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## **IS HEALING AN OPTION TO AID SUSTAINABLE HEALTHCARE FUTURES?**

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It is becoming ever more apparent that the current model of healthcare delivery within developed countries is not sustainable. There are at least two major problems: the continuing development of expensive, high-technology approaches to diagnosis and treatment, which are putting an unsustainable economic burden on healthcare organisations (1); and the rapidly increasing carbon footprint of modern healthcare delivery systems, resulting in an unsustainable burden on the planet (2). Many possible answers to these problems are being considered by medical bodies including the British Medical Association (3). In addition, politicians are turning their attention to prevention, and are trying to move the responsibility for maintaining good health away from healthcare workers, and back to individuals and communities. For example, Public Health England is developing work on ‘salutogenesis’ (the generation of health) in addition to working on the prevention of disease (4,5). Over the last few years there has also been a burgeoning interest in what might be called ‘low-tech/high talk’ interventions such as the ‘walk and talk for mental health’ movement (6) and arts for healthcare (7). This has been accompanied by an increasing appetite amongst the public for complementary and alternative approaches to medicine (CAM).

### **Why Healing?**

Healing is an inexpensive, low-tech intervention, with a low carbon footprint and much potential. There are many different types of healing practice, but in the UK the most popular forms (such as Reiki, energy healing, spiritual healing and therapeutic touch) are based around the concepts of channelling or balancing energy. These practices generally but not always involve a healer and a client meeting with the intention of facilitating healing. Most healers think energy exchange is the main mode of action (8). Many healers regard their ability as a gift that should be given with love to others, and so charge little or nothing for their services. However, healing, like many other forms of CAM includes a diverse group of practices, described with differing terminologies, carried out by people with widely varying levels of training and competence,. In addition, and again in common with other CAM practices, healing’s efficacy is disputed. The biomedical community finds it hard to believe in

healing, for it cannot be explained within our current materialistic understanding of the world (9).

### **Can it possibly work?**

The best evidence for determining the efficacy of any intervention is said to come from high quality randomised controlled clinical trials (RCTs) designed to reduce the likelihood of bias (10). Not surprisingly, many investigators have used RCTs to assess the effects of different types of healing. As is usually the case in the world of research, the results of different trials have varied, some showing good effects, others not. The accepted technique for dealing with such variations in trial outcomes is to undertake a synthesis or meta-analysis of all published trials (11). This approach brings all available data together so that the quality of the different trials can be assessed, the analysis adjusted accordingly, and the possibility considered as to whether unpublished work might have biased the overall results. In general, data from a meta-analysis of trials are expressed in terms of the '*effect size*' of the intervention (an assessment of the average amount of change that the intervention achieved) and *statistical probability* (how likely it is that the result could have arisen by chance). The effect size and statistical analyses compare the intervention being tested with a 'control' intervention, which might involve doing nothing, or using a sham or dummy intervention (a placebo) to assess what would have happened if there had been no specific intervention, but all other aspects of treatment (including the clients' expectations) had been the same for both groups.

#### Key features and advantages of RCTs

- 1) A treatment is compared with a 'control' which must be sufficiently similar to the active treatment
- 2) Random allocation of patients between groups sufficiently similar (or large enough) to ensure that any divergence in outcomes is unlikely to be due to special differences between the groups
- 3) Blinding means that neither patients nor professionals can unwittingly influence the results through placebo or other expectancy effects.

Some healing practices involve the therapist touching their clients, but many do not. A new meta-analysis of 'non-contact' healing studies has just been published (12). For the purposes of this study the researchers only considered trials of healing interventions *which did not involve any direct contact* between the therapist and client. This precludes the possibility that any resulting changes in health status could have been due to physical contact rather than the healing intent. The authors undertook a comprehensive search of the literature. The quality of each study available assessed independently, along with an assessment of publication bias. Roe et al. who performed this state-of-the-art meta-analysis of all trials reported positive outcomes for human non-contact healing intention: a pooled effect size, from 57 different trials of 0.23. There was considerable heterogeneity in the trials, and many were of poor quality, but the results remained significant even when the analysis is restricted to studies meeting minimum quality standards.

## **Problems with RCTs**

Relying on data from standard RCTs as a way of assessing the efficacy of CAM interventions such as healing is not without its problems; for instance it is difficult to find an appropriate 'sham' control. In CAM there is a lot of interaction between the so-called 'specific' effects of the treatment (the healing energy flow, the homeopathic remedy, or the placement of acupuncture needles for example), and the 'non-specific effects' that include things like the relationship between practitioner and client, and the environment in which the treatment is being given. Conventional 'biomedicine' dismisses these 'non-specific' effects as a part of the placebo response. But if, as Paterson and Dieppe have suggested, there is interaction between the non-specific (placebo) effects of an intervention, and a treatment's specific effects, RCTs will always under-estimate the effect size of the specific part of the therapy. Paterson and Dieppe argue that this is one of the reasons why CAM therapies might seem to be ineffective in trials and meta-analyses, and why such treatments are commonly written off as 'just a placebo' by some biomedical authorities (13).

## **Pooling the data**

The new meta-analysis by Roe et al. (12) has tried to address this problem, by looking at the effects of non-contact healing on non-human targets. The advantages of studying such systems is that a good placebo control group is less important: expectations (a major determinant of a positive placebo response), patient-practitioner interactions, and the environment in which the healing takes place are far less likely to bias the results of experiments on plants, animals and cell cultures. Experimenter bias might still be important, but it is harder for scientists to explain away a positive effect on a non-sentient target as 'just a placebo response'. The overall results of this meta-analysis suggest that non-contact healing results in relatively small, but highly statistically significant effects on non-human targets, as well as on humans. Indeed, both the effect size and statistical assurance were slightly greater in some of the non-human systems than they were for humans — the pooled effect size of healing from 49 non-human studies being 0.26. There was some evidence for publication bias (studies resulting in a positive outcome being more likely to be published than those showing negative results), but the data clearly indicate that non-contact healing intention can result in beneficial outcomes on both human and non-human targets.

## **Other ways of researching**

Whilst this sort of study is helpful and important, and may help close the gap between those who practise and believe in healing, and those who dismiss it as nonsense, conventional RCTs should not be considered the only valid way of investigating the efficacy of such CAM interventions. Healing and other CAM interventions are 'complex': unlike drugs they involve more than a single component, and they often rely heavily on human interactions. Guidelines for the investigation of complex interventions recommend the use of a variety of different types of trial design rather than the simple, individually randomised RCT. And in some instances, experimental trials are inappropriate or unnecessary, so that other sorts of data perhaps using observational and qualitative methods to gather data should be used to assess the value of an intervention (14). But the way in which most medical research strives to be objective and to bracket off human interactions means that its favoured methods do not deal well with complexity, or with subjective, personal, experiential ways of knowing. So we may need to use other approaches. Realist-based research (15) is an example of a system which,

because it comes from the field of sociology and so recognises the importance of context and complexity, might offer one way to move the field forward. Realist research asks the question 'what works for whom and in what circumstances?'

### **What do we conclude?**

From these data we conclude there is evidence that non-contact healing intention can indeed have beneficial effects, with the usual caveat that more research is needed. Although Roe et al. found some 106 trials of healing, this is a relatively small number for such a huge subject, and many of those trials were of poor quality. Many practitioners of healing believe the main 'ingredients' in non-contact healing interventions are focused attention with good intention. Healers are not the only people who can and do use that approach with their clients; many doctors and CAM practitioners conduct their business in a similar way. Could healing intention be why some practitioners are able to achieve better results than others when using similar techniques?

There are many other reasons to advocate interventions such as non-contact healing in the future. It is cheap and sustainable, it helps people stay well and can assist in the conventional treatment of disease. Unlike many other kinds of intervention it appears to be timeless: healers and healing have been a feature in all societies and cultures throughout history. Healing is unlikely to suffer from becoming irrelevant as disease and illness problems change, or to suffer from habituation problems. Antibiotics have to be constantly modified in order to retain their efficacy in the treatment of infections, as pathogens adapt to such environmental threats in the manner of the 'Red Queen Effect'. Healing does not seem to lose its effects on health and wellbeing in this way. However, the sustainability of the healing practitioners, as well as those of healthcare in general, will need to be considered if healing is used more widely; as we pointed out earlier, many healers do not charge for their services, but that way they cannot make a living from the service they provide.

In conclusion, we recommend that healing studies become integrated with mainstream medicine to help us move towards a sustainable healthcare future.

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