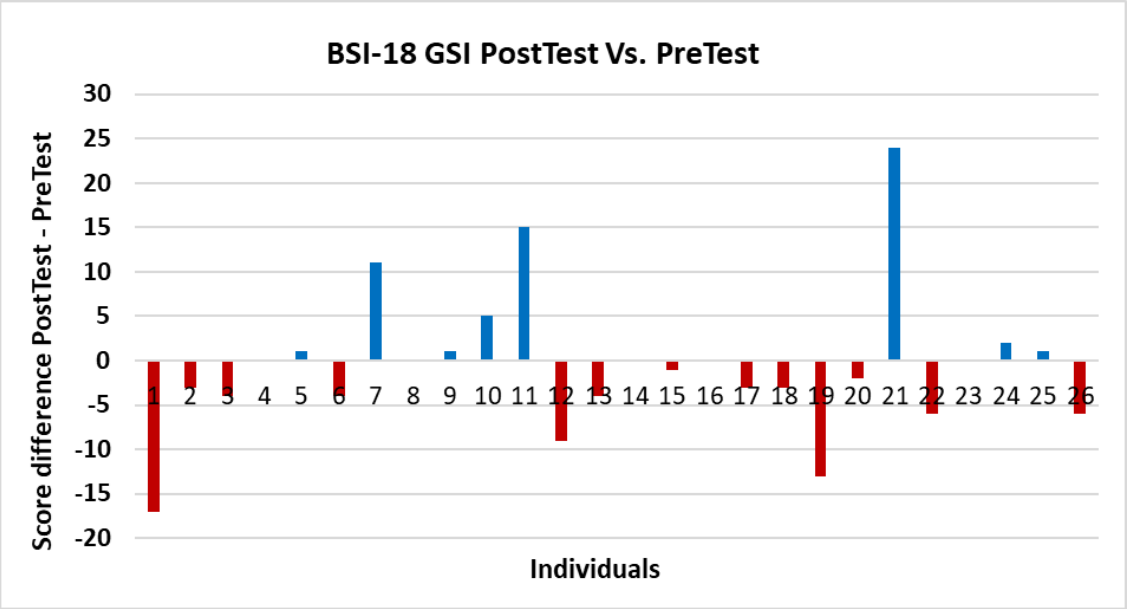


Figure A24.1: BSI-18 pre and post-test scores in GSI for Study II

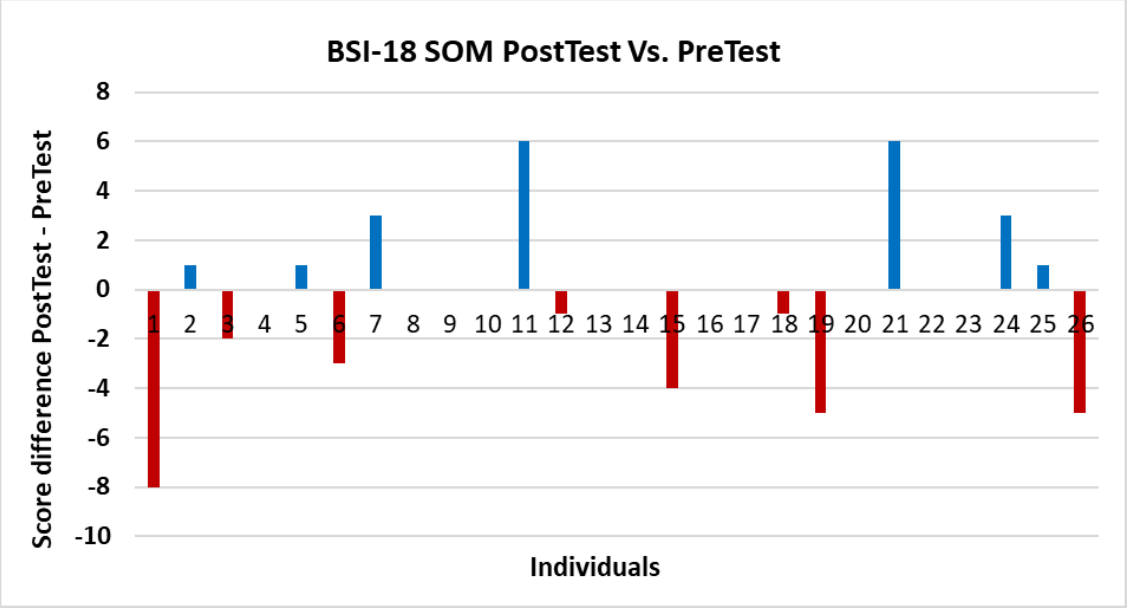


Figure A24.2.: BSI-18 pre and post-test scores in the Somatization Subscale for Study II

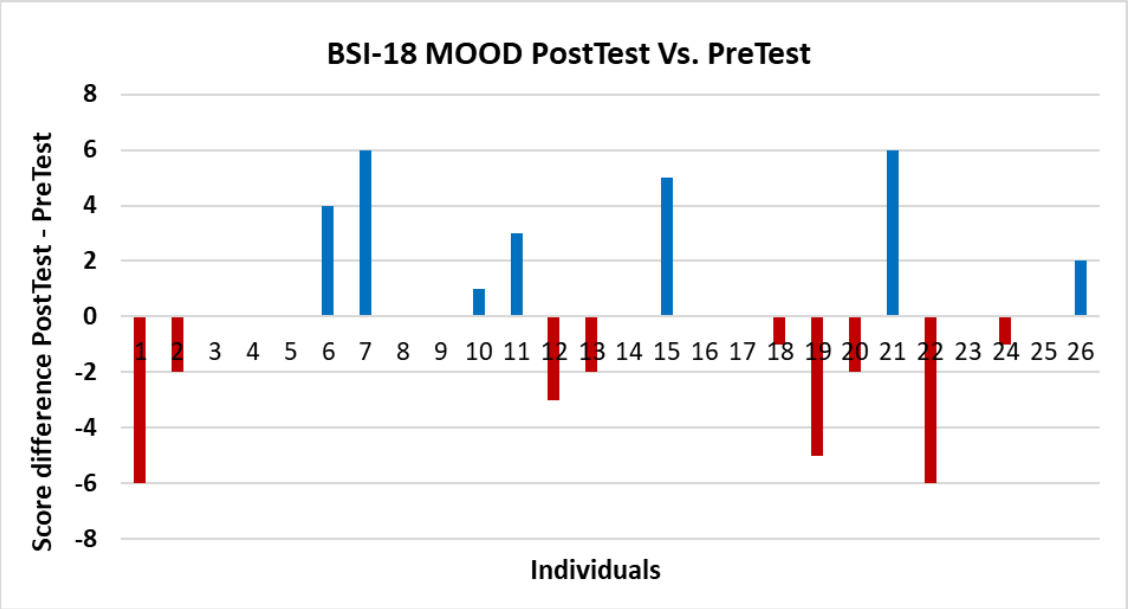


Figure A24.3. BSI-18 pre and post-test scores distribution in the Mood subscale for Study II

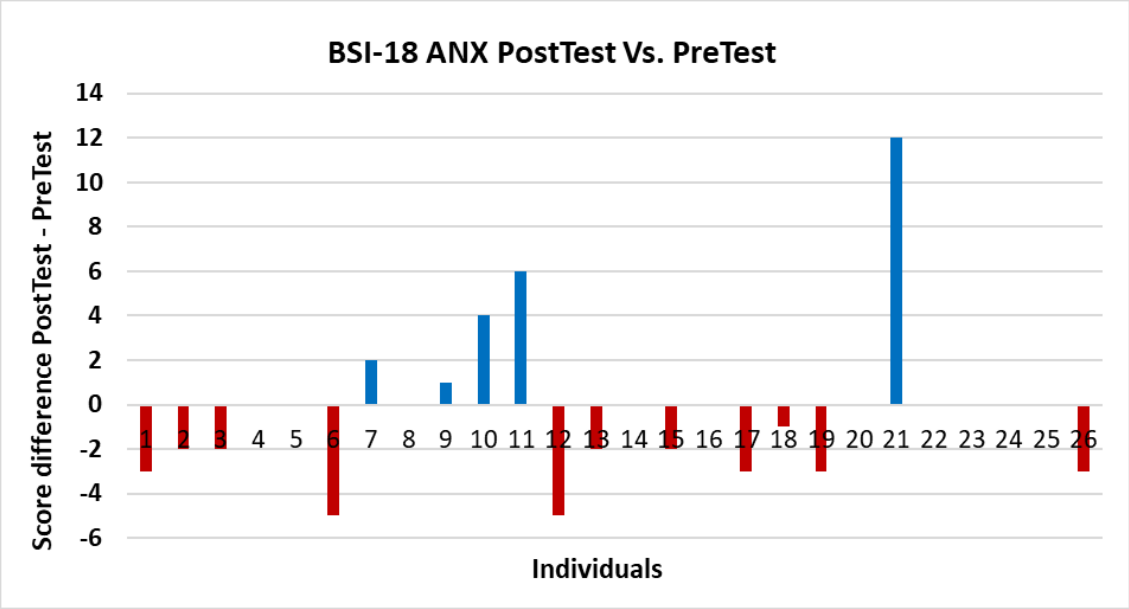


Figure A24.4. BSI-18 pre and post-test scores distribution in the Anxiety subscale for Study II

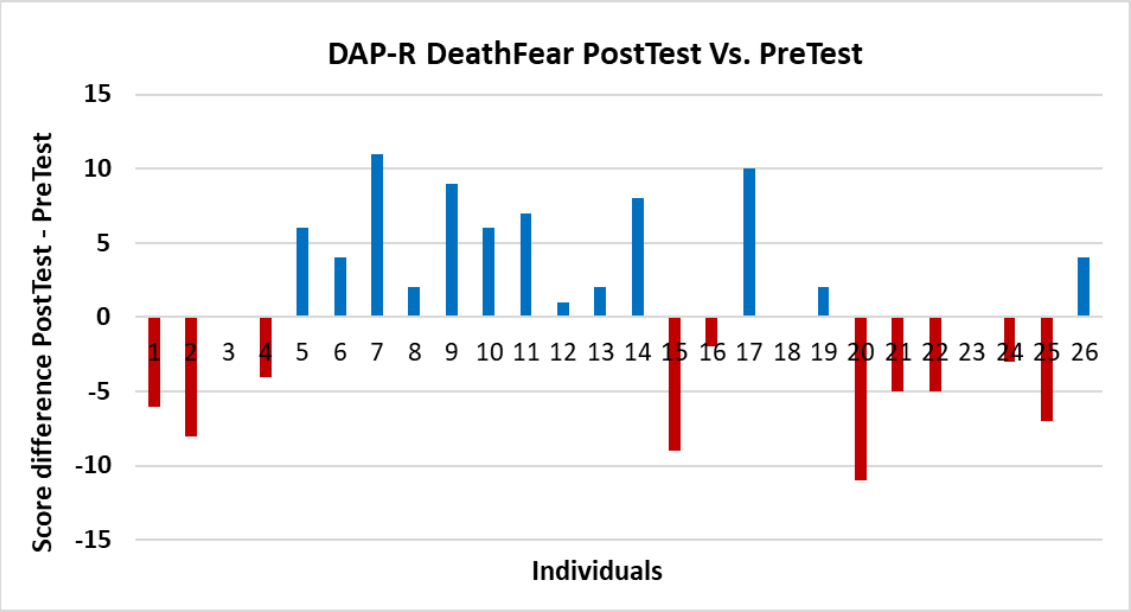


Figure A24.5. DAP-R Fear of Death pre and post-test distribution for Study II

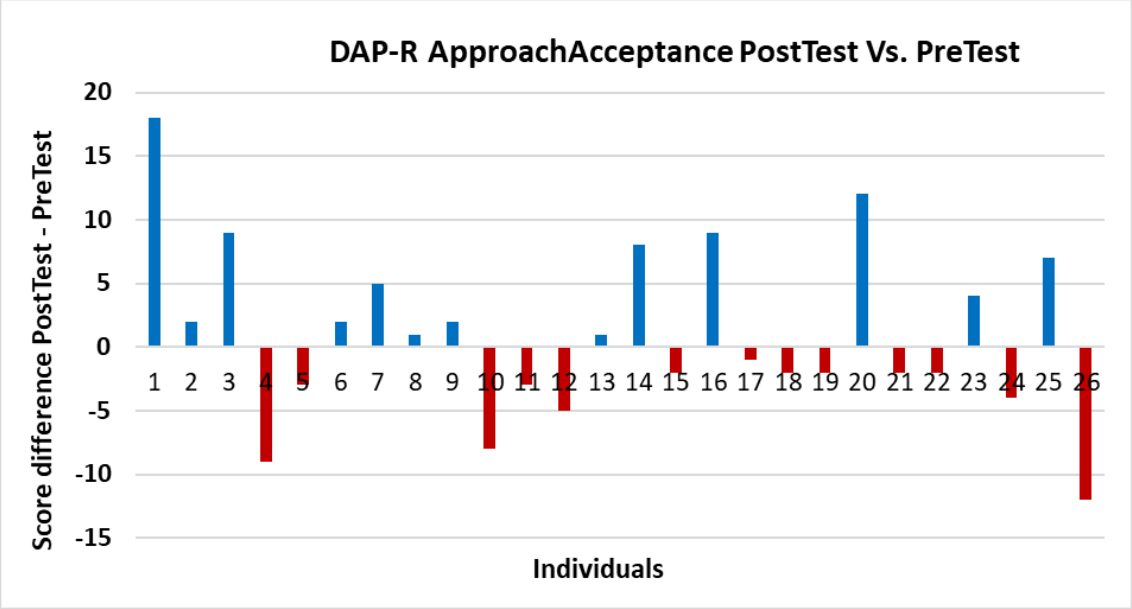


Figure A24.6. DAP-R Approach Acceptance pre and post-test distribution for Study II

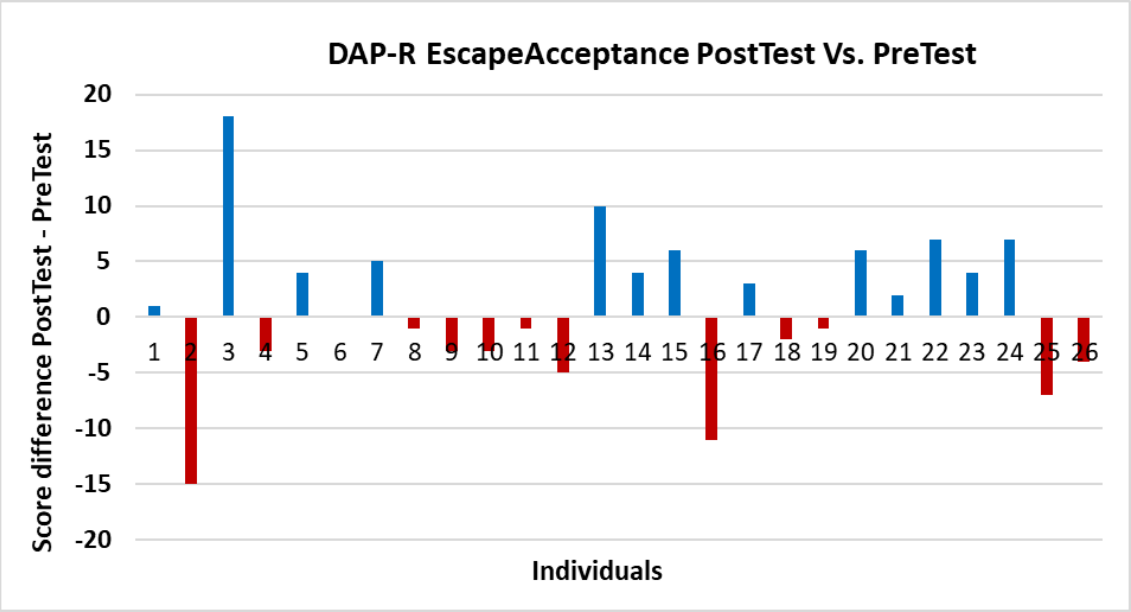


Figure A24.7. DAP-R Escape Acceptance pre and post-test distribution for Study II

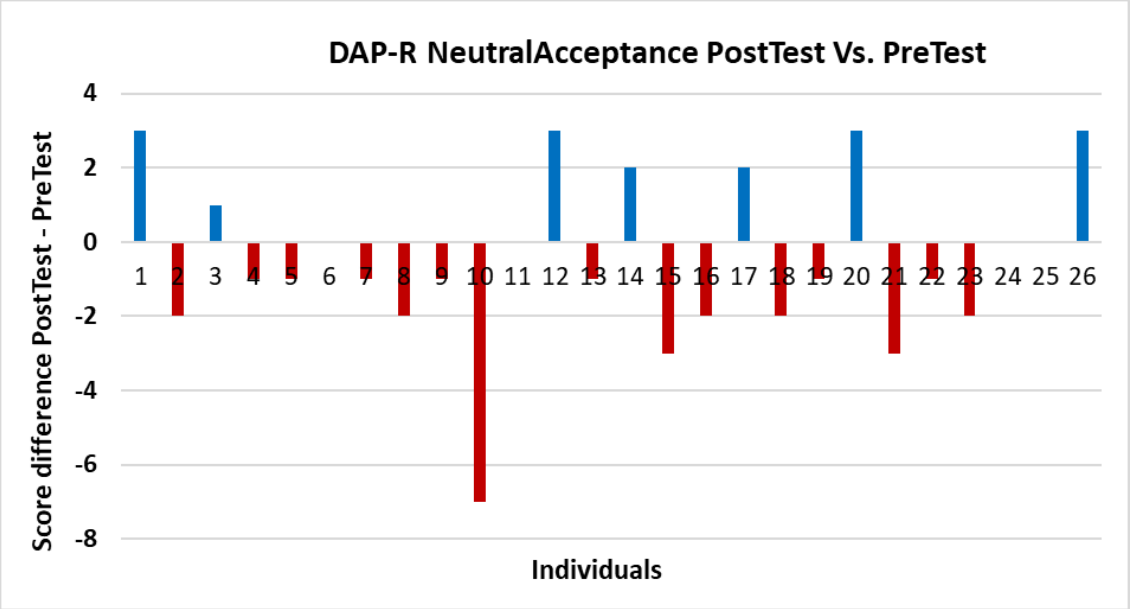


Figure A24.8. DAP-R Neutral Acceptance pre and post-test distribution for Study II

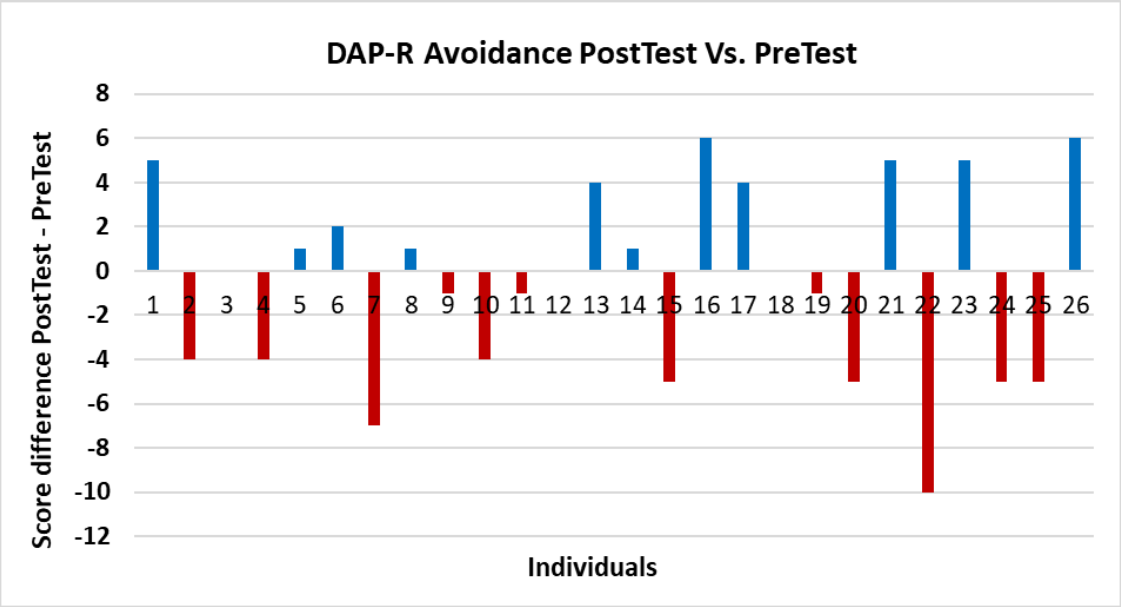


Figure A24.9. DAP-R Avoidance pre and post-test distribution for Study II

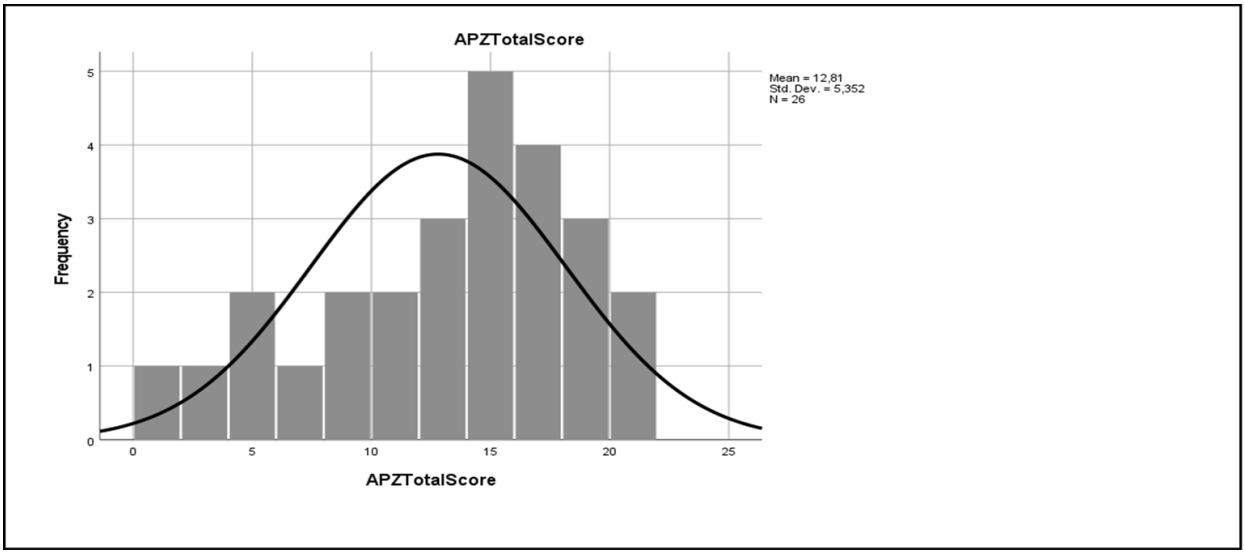


Figure A24.10. Total Index of the APZ Scale for Study II

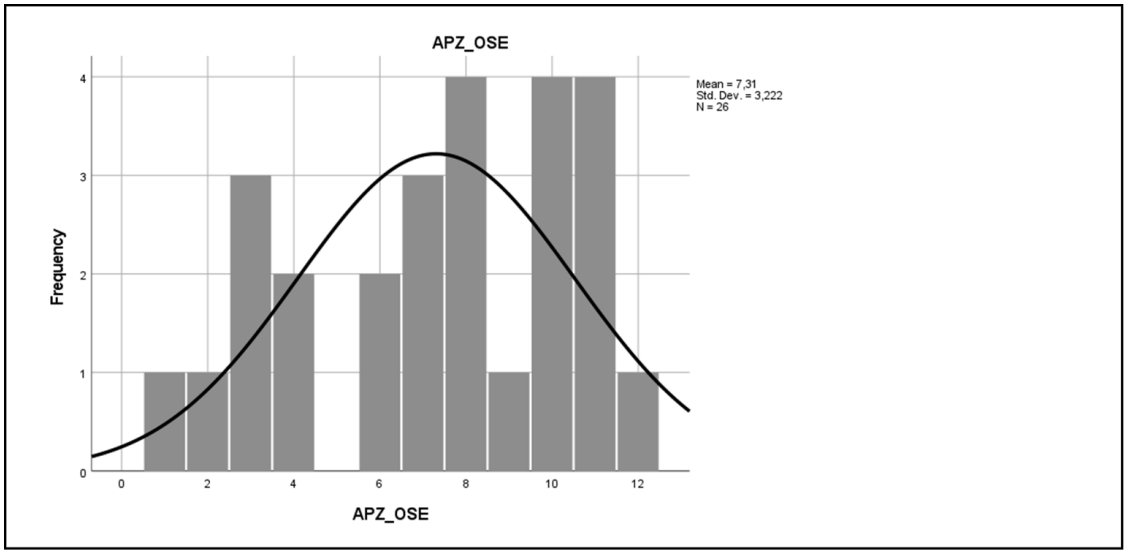


Figure A24.11. OSE Dimension of the APZ Scale for Study II

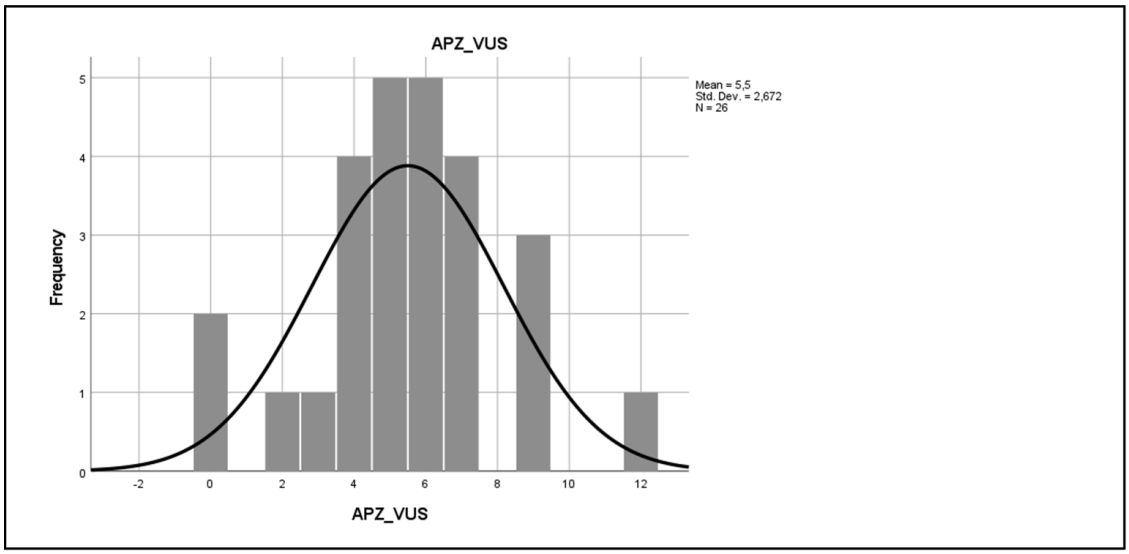


Figure A24.12. VUS Dimension of the APZ Scale for Study II

APPENDIX 25

(Hypnosis Script)

NDE PROTOCOL TO BE APPLIED AFTER A RELAXATION AND DEEP HYPNOSIS PROTOCOL

Soft music is playing in the background along with nature sounds, when appropriate

Duration: approximately 35 minutes

Imagine… just imagine… imagine that you are in this safe place where you allow yourself to have a dream, different from other dreams you might had before, just by following my instructions.

Allow yourself to listen to my voice and to my words, as if they were yours. Pay attention to my voice, to my words. Allow yourself to enter your new dream…

Imagine that you are away, taking a break from everyday life… And that this time you decided to travel to a place where snow is all around, no matter the time of the year. Today you have decided to go hiking alone, to enjoy the snowy landscape and the fresh, crisp air…

The sun is shining brightly over the white mountain path, the birds are singing in anticipation of warmer weather… it is quiet and peaceful all around.

You have a winding path in front of you, sided by towering, evergreen trees, and you can hear your footsteps over the snow as you move forward. You inhale deeply, breathing the pure, cool air, in contrast with the warmth of the sun gently touching your face…

You are enjoying the moment and feeling grateful for being exactly where you are, as you move on towards the dense forest nearby, following the gentle sound of a water stream hidden behind the trees where birds are cheerfully singing.

Suddenly in the middle of the walk, every natural sound that you were listening to before seems to come to a halt… even the birds stop singing. All is silent now…. Too silent…

Suddenly, you hear a ferocious rumbling trembling sound, like a thunder coming from inside the earth, and you understand that a snow avalanche is coming from the mountain above in your direction...

You know that you do not have a chance of escaping, you are too far in the woods, and it is impossible to run over the snowy grounds. And as your thoughts are speeding up, in an attempt to flee, you are suddenly caught by the avalanche and pressed down to the ground by the layers

of snow crushing over you. At the same time, you feel cold and hot, from the weight of the snow of top of you, like a smothering white blanket, preventing you from breathing as you should...

Your thoughts are racing right now, trying to find a way out of this white prison – what will happen, is this how it feels to reach the end? Is this how it feels?…

You feel your awareness slowly fading away, you cannot move, you don't seem able to breathe as you should, your thoughts are slowing down, and you feel like you should not even resist anymore, giving up seems to be what is left right now, you start losing touch with what remains of your external world… however, from afar, there is a sound, it seems that dogs are barking at a distance and maybe, even human voices … is there a chance that someone is coming to your rescue?...

And as you hope, you feel like you are slowly fainting … losing your consciousness entirely…

Then, all of a sudden, you see yourself in a simple platform bed, like you were lying inside a monastic cell, covered in white blankets … you feel you might have been rescued from the avalanche… but you are not sure…

It is possible that you might have died, you don't feel your body, and there is some confusion, like you lost track of space and time, and even of yourself, it is like your mind is in a very different place disconnected from what was your body, that you do not feel anymore as totally yours, but you know is lying down, covered in white covers…And that your mind is somewhere else, like it has taken off…

You now have the strong impression that you, or what you feel as yourself, your awareness is somewhere else, gently floating above your body, whether dead or alive… lying below at a distance … high above the bed.

Now you are clearly floating farther away from your body and going up… up… and up. You have a clear perception of seeing your body from above, covered in white covers, either dead or alive, but this does not bother you the least, you are not concerned, you are still you and you feel somehow free, strangely, and pleasantly free…

And as you are free floating upwards, you are also moving, almost speeding, through a void, you have this feeling of empty space, without light, it could be a tunnel… or a black hole or some other kind of nameless, formless space … oddly welcoming… you build momentum as you move

up and forward, there is a clear sense of quickening… some sort of strange wind blowing might be heard or felt, propelling you to keep on going...

Now it is clear for you that you are being pulled towards a tunnel like space … and with a sudden 'whoosh', it is like you, what you feel as you, is now inside a super-high-speed elevator going up through the tunnel…

And ahead there seems to be only darkness… welcoming darkness… Inside this formless space you feel like you are moving faster and faster, and your mind keeps up with this swiftness, your thoughts are racing, but more coherent, you feel connected to a deeper wisdom, that seems to be now fully awake, and have access to profound insights and sharp observations, about yourself, others, and life in general…

It seems now possible that you have access to this abundant current of higher knowledge about life, your true nature, and your place in a wider scheme of things … And as you flow within this intelligent stream, you keep on feeling irresistibly pulled towards another unknown place …

Suddenly you notice a very bright light from a distance, and you seem to be irresistibly pulled towards it, with a clear sense of direction, it is straight ahead of you, and you cannot resist the attraction, the overwhelming emotion of returning to a welcoming place where you have been many times before and know so well...

You are now clearly ascending towards a bright light at the end of the darkness… A light of incredible brilliance, an iridescent light shimmering in front of you… attracting you irresistibly with its glowing, familiar, gleam…

For the first time since you left your body behind, you have the feeling you are not alone… you feel this incredibly bright light has attracted other life forms, you can sense shapes, energies, around you… they give you distinct feelings, they might come from people, animals, plants… You might know them… or not… but they feel somehow familiar to you…some of them might have been close to you … you feel deep loving, caring feelings from them and towards them…Some never existed in your real world… they might have lived in stories, legends, myths… some might even look like religious figures or spiritual entities… they might not have physical bodies… they might look like they are made of light…or energy… they are fully alive no matter who they are and their presence is reassuring, all is well, you know it… And whoever or whatever they might be, they bring you great joy… a feeling of belonging… of being welcome… so much lightness, joy, and happiness in this encounter...

You notice you are able to communicate without words, like telepathy…with them…and you understand everything they want you to know, about them, about yourself, about life… and death also…Whoever they are, their presence is heartening, loving, caring… they knew you were coming and were waiting to greet you.... you feel their utter benevolence …And they are making way for you, you are now approaching the indescribable light you have glimpsed before…

You feel intense emotions of profound peace, well-being, love, growing inside you as you are approaching … And you feel this deep benevolent and reassuring embrace like nothing you have ever felt before… like you are being softly cradled by this compassionate, loving light…

A feeling of overwhelming love, like nothing you can remember having felt before, pours softly into every part of you …

At the same time you feel, deep inside you, the tremendous joy of being in this place, free from of your body and earthly troubles, and in the presence of loving beings and the unconditional love that comes from this bright light.…

You feel you have no masks, you no longer need them… this light knows you in every aspect of yourself big or small, but at the same time you feel totally accepted and loved in this knowing, deeply safe and profoundly happy… You feel whole, as you have never felt before…

You feel this source of love is also a source of unlimited knowledge, and you may even receive a part of all this knowledge, as if the wisdom and some of the secrets of the universe could now be shared with you… you are able to know things… important things… for your journey…

Now, you have a sense of having moved "somewhere else," to a territory that may seem like a spiritual realm with an otherworldly landscape…

It is the most beautiful landscape you have ever seen... colors are more vivid…you seem to be listening to celestial music clearly, like nothing you have ever felt on an earthly plane, natural elements like you could have never imagined, incredible trees, flowers, and birds…

And you feel deep inside yourself the privilege of being here…deep inside… you want to retain this memory… hold it inside your body, as you are being showered with the energy of the true fountain of life, love, and wisdom…

As you feel all of this… you might sense that close to you, there is a loved one, or a holy presence or what can be called a spiritual guide… telling you that it is not yet your time to be here for more than a short visit… he reminds you about your family, friends, maybe pets, about a task you left unfinished or a project you have to undertake as part of your life's mission, you still have lots of experiences to be accomplished somewhere else… in the place where your body was left behind…

And you seem to hear a voice saying ' *Do turn around and go back. It is not your time to be here yet'*... And you decide to acknowledge this instruction …

But before returning, it seems that you are being given access to a review of your entire life… you are given the opportunity to see and relive every thought, emotion, action and feeling you experienced before, and the impact it had on yourself and others …You even recall all your thoughts, words, and actions in relation to different situations…. You feel the impact your choices had on others …you just know…

This is an important lesson you are learning right now from this perspective, as an observer of your own life… about what is important… and what should be important from now on… You feel that finding your own inner truth … who you really are and what you are meant to do right now with your life is the most important thing… who you really are… who you really are… who you really are… You do not feel judged in any way… you feel loved and appreciated… and this is the most important lesson… And you have learned it well. Now you know what matters.

And you feel this is the moment to go back… along with a strong reluctance to go back… but you realize that you need to return… your earthly mission must yet be accomplished before you are allowed to stay in this newfound home...

Suddenly, you hear a loud voice inside your mind... the same sacred being, an ancestor, a guide, or just your own wise voice saying that you must return right now…that you shouldn't be here for so long anymore. It's not your time yet. You must go back…And you decide to return to your body…to the monastic bed where you were left under white covers…And this is when you feel warm, strong arms gently pushing you back to the bed where your body was left behind… It is time now to return.

APPLY: POSITIVE PROGRAMMING, SAFE RETURN FROM THE HYPNOSIS SESSION AND DEBRIEFING.

APPENDIX 26

Quotes from Fairydust and Pixie-K's
for Mystical Subthemes
matching
Walter Pahnke's (1969) Model

1. Unity *is a sense of cosmic oneness achieved through positive ego transcendence. Although the usual sense of identity, or ego, fades away, consciousness and memory are not lost; instead, the person becomes very much aware of being part of a dimension much vaster and greater than himself. In addition to the route of the "inner world" where external sense impressions are left behind, unity can also be experienced through the external world, so that a person reports that he feels a part of everything that is (for example, objects, other people, or the universe), or more simply, that "all is One"* (Pahnke, 1969:7).

For Fairydust, the closest she came to this sense of Unity, was through the sensorial contact with her grandfather's scarred and blackened hand, and with his eyes. She felt transported by them to another dimension of existence, and then again to the everyday world. This experience might be equated to the dissolution of physical boundaries and limits that characterize the experience of unity. In this case it did not involve the experience of being One with everything, but it did involve a transient loss of boundaries:

Fairydust's Interview

Yeah, but it was not just a physical touch, it was that whole envelopment of yourself, internally, emotionally, physically, it was just a part of myself that was enveloped by that hand, it was beautiful, and which was very contrary to what the physicality of the hand looked like. I remember looking into his pale grey blue eyes and then felt as though I was pulled through them. I was then back in the "other" place, with both of my grandparents, and felt suffused in such a strong vivid feeling of their presence. I felt their reassurance, love and a peace so intensely, I didn't want to leave them.

For Pixie-K, the feeling of unity came from the immersion into an ocean of consciousness, where she felt she was a part of something bigger that herself, giving renewed purpose and meaning to her life:

Pixie-K's Interview

Like I said, it was a lot of reassurance of the self and the feeling that I'm part of something bigger, that I'm included. And what that did for me is that I've got a sense of a role to play, like there is a reason for me being in touch with that stream. It confirmed a lot of things for me and made me just want to do it again.

---

2. Transcendence of Time and Space *means that the subject feels beyond past, present, and future, and beyond ordinary 3-dimensional space in a realm of eternity or infinity* (Pahnke, 1969:7).

For Fairydust, this feeling came from meeting her grandparents, who not only appeared to her fully alive, even if they died many years before, but this apparition as younger selves, also defied the linear time experience. Pixie-K described several elements pointing to the fact that time and space have no importance in the dimension she travelled to, as she gained the ability to fluidly move between distant places, in a short amount of time. Her experience of space was also not logical, as she felt high and deep at the same time:

Fairydust's Report

This hand took me to "another" place, where I met my nan and grandad. I recognised them as their younger selves.

Pixie-K's Report

I was amazed at the ease with which I left my body and had the immediate knowledge of how to move willingly and in any direction. I had the feeling of being very deep and very high simultaneously. The space around me was all conscious, collective movement in streams. I was past, present, future – I was not 'I' anymore, there was a fluidity to the space, the way I move, the streams of consciousness.

---

3. Deeply Felt Positive Mood *contains the elements of joy, blessedness, peace, and love to an overwhelming degree of intensity, often accompanied by tears* (Pahnke, 1969:7).

For Fairydust, such feelings came explicitly, as overwhelming love from her grandfather, but for Pixie-K, came in a different manner. As she carried a story of abuse and trauma, those positive feelings reassured and encouraged her to dive deep into her wounds and overcome the pain, anxiety, and fear of what she endured, cleansing all negativity:

Fairydust's Report

I felt a hand take mine, I am lifted up and was greeted by my nan and grandad. I knew I could be strong, I felt a sense of grace from them, a pride in me, and then a shared love. I was shown a scene of my grandad in his garden. I was with him, he watches me pull up flowers and I feel his love for me as he picks me up. I feel a profound joy and love, my heart is so full. As he lifted me into his arms, I felt an overwhelming sense of love.

Pixie-K's Interview

Pixie-K – *Definitely, but not anything specific that I can call it, just a feeling of reassurance and 'This is who you are, you know who you are, you can do anything anywhere and still feel you, because that's how strong you are'.*

Sofia - *Things coming in and out?*

Pixie-K – (…) *And that thing made me a lot braver, since the work that we did, I kind of know where I need more healing to happen and not feel shy about that. So, when I went there, it was so familiar and because*

of what we've done, again, I knew how to move in this space, and I wasn't afraid to be there. So, I think it made me a lot braver.

(…)

Pixie-K – *And if I healed all of my places and fell in love again with myself, and not be worried or ashamed, or afraid, or whatever… I feel that, doing the work with you, I feel it knocked down with loads of things…*

Sofia - *What do you feel you got rid of that you no longer needed?*

Pixie-K – *Let me see, fear mostly, I was really dealing a lot with anxiety you know, it's understandable after traumatic situations…*

---

4. Sense of Sacredness *is a nonrational, intuitive, hushed, palpitant response of awe and wonder in the presence of an inspiring Reality. The main elements are awe, humility, and reverence, but the terms of traditional theology or religion need not necessarily used in the description.* (Pahnke, 1969:7).

For Fairydust, the sense of wonder coming from this non-material dimension, came from the reassuring feeling her grandparent's presence brought to her, a feeling she found out she could return to when needed. For Pixie-K, she explicitly mentioned the awesomeness and wisdom of a sacred space that she could identify herself with, and from which she could receive the healing she needed:

Fairydust's Interview

I feel my grandparents are watching over me and like to think I will be with them once again when I have finished my life.

(…) it was the right fit for me, I said, there was no way I could know any of this, this is just unbelievable gifting.

(…) And I wrote down, kind of what I felt afterwards because I needed to try and process it, and when I spoke to my husband I said: 'That was the most amazingly moving experience'.

Pixie-K's Interview

So, in that womb space I felt that I was really ashamed of myself, I felt really apologetic and all this stuff, and the wisdom of a more sacred space, was very much like what I met on a near-death experience: 'This is what you are'…

(…) *I think people are just scared of how big it all is, the awesomeness of that place …*

---

5. The Noetic Quality *as named by William James, is a feeling of insight or illumination that, on an intuitive, nonrational level and with a tremendous force of certainty, subjectively has the status of Ultimate Reality. This knowledge is not an increase in facts but is a gain in psychological, philosophical, or theological insight.* (Pahnke, 1969:7).

It was perceptible, from Fairydust's tone and discourse that her concept of reality changed since the experience, as the resulting combination of several aspects. From the intense feelings that remained with her, to the final confirmation of her perceptions as veridical, she knew an unknown dimension of existence was communicating with her, showing itself in the form of her late grandparents. The undoubtful certainty that remained, of them being close by, witnessing and supporting her journey, came from the external validation her mother provided. This was for her, an illuminating moment:

Fairydust's Interview

It was such a beautiful, beautiful feeling, I just wanted to stay there forever with him, and he was 'Ok, no, you have to go, you should be fine, but I'm with you anyway'. He knew I needed to feel that intensity, I think, to give me strength… (…)

So, when I was describing it to my mum, she started crying, and I said 'Why are you crying?'. She just held my hand as she said: It's your grandad and she was literally in tears. And I said, 'please stop crying, please stop crying', I was so upset, and she said those scars are from the coal dust. So, when they cut their hands the coal dust gets into the scars and they look like that, they are tattooed, and there are lines across where they cut their hands, and I had no idea about that, I did not even know it did that, and I was like 'oh, oh, my Goodness'.

For Pixie-K, the experience in itself came both as a lesson and a confirmation of things she already knew: on the one hand, she was made aware of her real identity, as a much stronger person than she thought she was; on the other, it confirmed an inner knowledge she had already gained from previous experiences, of another dimension of existence and a place that she called 'the source', made from all-permeating energy. The ocean of energy she felt immersed in, also in the physical reality, remained with her:

Pixie-K's Interview

Especially because it taught me about my essence, of where I am, and that all of this, all this stuff is getting in my way to get to know my natural self, you know, so wherever I am, like in consciousness, from my call it's touch base, 'terra firma', and it doesn't matter whether I have a body or not, I'm still my essence. And that gave me a lot of strength.

(…) *Returning to the source thing, and certainly, immediately after it was the energy I felt. Like I said, it was really vibrant and everything, everything felt so alive (…). I felt the vibrancy of everything, and I just sat for three days, just processing, thinking about it.*

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6. Paradoxicality *refers to the logical contradictions that become apparent if descriptions are strictly analyzed. A person may realize that he is experiencing, for example, an "identity of opposites", yet it seems to make sense at the time, and also afterwards.* (Pahnke, 1969:7).

For Fairydust, the contradictions came in different ways, as she could know things and communicate through feelings and mental images rather than words, and see herself from her grandfather's eyes, at an age she could not consciously remember his intense loving feelings for her. This memory was awakened by having his perspective, by being her childhood and adult self at the same time, and gaining the absolute certainty of his love:

Fairydust's Report

I knew they were talking to me even though they didn't speak, I felt they were saying I was going to be fine and to trust those around me. I felt this was said in images and feelings rather than words and each image was given with flashes of loving emotion.

(…)

I found myself looking into my grandad's eyes and was then transported to a memory of when I was a child. I could see myself in his garden and felt I was about two years old. I was following my grandad in the garden and pulling up small seedlings he had just planted. I was watching this through my grandad's perspective, but still remained myself.

Gaining a different perception in terms of identity was something that Pixie-K also reported, as she felt part of an ocean of energy, merging herself with a larger field of conscious stream, that was at the same time infinite and contained:

Pixie-K's Report

The space around me was all conscious, collective movement in streams. I was past, present, future – I was not 'I' anymore, there was a fluidity to the space, the way I move, the streams of consciousness. It was awesome and infinite, yet it felt contained somehow.

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7. Alleged ineffability *means that the experience is felt to be beyond words, nonverbal, and impossible to describe; yet most persons who insist on the ineffability do in fact make elaborate attempts to communicate the experience.* (Pahnke, 1969:7).

Fairydust could describe the details of her experience, except for those difficult to put into words, because they had a telepathic nature or were related to her body, that could not be felt in the usual way:

Fairydust's Report

Yeah, but it was not just a physical touch, it was that whole envelopment of yourself, internally, emotionally, physically, it was just a part of myself that was enveloped by that hand, it was beautiful, and which was very contrary to what the physicality of the hand looked like. It was a very ugly, kind of worn out scared hand and I remember thinking 'Gosh, this is really weird', I just don't understand why I feel like this about his hand.

For Pixie-K her oceanic dissolution experience was described metaphorically, as words were not quite adjusted to what she felt:

Pixie-K's Interview

Again, I will just have to link back to the sea and the ocean, because it is the only way I can describe this sort of feeling.

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8. Transiency *means that the psychedelic peak does not last in its full intensity, but instead passes into an afterglow and remains only as a memory.* (Pahnke, 1969:7).

Even if the event was transient, it left an indelible emotional trace: even if the intensity of the feelings faded away, they could be easily reconnected with the felt experience. The citations below came from their spontaneous reports, and it was clear that an inner psychological transformation followed the emotional impact of the session:

Fairydust's Interview

Fairydust - *I was more, I think that for the first few weeks I was more elated from that experience with them…*

Interviewer*: How long did it last?*

Fairydust - *Weeks. I think I went to Christmas skipping around in my brain and kind of speaking about them all of the time.* **(…)** *I felt as though I had been given an insight I would otherwise not have had. I felt centred the following week and changed how I was reacting to my stress and problems.*

Pixie-K's Interview

It was such a gentle process that I felt safe, I was guided, I wasn't afraid of anything and I knew somebody would bring me back from that. But I remember feeling that, 'Oh, no it's worn off, I want to go back!'. But I think that as a regular therapy that would be an amazing thing to be bringing to people. I would want to do it again, for sure.

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9. Persisting Positive Changes in Attitudes and Behaviour *are toward self, others, life, and the experience itself.* (Pahnke, 1969:7).

The experience changed their psychological framework, in a positive direction, and some form of growth followed and remained stable. The emotional intensity of the experience, helped them in changing the way they faced their life challenges and settled into something more stable:

Fairydust's Report

Overall, I am left with a positive association with this experience even though I am puzzled by some of the aspects I have described. I am able to remember the feelings vividly as if they were a new experience each time I remember. I would be happy if this feeling continues as I find it comforting and calming and I feel may help me through the third year of my degree and my physiotherapy sessions.

Fairydust's Interview

And I didn't want to let it go, but to be fair I still feel them, I can still feel that feeling. If I'm really low, I know I can remember that feeling from them. So, it's not as if I have lost them, it's still there in my brain and I think it helped in my recovery.

Pixie-K's Interview

And that thing made me a lot braver, since the work that we did, I kind of know where I need more healing to happen and not feel shy about that. (…)

And if I healed all of my places and fell in love again with myself, and not be worried or ashamed, or afraid, or whatever… I feel that, doing the work with you, I feel it knocked down with loads of things

APPENDIX 27

Quotes from Fairydust and Pixie-K's
for Spiritual Maturity Subthemes
matching
Genia's Model (1990;1997)

:

1. Transcendent relationship to something greater than oneself

The awareness of a force in creation greater than ourselves and our acknowledgement of it is an essential part of what religion is all about." [37] Others insist that this essential awareness and acknowledgment must also include the feeling of union or personal connection to the divine and harmonious relationship to the universe and totality of existence.[28] Indeed, central to religious maturity within any faith tradition is the quality of relationship between the believer and his or her conceptualization of the transcendent. For the religiously mature, this relationship is divested of egocentric and utilitarian motives as much as is humanly possible (Genia, 1990:93).

The feeling of transcendence came from the supernatural contents of their experience that, in a direct and practical way, conveyed a feeling of reassurance about the existence of a greater, hidden reality, a *heightened and complete life* (Underhill, 1912/2020:94). Even if they suspected that this other dimension existed, they gained a new certainty about it, coming from an unmediated experience of transcendence. With it, came the certainty of an underlying and harmonious connection between all things, material, and non-material. In Fairydust's case, it came from the otherworldly experience of a dimension, not completely separate from the material reality, where dead people dwell. For Pixie-K, it came in the form of an immersive dive into what she felt as the immutable nature of consciousness:

Fairydust's Report

I feel my grandparents are watching over me and like to think I will be with them once again when I have finished my life. (…) I found to know I was watched over by loved ones very comforting to feel they will be there when my time has come a blessing and a joy to know.

Pixie-K's Interview

Especially because it taught me about my essence, (…), so wherever I am, like in consciousness, from my call it's touch base, terra firma, and it doesn't matter whether I have a body or not, I'm still my essence. (…) Like I said, it was a lot of reassurance of the self and the feeling that I'm part of something bigger, that I'm included.

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2. Consistency of lifestyle, including moral behaviour, with spiritual values

For the religiously mature, religious beliefs and values function as a guiding system that becomes internalized and integrated with one's life experience and conscience (Genia; 1990:93).

For Fairydust and Pixie-K, spiritual beliefs and values have been a constant in their lives, influencing their interpretation of past events and challenges. The way they think, feel and act became increasingly permeated with their spiritual worldview, including their career choices, meant to bring to others what they have learned in their spiritual path. Their life lessons have been internalized and imbued with a spiritual meaning, working as guidelines for future choices, and as protection from external influences. The NDE experience has also been interpreted and integrated in the exact same way:

Fairydust's Interview

I feel as though the choices I made for my module in my 3rd year were very spiritual. So, I did, Spirituality, Religion and Well-Being, Parapsychology, and Positive Psychology as well as Counselling. They all melted together, they created this very holistic, spiritual experience for my third year… (…)

I know I've got two areas where I want to share my story and I want to show people that medicine is not just physical. There's a huge amount of recovery that's psychological and spiritual, more spiritual than psychological, actually...

Pixie-K's Interview

When I got my first job, looking after elderly people, and that's when it all sort of… You know, I was sitting with people and always experiencing death… It was a care home. I would just sit with people and kind of guided them, I guess, being there just comforting them when they were facing such a thing. I've seen people go, I've seen people welcome death and I've seen people being really, really, afraid of it. (…)

With the volunteer role, I mean, at the Coroner's Court, just supporting people as they get in inquests or whatever they need. Like if someone dies and they need an inquest I would support them with whatever…

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3. Commitment without absolute certainty

We operate on the basis of incomplete knowledge in all spheres of life. Indeed, some of the most important decisions in our lives are made on probability and not absolute certainty. For example, physicians treat physical illnesses with available methods until new and more effective treatments are discovered and perfected. Similarly, religious persons can remain committed to and behave in accordance with their particular faith, while seeking to discover higher levels of spiritual knowledge and truth (Genia; 1990:93).

Their spiritual path has not been straightforward and was marked by challenging moments, where doubt has been present, only to be illuminated by strong feelings of trust in a higher power, resulting in stronger convictions. Faith-challenging life cycles like Fairydust's accident or Pixie-K's abusive relationship, were overcome with their openness to new life-choices and hopeful commitment to a different result:

Fairydust's Interview

They can't, they just said the nerves must have reconnected somehow, but they don't understand the mechanisms that have connected my brain and the signals. Because I knew there was signal potential in my legs, but the damage was in the spine, so the brain was sending the signals but they weren't getting through, So they don't know what has changed. But you know, 'Hey, you're moving your legs and you're walking now but there's no explanation at all'. That's where they need to be exploring. I need to say to people that there is so much to physical healing than physiotherapy. Because for me, I think I am a walking advert to exploring other parts of your should and your mind. So, I'm going forward and I would like to do more with that.

Pixie-K's Interview

(Talking about insights she had)

Definitely, but not anything specific that I can call it, just a feeling of reassurance and 'This is who you are, you know who you are, you can do anything anywhere and still feel you, because that's how strong you are'. (…)

At the moment I am trying to embody the whole playfulness of the Universe and how your vibrations are is where you go. After all these years and all that has happened I said to myself, 'I have to lighten up and act how I feel, which is light, all these things were weighing on and I wanna play. Being here is playful, there's no reason not to… But this is information that I kind of obtained from other sources.

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4. Appreciation of spiritual diversity

Critical for religious growth and related to the tentativeness by which a mature religious outlook is maintained is an openness to religious faiths and ideological systems that are different from one's own (Genia; 1990:94).

A spiritual mature outlook on life has translated into their openness to explore a variety of alternative therapeutical modalities, without prejudice or reproach, while maintaining enough discernment and critical judgement:

Fairydust's Interview

(Talking about a past life regression with hypnosis)

So, I did the NDE with you, one year ago, and more or less about the same time I did the regression. (…) And… to be fair, I did not know what to expect when I went through, I was little bit reticent. And she did all the prep work, and when it kind of started, I went very deep very quickly, and it was like I was two separate people, I was visiting these lives, it was like a film playing for me but I felt the intensity of all those visits, like it was real time.

Pixie-K's Interview

I would relate a lot to this stuff, like Tarot cards and things like this. I got to do lots of things, I learned to meditate with rune stones, and tried to find the same stone, when I was asleep. I would go to sleep with one in my hand, and I would try to find a single in my dreams. I got really into about dreaming…

5. Absence of egocentrism and magical thinking

Religion that is used for magical wish religious fulfilment of egocentric needs or to achieve union with an idealized benevolent, all-knowing, all-powerful parent figure is the hallmark of an immature, self-serving, and utilitarian religiousness (Genia; 1990:94).

For them, their spiritual outlook on like is not used as a defence mechanism against a hostile world or to justify their personality defaults, to accuse others or to maintain a sense of identity. It is in fact a lens, through which their interpret reality in a constructive way, from a higher understanding on how the mechanics of reality works. It is not a tool to bend or distort reality, but an awareness enhancer, that allows their psychological structure to encompass a wider reality where the divine element is included:

Fairydust's Interview

Sofia: *So, you think in your situation precognitive dreams are there for a reason, you can really avoid situations …*

Fairydust: *This was the first time I tried to change it for somebody else. For my family, I would see something and go 'Oh, I've been told this, so I need to try and change that'.*

Interviewer: *Are there situations that you cannot do a thing?*

Fairydust: *That can happen, yes.*

Interviewer: *Do you feel left with that feeling of powerlessness?*

Fairydust: *Yeah, like when my cat passed away, I knew there was nothing I could have done while I was dreaming it… (…) I felt has though he came to me at the time he was passing. So, there's, I think, two types of dreams, kind of as they happen.*

Interviewer: *I met people that said they had precognitive dreams, but they could not do a thing.*

Fairydust: *I've always been able to change. I haven't done it very often, but I have done it with all my family and the times I haven't done it, they've happened.*

And there's a lot of self-acceptance that needs to happen. Not everybody who is in depression or trauma has the ability to see things from a different point of view… And like I said. That was the biggest thing for me, was how simple, really, it was, with guidance, to be able to climb from 'here' and be somewhere else, in this collective consciousness… Yes, even though in the end it's just another point of view, but I really want to develop that… (…)

Pixie-K's Interview

It's like being conscious and then being aware of your consciousness, and then being aware of the awareness, you know what I mean? It's like I'm here doing this thing and I'm aware of that, but I am still here being aware of all of these places. (…) I think the best part of being alive, from all of these different perspectives, is if you can line them up and see them from the same tube, and understand that that's what you are here for, I think.

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6. Equal emphasis on both reason and emotion

According to Anderson, " . . . a healthy religion is one that is emotionally satisfying and intellectually convincing. "[46] *Most experts in religious psychology agree that a mature religious outlook contains a balance between reason and emotion***.** (Genia; 1990:94).

For them, spirituality is experiential, it is not an intellectual exercise on how the world works, it is a kind of knowing that comes from living and feeling, on a 1st person basis, the spiritual rules they believe in. So, every existential issue they have been confronted with, is interpreted with both mind and emotion, in a synergistic way, which for them is an empowering combination:

Fairydust's Interview

(Talking about a past life regression with hypnosis)

Fairydust: *There was this third life, I can't really remember it very well but that was the one that stayed with me the most, I think they were all related though to leg injuries or lower back injuries. And it was really strange, because when I became aware that I had these traumatic accidents in my past, it just… I felt lifted,*

I felt as though suddenly could differentiate myself from them and then let go and my body was allowed to heal. It was as though they were dragging me and angering me and so my body couldn't heal.

Pixie-K's Interview

(Talking about a paranormal experience she had as a teenager)

Speaking of those, I was quite young, I don't know, about 16-17, I felt that I was cleansed of a lot of punishing self-negative thinking by these beings that were able to test the properties of it and they took it from me, because they don't know about it, in their culture, they don't have this negative self-vibe… (…) I could best describe it as a doctor, or more than one, they were so many in my room, it was like a full-experiment thing, they asked for consent and everything. I consented to it. (…) it was important, it was like pulses of energy and on the next day I felt better, cleansed…

Because you create your Universe from your ideas, so maybe that's the only way I could process that kind of otherworldly visitation at that point in my life. Or whatever it was, I felt it benefited me, so I didn't question if I was going mad or not because I felt it had a positive effect.

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7. Mature concern for others

A mature religious expression takes seriously the command to "love thy neighbour as thyself" through passionate commitment and effective action, not only toward self-realization but toward the realization of humankind as well. By confronting life's challenges beyond their own egocentric orbits, the religiously mature "bear the fruits" of truly living their religious commitment through productive love and work. (Genia; 1990:95).

They feel that any innate or acquired gifts should be shared with others, to help them in their life challenges and to be of service to the greater good. They have an unselfish approach towards life and people in general, who deserve to be treated in the best possible, compassionate manner. They

do live according to the perennial philosophy's ethical Golden Rule: "*Do unto others as you would have them do unto you.*":

Fairydust's Interview

And after that we had lots and lots of occasions. So, I used to see if he had an accident in a car. Numerous occasions I would take the keys and say 'No, you're not going today'. I had a friend who I saw her husband have a crash and it was so vivid. The dream was, I went to the funeral, and me and my friend were talking about his crash and we were describing exactly what happened. (…) So, she stopped her husband, sort of delayed him an hour to go to work and he was running around the house trying to retrieve his keys and they had a bit of a squabble. Eventually he got his keys because he was late for work. Anyway, on the way to work it came on the radio that there was an accident at that junction at the time I said it was. And it was with a lorry and two cars. So, he said it was there that he would have been if he followed his normal route at a normal time.

Pixie-K's Interview

I thought it would be quite an interesting role for me. It's a volunteer role and in the Coroner's Court there's no one else to support a family, they have an inquest and go home, there's no one to show them where the toilet is, if you need to step out or whatever. It's just someone who would be supportive.
But this weekend I'm doing Reiki, and this seems to be the beginning of what I want to do, certainly in what regards the death doula thing, which is more like an energetic role rather than organizing your last wishes and etc

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8. Tolerance and human growth strongly encouraged

A mature religious outlook balances humility with healthy, positive self-esteem and emphasizes forgiveness over guilt.[22] *Although the religiously mature accept responsibility and experience guilt for wrongdoing, they reject excessive self-condemnation* (Genia; 1990:95).

For them, life is all about responsibility, about knowing your place in the scheme of things, about learning the right balance between giving and receiving, so that they can be able to learn and forgive those who are not able to do so:

Fairydust's Interview

My instinct, naturally, is always to put other people first, I am really giving, kindness is one of my strengths to the point where I actually tell myself I give to much away. And I know this is part of my personality but there can be a closing, where you don't do use your whole self for yourself, you just keep giving to other people to try and make yourself feel better. And I knew, from that moment on, I needed to open that other part of myself up and start being selfish but in a really healing way, in a positive way in a kind way to myself, with a kind of compassion I hadn't had before.

Pixie-K's Interview

I couldn't live, no, I really couldn't live with it. And, physically, I was not healing… It really messed with my head. These elements of still wanting him to do the right thing I guess, giving him a chance to sort himself out, maybe, I don't know, But, yeah, I can't actually, day to day…this is a massive truth and I can't deny it: I feel better now that've done it.

(…) *Yes, to be open to other things. When I was in therapy my counsellor would say that it was so refreshing to work with someone who actually wants to be well. Because it's so easy to get stuck in places, feel safe and just exist there…*

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9. Struggles to understand evil and suffering

A healthy religiousness encourages involvement in life rather than fearful separation. It stimulates a generally optimistic view of the world and of human nature, although not one that is naive in denying the reality of tragedy and suffering. (Genia; 1990:95).

For them, their spiritual quest has been about accepting and mending the wounds of the past, trauma, injury, and all the associated negative emotions, and to integrate those unhappy parts of their story into a coherent and updated narrative, from which they can derive meaning, a sense of purpose and hope for a better future.

Fairydust's Interview

(Talking about a past life regression with hypnosis)

And she took me deeper and I ended up reliving an accident where I was being in a farm, it was crushing my legs and the person died, crushed to death, and I relived that moment with absolute intensity, it was like I was there for every single breath as it passed. (…) Afterwards, it took me quite a while to process what happened, I was almost shocked that I relived this, it was almost like a near-death experience again. But to know that I had had this traumatic injury to my spine and to my legs, and I was almost carrying that injury with me still. I felt as though I could let him go and say you're at peace now and that there was this separation as I kind of came to me again and said thank you for letting me know you were there, and I can go on now.

Pixie-K's Interview

Yes, it was scary, we were terrified for years, it was not nice at all… At one point I was keeping a diary because I thought he was going to kill me, and somebody needed to know what happened. It was so weird and bizarre, really strange, but now I'm coming to a point where I'm like 'This is not my life, this is not my life', and really felt this was not my life, and I'm understanding this is his story'. After the separation it was really a lot better, but even then, at times I felt I was held, I was supported, spiritually, definitely.

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10. A felt sense of meaning and purpose

> *In other words, healthy religion becomes a point of reference that not only provides guidance for one's decisions and actions in all spheres of life but also infuses one with a sense of meaning and purpose as well.* (Genia; 1990:95)

Before, and especially after the induced NDE, they felt their life had a purpose, linked both to positive and negative cycles, that somehow integrated with their personality and life-challenges. They were already able to find meaning in their difficulties, but after the hypnosis session they were imbued with a sense of mission to go about and share their life lessons with others. They know what happened to them also transcended them and their will:

Fairydust's Report

I found after the experiment I was sensitive to my feelings about my purpose. I felt peaceful and supported in attaining my goals.

Pixie-K's Interview

And what that did for me is that I've got a sense of a role to play, like there is a reason for me being in touch with that stream. And then again, being of service, somewhat, because I want to explore it as well, even though I am quite happy to flow with things, it would be really good to be able to utilize it more, that I can be helping people, or even still helping you the study or them with death, I don't know, whatever comes. Because the more I make sense of it, the more I can channel it, but yes, that's why.

APPENDIX 28

Hypnosis as a Safe Therapeutic Technique : arguments presented before the Research Ethics Commitee

Hypnosis as a safe therapeutic technique

Clinical hypnosis, a technique approved by APA, is recognized as a powerful and effective intervention tool in the treatment of a wide range of situations. And, when applied by qualified professionals, can be used in a safe and risk-free manner. The hypothesis of an NDLE being interpreted as negative is theoretically possible, as in any other subjective experience. In any case, it should be noted that the effects of hypnosis vary, not only according to the subject, to their physiology, personality, and life experiences, but also according to the context. The effects of stage hypnosis and the risks associated with induction by untrained people who deliberately create embarrassing situations, are different from those occurring within the application of a laboratory protocol by mental health professionals, trained to intervene in different scenarios.

The literature on the risks associated with experimental hypnosis is not very abundant, but the conclusions emerging from existing reviews (Gruzelier, 2000; Lynn, Myer and Mackillop, 2000; Wagstaff, 2000), indicated that post-hypnotic effects within a sample of university students were not different from those produced after a situation of evaluation in class or exam (Coe and Ryken, 1979; Lynn, Martin and Frauman, 1996; Peterson et al., 1991). In fact, according to the available research, sample students show more negative effects following a test than after participating in a study involving hypnosis which, in addition, was afterwards considered as more pleasant than other activities (Coe and Ryken, 1979; Witzenhoffer and Hilgard, 1962 *in* Lynn, Myer and Mackillop,

2000; Petersen et al., 1991). However, as in any activity there are possible risks and, even in a medical consultation, there may be conversational iatrogeny. In that sense, the literature indicates that some people experience some transient effects during or after hypnosis in an experimental setting which can last from 5 minutes to 3 hours after induction (McHovec and Oster, 1999; Barber, 1998; Lynn, Martin and Frauman, 1996; Page and Handley, 1996). Such effects typically include headaches, confusion, dizziness or nausea and, less frequently, anxiety or panic (McHovec, 1998), ranging from 5% to 31% (Lynn, Martin and Frauman, 1996). The highest percentages of negative effects results from poor application of the techniques or bad clinical practice, and the lowest rates occur in contexts where samples taken from university populations are used (Hilgard, Hilgard and Newman, 1961; Orne, 1965; Hilgard, 1974). Kihlstrom (*sd*) suggested that more common situations, such as dizziness and headache are temporary and easily remediated, occur in less than 5% of the subjects and, generally, hypnosis is perceived by the subjects as a pleasant and positive experience (Brentar and Lynn, 1989). Thus, much of the existing literature on the negative or unwanted effects associated with experimental hypnosis conclude that there is no basis for linking those effects to the hypnotic process, or that such a procedure is responsible, more than any other, by subjective stressful changes (Brentar and Lynn, 1989).

It has also been evidenced that the frequency of post-hypnotic effects varies according to the subjects' hypnotic susceptibility, but studies have shown discrepant results (Coe, Peterson and Gwynn, 1995; Lynn et al.,1992). Therefore, the prior application of a scale measuring individual hypnotizability is not useful for the purpose of excluding subjects who are more likely to suffer some undesirable effects. There are indeed individual differences in responses, and these are also relevant to most studies: the lack of association with hypnotizability, along with the finding that negative effects are equally likely following mundane nonhypnotic procedures (even relaxation), implies that the negative effects are not produced by, or limited to hypnosis. The timing of negative reactions, however, may lead participants and experimenters to misattribute them to hypnosis

(Lynn, Myer and Mackillop, 2000). From the above, and as Lynn, Martin and Frauman (1996) refered, to the present time there is no reason to believe that hypnosis poses special or unique risks to participants. In conclusion, well controlled experimental studies suggest that hypnotized participants are not at special risk, although negative effects, which require vigilance and attention, occasionally occur and demand recognition and attention.

All considered, even if research indicates that negative effects are relatively rare in the overall context of individuals experiencing hypnosis, when they do occur, should be considered serious enough to demand close attention. Wagstaff (2000) concludes that, on the basis of the available evidence, there is no support to affirm that hypnosis procedures, even those that may be distressing to participants, especially predispose anyone to develop schizophrenia or any other form of madness. However, there is extensive literature that warns about the production of anxiogenic and psychosomatic effects in patients with severe psychopathology (schizophrenia in particular), which cannot be ignored. In this sense, the use of experimental subjects with this type of pathology should be avoided and prevented at all costs, and it is anticipated that the fact that the literature on experimental hypnosis does not report similar cases, is due to the application of several safeguards that should be included in any study. In any case, even with the smallest possibility of adverse effects occurring, however temporary and not serious, it is important that precautions are applied before, during and after the protocol's application. Orne (1965) recommended the exclusion of subjects with obvious psychopathology. So, a process of filtering should include a medical and psychosocial questionnaire, with questions about previous experiences, current and past physical and mental health conditions, current consumption of substances, whether drugs or alcohol and the existence of fears, phobias, conflicts and social problems (Page and Green, 2002). Also, there should be an adequate management of expectations, through a previous enlightenment session, taking care not to suggest exactly what is intended to be avoided when specifying minimal and

transient risks, in order not to create "self-fulfilling prophecies" (Kilhstrom, s.d., Page and Green,2002).

A NDLE induced through hypnosis as a safe therapeutic technique

Even considering the safety of the technique, if the use of new protocol designed to induce a NDLE is being contemplated, a previous analysis on the possibility of triggering even transient and non-serious adverse effects should be performed. According to the literature, is it not likely that it can. First, it is important to emphasize that the fact that the experience occurs in the context of hypnosis, without any kind of risk or threat to life, removes the possibility of triggering dissociative experiences, otherwise associated with events that are at the origin of symptoms of post-traumatic stress syndrome (PTSD). Greyson (2001), analysing NDEs after a physically distressing event, affirmed that it would be surprising if there were no association with PTSD symptoms. However, he adds, if dissociation to trauma can effectively predict subsequent episodes of PTSD, the type of dissociation that occurs in a NDE, does not. Additionally, he suggests that NDEs may even have a defensive function, protecting against the subsequent development of PTSD (*idem*). In this study, Greyson (2001) concludes that NDEs differ from other forms of peri-traumatic dissociation because of their strong positive affect, and it is plausible that this affection may protect survivors from further development of PTSD. Therefore, it can be concluded that, in a safe experimental situation, it should not be expected that the normal risk of hypnosis might be increased by the fact that the experience scenario involves experiencing the typical phenomenology associated with an NDE.

However, if most NDEs are positive, one cannot say that frightening experiences do not exist, even though there is no solid evidence on their exact frequency, when the published figures, ranging from 1% to 22% are based on comparative values extracted from Gallup polling extrapolations

(Bush, 2002). A master's thesis presented in Portugal that studied people who had an episode while in an intensive care unit, reported that negative experiences were associated with physical injuries resulting from multi-trauma after road accidents (Dias, 2005). It was also verified that in cases where there is a perception that the NDE had a negative content, this occurred in function of the interpretation given to the experience (*see* Section 2.10.). In most cases, the common perception that reality does not reduce itself to the physical world, can cause some dissonance towards previous materialistic worldviews (Bush and Greyson, 2014). However, it is also known that these interpretations are not static and tend to change over time and that, only in the absence of integration they remain tinged with a negative tone (Bush, 2002). This is to say, that in the unlikely case of a negative emotional experience, it can be properly integrated and re-signified, as with any other therapeutic intervention. As Bush (2002:132) concluded: *if there is a single conclusion to be drawn here, it may be that we are called to a higher level of understanding: to recast our assumption that pain is equivalent to punishment, that suffering is in itself malevolent, that there is no gift in the dark. Identification with an appropriate archetype and expansion of the meaning of their own symbols can help people move toward resolution of these experiences with a profound sense of the Mystery we share with all of human history.*