



Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by Specialist Community Public Health Nurses?

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Abstract

Oral health is a fundamental aspect of overall health and well-being, particularly in infancy and early childhood (Public Health England (PHE), 2014). In England, Specialist Community Public Health Nurses (SCPHNs) provide mandated contacts with families, creating a unique opportunity to promote early oral healthcare and prevent early childhood caries (ECC). Despite this, gaps remain in the consistent delivery of oral health advice and the potential role for dental nurses to support these interventions is largely unexplored.

This study explored whether dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by SCPHNs. Online qualitative interviews were conducted with SCPHNs ($n=8$), parents or caregivers ($n=8$), and dental nurses ($n=7$) in England. Analysis revealed four key themes: (1) Knowledge, Competency, and Confidence in Early Oral Health Interventions; (2) Interdisciplinary Collaboration and the Role of Healthcare Professionals; (3) Barriers and Challenges to Implementing Early Oral Healthcare; and (4) Improving Access to Dental Services and Early Oral Healthcare Support.

The findings highlight the untapped potential to address gaps in infants and toddlers' oral healthcare. With their clinical expertise, dental nurses are well placed to support SCPHNs in promoting oral health during these critical formative stages. Although SCPHNs recognised the importance of oral health promotion, formal collaboration with dental nurses was largely absent. Many parents or caregivers reported receiving little or no oral health advice, while dental nurses expressed both enthusiasm to contribute and concerns about role clarity, professional boundaries, and training needs.

Overall, this study emphasises the potential for dental nurses to work alongside SCPHNs, representing a novel area of inquiry that integrates dental and public health nursing within the early years' context. These findings offer new insights into how these professions can collaborate to improve oral health outcomes for young children and reduce early years' inequalities.

Keywords: Specialist Community Public Health Nurses (SCPHNs), parents or caregivers, dental nurses, infants or toddlers, oral health, early intervention.

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From the bottom of my heart, thank you.

List of Abbreviations and Acronyms

BDA	British Dental Association
BDHF	British Dental Health Foundation
BDJ	British Dental Journal
BSPD	British Society of Paediatric Dentistry
CASP	Critical Appraisal Skills Programme
CGDent	College of General Dentistry
CIPD	Chartered Institute of Personnel and Development
CNN	Community Nursery Nurses
CYP	Children and Young People
DCby1	Dental Check by One
Dmft	Decay, missing, filled (deciduous) teeth
DMFT	Decay, Missing, Filled (permanent) teeth
DN	Dental Nurses
DNOHE	Dental Nurse Oral Health Educator
DOH	Department of Health
ECC	Early Childhood Caries
<i>et al.</i>	'And others'
Exodontia	Removal of teeth
FDS	Faculty of Dental Surgery
G.A.	General Anaesthetic
GDC	General Dental Council
Gingivae	Gum
Gov.UK	Government United Kingdom
HEE	Health Education England
HCP	Healthy Child Programme
HSCIC	Health and Social Care Information Centre
HV	Health Visitor
iHV	Institute of Health Visiting
IMD	Index of Multiple Deprivation
LCC	Local County Council
LHFT	Local Healthcare Foundation Trust
NCDs	Non-Communicable Diseases

NELSON	Northampton Electronic Library Search Online
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
NN	Nursery Nurses
OCDO	Office of the Chief Dental Officer England
PHE	Public Health England
PICOT	Population, Intervention, Comparison, Outcome and Time
ppm	Parts Per Million
RCN	Royal College of Nursing
RCS	Royal College of Surgeons
RCT	Randomised Controlled Trials
SN	School Nurses
SCPHN	Specialist Community Public Health Nurses
SDS	Salaried Dental Services
UK	United Kingdom
UoNREC	University of Northampton Research Ethics Committee
WHO	World Health Organisation

Glossary of Key Terms used in Dentistry.

Cariology

Definition: The scientific study of dental caries (tooth decay), derived from the Latin caries, meaning decay (Chapman and Felton, 2021). The National Institute of Dental and Craniofacial Research (1999) recommended replacing terms such as “rampant caries” or “bottle caries” with the more precise term Early Childhood Caries (ECC) a rapidly progressing form of decay affecting primary teeth. ECC is initiated by microbial activity and strongly influenced by behavioural factors (Hollins, 2019).

Dentition

Definition: The development, morphology, and eruption of teeth across the life course. Most individuals possess two sets of teeth: the primary (deciduous) dentition of twenty teeth (ten per jaw) and the permanent dentition of thirty-two teeth (sixteen per jaw) (Hollins, 2019). The eruption of deciduous teeth typically begins with the central incisors at around 6-8 months, followed by lateral incisors between 7-12 months, and first and second molars between 12-24 months (Chapman and Felton, 2021; Welbury, Duggal, and Hosey, 2018). By 12 months of age, children generally have around eight deciduous teeth (Chapman and Felton, 2021). Note: Individual variation exists, including supernumerary or congenitally missing teeth, which may alter these numbers.

Oral Diseases

Definition: Oral diseases include a wide range of conditions affecting the mouth such as dental caries, periodontal disease, and oral cancer (Hollins, 2019). Dental caries is a progressive bacterial disease that demineralises enamel and dentine (Foxhall and Lown, 2021; Health Education England (HEE), 2019). Oral diseases share common risk factors with major non-communicable diseases (NCDs), including high sugar intake, tobacco use, and alcohol consumption, linking them with conditions such as diabetes mellitus, atherogenic cardiovascular disease, and certain cancers (Foxhall and Lown, 2021). As NCDs are shaped by genetic, behavioural, and environmental factors across the life course (The Lancet, 2023), the prevention of oral diseases is integral to wider health promotion. Of particular concern is Early Childhood Caries (ECC), the most common NCD in children, which is both preventable and strongly associated with early-life behaviours. Its onset

in infancy and toddlerhood highlights the need for timely intervention to protect lifelong oral and general health (Dawett, Deery, Banerjee, Papaioannou, and Marshman, 2022).

Chapter One: Introduction To the Thesis

1.1 Introduction to Chapter One

Oral health is a critical component of overall health and well-being, particularly in infancy and early childhood (PHE, 2014). In England, Specialist Community Public Health Nurses (SCPHNs) play a significant role in the provision of oral healthcare during this critical development stage. As part of their mandated contacts, SCPHNs offer a unique opportunity to address oral health, laying the foundation for a lifetime of good oral health behaviours. Promoting good oral health to prevent early childhood caries (ECC) is instrumental to achieving positive outcomes for infants and toddlers. Dental and other healthcare professionals have a vital role in ensuring children develop healthy and functional dentition during this early stage in their development (Drummond, Meldrum, and Boyd, 2013).

Drawing on the lived experiences and views of SCPHNs, parents or caregivers, and dental nurses, this study provides evidence to support the argument that dental nurses in England have a potential role in the early intervention of oral healthcare for infants and toddlers during mandated contacts.

This thesis critically examines the existing body of research on the role of dental nurses and SCPHNs in the provision of oral healthcare during mandated contacts, identifying high-quality practices, challenges, and existing gaps. It then presents empirical research undertaken to explore ways to improve the quality of oral healthcare provided to infants and toddlers during mandated contacts, including the potential integration of dental nurses into early oral healthcare strategies and their collaboration with SCPHNs to enhance outcomes for infants and toddlers.

A qualitative design was adopted for this study because understanding the potential role of dental nurses in early oral health intervention requires an in-depth exploration of the perspectives, experiences, and contextual influences shaping both professional practice and parent or caregiver engagement. Qualitative inquiry is particularly valuable where professional roles are evolving, service boundaries are complex, and lived experiences cannot be sufficiently captured through quantitative approaches. By drawing on the views of SCPHNs, parents or caregivers, and dental nurses this study generates a multi-layered understanding of how early oral healthcare is interpreted, delivered, and experienced during

mandated contacts. This thesis offers an original contribution by providing the first focused exploration of dental nurses' potential role within this specific public health context, while also revealing how SCPHN practice and parental and caregivers' experiences interact with, support or constrain this role. These insights advance practice by informing workforce integration and early-years oral health policy, and they extend theory by deepening the understandings of interprofessional public health roles and the relational factors shaping early oral health interventions.

1.2 Study Aim, Research Objectives and Research Questions

The aim of this study is to explore whether dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by specialist community public health nurses (SCPHNs).

The research objectives (ROs) were as follows:

RO1: To investigate the willingness of SCPHNs to collaborate with dental nurses in providing oral health support for infants and toddlers.

RO2: To explore the lived experiences of parents or caregivers regarding oral health advice they have received.

RO3: To examine dental nurses' perspectives on the challenges and opportunities of collaborating with SCPHNs in delivering early oral health interventions.

The three research questions (RQs) were:

RQ1: Are SCPHNs willing to collaborate with dental nurses to provide oral health support for infants and toddlers?

RQ2: What are the experiences of parents or caregivers regarding oral health advice they have received?

RQ3: What are dental nurses' perspectives on the challenges and opportunities of collaborating with SCPHNs in delivering early oral health interventions?

1.3 Researcher's Biography

My professional career has strongly influenced my decision to undertake this study, which in turn will inform and enhance my work with health organisations proactively. My clinical background is in dental nursing, and I am a registrant with the General Dental Council (GDC) for dental professionals. My experience spans general dental clinical practice, oral health education, dental nurse training,

practice management, and organisational leadership. Until recently, I served as a programme coordinator and senior lecturer for the Foundation Degree Science Dental Nursing at the University of Northampton. I hold academic qualifications aligned with this role, including a registered dental nurse qualification (RDN), Oral Health Educator (OHE), an MSc in Public Health, and a BSc in Professional Practice.

In addition to my academic and professional pursuits, I hold several esteemed roles within the field of dentistry and oral health. I previously served as President of the International Dental Organisation UK (IDO-UK), a role that fostered professional collaboration and international engagement. I currently serve as an Oral Health Advisor for the Society of British Dental Nurses (SBDN), where I provide expert guidance and best practice in dental nursing. Locally, I act as an Oral Health Champion for Northamptonshire Health Foundation Trust, promoting oral healthcare within the community. Furthermore, I am a member of the National Oral Health Promotion Group, collaborating with other dental professionals to address oral health disparities and advocate for oral health preventive care.

My dedication to the profession has been recognised through the presentation of a lifetime achievement award by the Society of British Dental Nurses (SBDN), in recognition of my outstanding lifetime contribution in the field of dental nursing and oral health equality. These roles and accomplishments highlight my passion for improving oral health outcomes and addressing systemic gaps in oral healthcare, themes central to my academic research and professional ethos as seen in this research.

1.4 Rationale for the Study

In my role as a dental nurse and oral health educator within general dental practice, I regularly supported patients and families in the management of their oral healthcare. During this time, I encountered very young children who required dental extractions under general anaesthetic (G.A.) due to gross early childhood caries. Children as young as 2 years old presented for tooth removal, a procedure which was extremely distressing for the child, their parents and the clinical team. The removal of deciduous teeth under G.A. can have detrimental consequences for a child, affecting the child's oral health development, and overall wellbeing. These experiences highlighted the urgent need for parents and families to receive

accurate information, practical oral health education, and effective preventive strategies from the earliest possible age.

1.5 Study Outline

This Professional Doctorate study builds on previous empirical research conducted for my MSc Public Health. The aim of that study was 'To explore the parents or caregivers understanding when introducing toothbrushing to children aged between 12-24 months within the home environment'. I employed qualitative, face-to-face, semi-structured interviews to explore whether parents or caregivers had received advice and support on tooth-brushing from any healthcare professionals, and to gather their views on the importance of their child having healthy teeth.

The findings revealed that many parents or caregivers had received no advice or support about their child's toothbrushing, nor had they been shown how to implement it. In some cases, participants resorted to contacting their own dentist for information.

Many expressed the need for more support on how to introduce toothbrushing effectively. Overall, parents or caregivers felt unsupported in establishing toothbrushing routines and wanted clear, tailored messages from midwives, health visitors and dentists.

These findings are consistent with other research indicating that oral health advice given to parents or caregivers is often general knowledge, rather than specifically tailored to the child's needs (Aljafari, Scambler, Gallagher and Hosey, 2014; Olley, Hosey, Renton, and Gallagher, 2011). Working collaboratively, healthcare professionals and dental care professionals could ensure more targeted support for oral healthcare. Collaboration is a vital element in the provision of oral healthcare, and creating opportunities for integration could enhance the future oral health of infants, toddlers, and their families (Tillen, 2013). Such collaboration would allow healthcare professionals to establish strong relationships with families, laying the foundation for consistent and effective toothbrushing routines that can be reinforced and developed during subsequent visits.

Building on the outcomes of my MSc study, I proposed the question 'Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by Specialist Community Public Health

Nurses'. In England SCPHNs have a broad public health remit, which includes oral health. The responsibility for promoting and preventing oral disease in early childhood is complex, and SCPHNs may not have the same depth of specialised training in oral health as dental nurses (Eskyte, Gray-Burrows, Owen, Sykes-Muskett, Zoltie, Gill, Smith, McEachan, Marshman, West, Pavitt, and Day, 2021). Since oral health is closely tied to general health (Foxhall and Lown, 2021), integrating oral health promotion into the wider advice given to families is essential (Public Health, England, 2018).

Collaboration between SCPHNs and dental nurses could strengthen service integration, enabling the delivery of more comprehensive and specialised support for families. Such collaboration has the potential to improve oral health outcomes for children by ensuring that parents or caregivers receive tailored, practical advice on early oral healthcare. Investigating the feasibility of upskilling dental nurses to take on a more advanced role in public health is therefore critical. A dedicated dental nurse oral health educator - public health role could bridge the gap between public health nursing and dental expertise. In the current climate, where NHS dental provision is reported to be at its weakest point in seventy-five years (Williams, Fisher, and Edwards, 2023), such a role could potentially not only alleviate pressure on dental services but also enhance preventive care for young children and their families.

1.6 Brief Context for the Study

This section sets out key aspects of the study context. It provides brief histories of health visiting and dental nursing, and explains the roles of SCPHNs, dental nurses, Chief Dental Officers and the General Dental Council (GDC).

1.6.1 History of Health Visiting

Florence Nightingale's contributions extended beyond nursing to influence the development of public health. Her pioneering work led to the establishment of the first formal training programme for health visitors in 1892, which emphasised preventive care and community health (Dale, 2020). This marked a distinction between nurses who were primarily responsible for "sick nursing", and health visitors, whose focus was on "home health" through preventive care, hygiene, and community health education (Adams, 2012).

From 1925, health visitor training in the UK required a midwifery qualification, and from 1945 a nursing qualification became mandatory. Over the past 162 years, the profession has maintained a strong emphasis on public health prevention, health promotion, and reducing inequalities (Department of Health, (DoH), 2011).

Internationally, the title and scope of the role vary. In the UK, the formal designation is Specialist Community Public Health Nurse (SCPHN), though the term health visitor remains in common use. In Denmark, and Norway, the title health visitor is also used. In Sweden the role is known as child health nurse, in Ireland, Canada and the United States as public health nurse, and in Australia, as family health nurse (Institute of Health Visiting England, 2017).

1.6.2 Specialist Community Public Health Nurses (SCPHNs)

The Nursing and Midwifery Council (NMC, 2004) established a dedicated register for Specialist Community Public Health Nurses (SCPHNs). To be recorded in Part 3 of this register as a SCPHN or School Nurse (SN), a registered nurse or midwife must complete an approved post-registration programme. More recently, in September 2022, the NMC introduced updated standards of proficiency for SCPHNs, setting revised requirements and competencies for practice (NMC, 2022).

In the UK, SCPHNs work closely with families, infants, and toddlers within community settings to promote early childhood development (Government United Kingdom (Gov. UK), (2023). In England, this involves delivering a universal home visiting service focused on prevention, early intervention, and supporting parents or caregivers. Developmental reviews typically occur at 6-8 weeks, 9-12 months, and 2-2½ years (NMC, 2022; Public Health England (PHE), 2018). However, due to workforce pressures and regional variation, some of these universal contacts are undertaken by community nursery nurses (Eskyte, Gray-Burrow, Owen, Sykes-Muskett, Pavitt, West, Marshan, and Day, 2021).

These early interventions form part of the Commissioning Health Visitors and School Nurses for Public Health Service Model for children aged 0 to 19 (Gov.UK 2023; PHE, 2018). This model aims to ensure early identification of potential health concerns that could affect child development and family wellbeing, providing a universal service with additional targeted support where needed (PHE, 2017).

At the 9–12-month review, SCPHNs are expected to provide essential oral health advice, delivering key preventive messages to parents or caregivers (Eskyte *et. al.*, 2021). SCPHNs are uniquely placed to deliver early intervention in the home, often engaging with families earlier and more consistently than general dental practitioners (NMC, 2022; Royal College of Surgeons, 2019). However, during the COVID-19 pandemic many mandatory home visits were replaced by remote consultations, which reduced opportunities to identify health and developmental issues in infants and toddlers (King, Gadsby, Bell, Wong, and Kendall, 2024).

Furthermore, the oral health information delivered by SCPHNs is often basic and reactive, constrained by limited time and competing priorities (Coll, Filipponi, and Richards, 2015). Yet promoting good oral health in early childhood is widely recognised as critical to giving children the “Best start in Life”, a core public health objective (PHE, 2018). The limitations of current approaches suggest that collaboration with additional professionals, such as dental nurses, could strengthen early oral health interventions and help reduce inequalities in oral health outcomes.

1.6.3 History of Dental Nursing

Following the discussion of SCPHNs, it is important to consider dental nurses, who form the second key professional group central to this study. Their historical evolution and current Scope of Practice (2013) provide essential context for exploring their potential role in early oral health intervention.

In the 1850s, with the introduction of dental anaesthetics, women assistants began to be employed to chaperone female patients. Prior to this shift, male assistants supported dentists in arrangement which resembled informal apprenticeships, often progressing into roles as dentists or dental mechanics. The importance of dental health was highlighted during the Second Boer War, when men were declared unfit for service due to poor dental health. This promoted the establishment of Local Education Authorities, and by 1907 the responsibility for overseeing child health, including dental health, was formalised (Reed, 2021).

Evidence from as early as 1914 shows dental nurses assisting in operation rooms during surgeries. During the First World War, the shortage of men led local authorities to employ and train women as dental nurses. Archival records from 1917 indicate the employment of dental nurses, then known as dental dressers in

Derbyshire and Birmingham. In Nottingham (1919), two dental nurses were trained to carry out fillings and extractions under the direct supervision of a dentist. In York, experienced dental nurses were conducting inspections of children's teeth, and proposals were made for their employment in school dental services.

However, the Dental Act of 1921 restricted dental nurses to chairside roles, prohibiting them from undertaking more advanced procedures. Although this was contested, the challenge was unsuccessful, and by 1932 the dental nurses' role had been reduced primarily to oral health promotion (Reed, 2021). This early restriction continues to shape the boundaries of that profession today, with their role defined through regulation and professional standards.

1.6.4 Dental Nurses

Dental nurses are registered professionals with the General Dental Council (GDC), who provide clinical and additional support to other dental registrants and patients (GDC, 2023). They can undertake further training to expand their role and develop additional skills in oral health education and oral health promotion, as outlined in the Scope of Practice (GDC, 2013; British Dental Association (BDA) 2021). Dental Nurse Oral Health Educators (DNOHEs) may play an important role in the community by offering tailored advice and support across a wide demographic, from early childhood to older adults. Their expertise can extend to individual oral healthcare, oral health promotion and disease prevention, population-based oral healthcare, and communication skills relevant to broader healthcare settings (GDC, 2015).

In their community role, DNOHEs can support parents and children aged 0-3 years old with preventative oral health advice, including effective cleaning of newly erupted teeth, teething relief strategies, appropriate use of bottles and drinking cups, guidance on weaning, and recommendations on when to initiate dental visits (Chapman and Felton, 2021; Foxhall and Lown, 2021; Brooks, 2015). Such early guidance can help to establish positive oral healthcare routines, reduce anxiety, and prevent negative attitudes toward dental care (Coates, 2013).

DNOHEs can also educate other healthcare professionals, such as SCPHNs, midwives, and community school nurses, to help ensure consistent and accurate oral health messages, thereby reducing the risk of conflicting advice and confusion

(Chapman and Felton, 2021). As part of the wider oral healthcare team, dental nurses have contributed to major oral health initiatives such as Smile4Life, Child Smile and Mouth Care Matters, highlighting their potential role in supporting public health outcomes (Reed, 2020).

1.6.5 General Dental Council (GDC) and the Chief Dental Officers of the 4 Nations

The GDC is the UK statutory regulator for dental professionals, operating under the Dentists Act 1984. All dental professionals must be registered with the GDC to provide dental care in the UK. The GDC has the authority to update professional standards, guidance, and the Scope of Practice, following consultation with stakeholders. Alongside this regulatory framework, the four Chief Dental Officers (CDOs) provide senior clinical leadership at government level. They work in partnership with regulators, professional bodies, and the wider dental workforce to influence oral health policy and service delivery across the UK. Any expansion of dental nurses' roles must therefore comply with GDC regulations while also aligning with the strategic priorities set out by the CDOs and national governments (Garratt, 2023).

1.7 Overview of Research Design

The historical and regulatory context demonstrates how dental nurses' roles have been shaped by policy, legislation, and interprofessional relationships. These influences are central to this study, which seeks to explore whether dental nurses have a role in early oral health interventions for infants and toddlers during mandated contacts with SCPHNs. To capture these professional and personal perspectives, a qualitative approach was required.

This study was situated within the interpretivist paradigm, using Narrative Inquiry as its qualitative methodology (Clandinin, 2013). Narrative Inquiry is particularly suited to exploring how people make sense of their experiences, making it well aligned to this study's focus on the stories of SCPHNs, parents or caregivers, and dental nurses. By emphasising lived experience, it enables exploration of how oral health advice is received, interpreted, and acted upon, as well as how professionals understand their collaborative roles.

Two interview formats were employed to reflect the study's participant groups. Unstructured interviews with SCPHNs encouraged participants to share their

experiences freely, generating rich accounts of oral health advice. Unstructured interviews with parents or caregivers captured their perspectives on how oral health guidance is received and applied (King, and Horrocks, 2010). Semi-structured interviews with dental nurses combined predetermined questions with open-ended prompts, enabling participants to reflect on their professional roles, potential barriers, and opportunities for collaboration with SCPHNs, while also allowing for unexpected insights.

All interview data were analysed using Reflexive Thematic Analysis (RTA) (Braun & Clarke, 2021), a recursive and iterative process in which themes were actively developed, reviewed, and refined to build a deeper understanding of the findings across all participant groups.

1.8 Structure of the Thesis

The thesis is organised into six chapters. Chapter One introduces the study, outlining its rationale and providing a brief account of my positionality and relevant oral health roles. It also presents the study's aim, objectives, and research questions alongside a summary of the research design. Chapter Two reviews the literature, situating the study within the broader context of oral health and early years intervention. Chapter Three details the methodology, explaining and justifying each component of the research design. Chapter Four presents the study findings, structured around the perspectives of SCPHNs, parents or caregivers, and dental nurses. Chapter Five critically discusses these results in relation to existing research and practice. Finally, Chapter Six concludes the thesis by drawing together key insights and setting out recommendations for future practice, policy, and research.

1.9 Chapter One Summary

Chapter One has introduced the thesis and its central argument, outlining the rationale, my researcher biography, and study context. It set out the research aim, objectives, and questions, and summarised the research design chosen to explore them. Finally, the chapter described the structure of the thesis and offered the contextual background for the study.

Chapter Two reviews the relevant literature to situate the study within the broader context of early oral health promotion, interprofessional collaboration, and public

health policy, providing the evidence-base to explore the potential role of dental nurses in supporting early oral health intervention for infants and toddlers.

Chapter Two: A Literature Review

2.1 Introduction

Chapter 2 was developed from an initial focused scoping review of literature on early oral health interventions and the role of the SCPHN workforce. Through ongoing reflexive practice, the chapter's scope and emphasis evolved to reflect emerging insights, critical evaluation of workforce variation, and the developing understanding of the research context. The scoping review was repeated and updated throughout the study to incorporate new evidence and policy development, ensuring the chapter remained current, relevant, and aligned with the study's focus.

Building on this foundation, this literature review critically explores the potential for collaboration between SCPHNs and dental nurses in delivering oral health advice to infants and toddlers during mandated contacts (Dingwall and Staniland, 2021). SCPHNs currently lead these early years' contacts, with parents or caregivers as the primary recipients of oral health advice; therefore, their engagement is central to establishing positive early oral health practices. By examining the roles of both professional groups, the review considers how collaboration might support early oral health promotion and frames a rationale for investigating the potential contribution of dental nurses within early years' contacts, which is the focus of the study.

Current research is prioritised to reflect contemporary practice, while foundational studies provide historical and conceptual context. The literature is critically analysed and synthesised to summarise key findings, identify gaps in knowledge and practice, and establish a rationale for the proposed research study (Dingwall and Staniland, 2021; Aveyard, Payne, and Preston, 2016; Chong Ho Shon, 2015). This supports the exploration of potential collaboration between SCPHNs and dental nurses within early years' contacts.

2.2 The Purpose of the Literature Review

The purpose of a literature review is to provide the context for the research study (Coughlan and Cronin, 2017). Without continual reference to relevant literature, the study risks being flawed by a lack of theoretical knowledge and insufficient connections to theory, policies, or clinical practice (Imperial College London, 2017; Coughlan, Cronin and Ryan, 2013; Ridley, 2012). Conducting a literature review

enhances theoretical understanding by comparing research studies using different methodologies (Coughlan and Cronin, 2017; Coughlan *et al.*, 2013; Ridley, 2012).

Through the analysis and synthesis of literature, any inconsistencies or gaps in knowledge can be identified. Summarising the findings serves as an indicator of the need for further empirical research and strengthens the research question (Coughlan and Cronin, 2017; Ridley, 2012).

2.3 Various Types of Literature

Literature is classified into four key categories: topical, theoretical, methodological, and policy (Harvard University, 2021). Each category offers insight into the topic, underlying theories and frameworks, methods of data collection and analysis, and the effectiveness of current interventions (Harvard University, 2021).

A scoping review was selected as the methodology for this literature review to provide a comprehensive overview of what is currently known about the research topic. This approach enables the identification of key concepts, research gaps, and the range of available evidence, thereby determining whether further empirical research is both feasible and justifiable (Coughlan and Cronin, 2017; Coughlan *et al.*, 2013). Scoping reviews are widely used to inform policy, research, and practice. Unlike systematic reviews, they do not aim to answer narrowly defined questions.

To enhance the credibility of the review, priority was given to sourcing articles that had undergone peer review prior to publication, as these are deemed to demonstrate greater rigour (Davis, Drey and Gould, 2009). Secondary citations from relevant studies were also examined to identify supplementary sources (Dingwall and Staniland, 2021). Other sources of evidence were incorporated to map the full scope of available research and non-research literature. This included grey literature, such as books to explore theoretical concepts, as well as practice literature offering professional insights (BDJ, 2023; Chapman and Felton, 2021). Where textbooks or professional handbooks were drawn upon, efforts were made to identify and cite the underlying empirical research supporting their recommendations; to maintain academic rigour and ensure the review was grounded in peer-reviewed evidence wherever possible. National guidelines, standards from professional regulatory bodies, and government white papers were

also examined. Examples include documents from the GDC, NMC, and PHE (GDC, 2020; NMC, 2022; PHE, 2021). Care was taken when interpreting government policy documents to mitigate potential biases arising from political ideologies (Hewitt-Taylor, 2011).

Electronic database searches were conducted using Northampton Electronic Library Search Online (NELSON) and Google Scholar. The databases accessed are listed in Table 2.3. These platforms were selected for their extensive coverage of journals focused on dental and oral health, as well as SCPHNs. The search strategy incorporated both key terms and free-text terms, along with a clearly defined inclusion and exclusion criteria, to ensure only articles directly relevant to the research question were retrieved (Aveyard, 2018).

CINAHL	British Journal of Community Nursing	SAGE	Social Work
Cochrane	Evidence-based Practice	Wiley	Oral Health Journals
Dental Nursing Journal	Health Visitors Journal	British Dental Journal	Evidence-based Dentistry
Public Health England	Gov.UK	Science Direct	Internurse
Journal of Oral Medicine and Dental Research	BMC Nursing	BMC Public Health	International Journal of Nursing
British Medical Journal	Web of Science	World Health Organisation	Children and Youth Services

Table 2.3: Databases used in Scoping Review

In conducting the scoping review, a range of key words were used (Table 2.3.1), with consideration given to alternative spellings and terminology. This included variations such as dental nurse, dental care professional, and oral health educator, as well as singular and plural forms such as infant/infants and toddler/toddlers. Synonyms such as children/kids and oral health/dental health were also included to broaden the scope of the search. Interchangeable acronyms, including health visitors and SCPHNs, were incorporated to ensure comprehensive coverage. Search strategies involved the use of phrase searching such as “oral health” or “dental health” using quotation marks to retrieve exact phrases, alongside Boolean operators (AND, OR) to refine results. An online thesaurus was also consulted to support the identification of alternative spellings and synonyms (Aveyard *et al.*, 2021, 2016).

Specialist Community Public Health Nurses	Dental Nurses	Toothbrushing	Oral Health
Health Visitors	Oral Health Educators	Fluoride	Child Dental Health

Community Nursery Nurses	Dental Care Professionals	Diet	Early Childhood Caries
Public Health Nursing Education	Interprofessional	Simple Sugars	Tooth Decay
Community Health Nursing	Collaboration	Preventive Oral Care	Infants, Toddlers, Kids

Table 2.3.1: Keywords Specific to the Research Question

Throughout the search process, it was essential to remain focused and use time productively to avoid being sidetracked by unrelated literature or “disappearing down rabbit holes”. Self-reflection played a pivotal role in determining the appropriate point to conclude the search a process that proved challenging. The formal search commenced on the 16th of July 2018 and concluded on the 16th of December 2023, at which point it became evident that continued searching would detract from the necessary task of critically appraising the collected literature (Ridley, 2012).

Even after the formal search period ended, key journals, including the British Dental Journal, Evidence-based Dentistry, British Dental Nurses’ Journal and Dental Nursing, were monitored for emerging research, alongside broader academic alerts through platforms such as Google Scholar, to ensure continued relevance to the study (Aveyard *et al.*, 2021; 2016). As part of this ongoing monitoring, particular attention was given to emerging national developments, including the First Dental Steps pilot study (Williams *et al.*, 2025), which offered important evidence of interprofessional, health visitor led approaches to early oral health intervention for families with young children. To support conceptual analysis, the Three Horizons model (Baghai, Coley and White, 1999) was applied, providing insight into system-level change and the potential future role of dental nurses in early-years oral health.

Recent nursing literature, including work published in BioMed Central Nursing (BMC Nursing) and the British Journal of Community Nursing, was reviewed to situate the study within wider context of nursing responsibilities relating to oral health across a lifespan (British Journal of Community Nursing, (BJCN) (2023); (BMC Nursing, 2023). Although these publications do not specifically focus on early years oral health, they illustrate the increasing recognition of oral health within contemporary nursing practice.

However, the NMC Standards of Proficiency for SCPHNs (2022/2024) do not explicitly mandate oral health competencies, instead referencing health promotion

and preventive interventions only in broad terms. This regulatory ambiguity underscores a gap within current practice frameworks and reinforces the potential contribution of dental nurses in strengthening early oral health interventions during mandated SCPHN contacts and across wider nursing roles.

Influential texts were also included, particularly those addressing the progression of early childhood caries (Ridley, 2012). The literature was critically analysed to identify similarities, contrasting findings, and emerging themes, thereby supporting a structured synthesis of the evidence (Coughlan *et al.*, 2013).

2.4 The SCPHN Workforce and Training in Oral Health in England

The Specialist Community Public Health Nursing (SCPHN) workforce forms the frontline of early years public health delivery in the UK, with SCPHNs leading the mandated contacts that underpin the Healthy Child Programme (DHSC, 2021). These contacts provide a key opportunity to deliver early oral health advice and preventive interactions. However, the SCPHN workforce has experienced significant fluctuations in size and distribution, which have implications for service delivery and population outcomes (NMC, 2024).

As of March 2024, there were 29,468 SCPHNs registered across the UK, with the majority located in England (22,791), followed by Scotland (3,372), Wales (1,848), and Northern Ireland (1,257) (NMC, 2024). In England specifically, numbers have followed a downward trend over the past decade, contributing to increasing caseloads, workforce instability, and reduced service capacity (NMC, 2024). This reduction has resulted in marked geographical variation in provision, with some local authorities operating close to recommended staffing levels, while others report persistent shortages. These inequities directly affect the consistency and frequency of mandated contacts and the delivery of oral health guidance to families (NMC, 2024).

SCPHNs are regulated by the Nursing and Midwifery Council (NMC) and are expected to deliver health and wellbeing interventions across the life course (NMC, 2022/24). The standards emphasise health promotion, preventive interventions, and working with families and communities, competencies that could encompass oral health. However, oral health is not explicitly named as a required proficiency, contributing to regional and local variation in practice. National public health

guidance, such as OHID's "Child Oral Health: Applying All Our Health" (2022), reinforces the importance of early oral health promotion, yet without regulatory mandate, the extent to which SCPHNs integrate oral health into routine practice remains inconsistent. Some SCPHNs access locally commissioned training or collaborate with dental teams, while others rely solely on optional professional development resources. Consequently, SCPHNs confidence, competence, and preparedness to deliver consistent, evidence-based oral health messages during mandated contacts vary widely (Eskyte *et al.*, 2021; Lewney *et al.*, 2018; Oge *et al.*, 2018; Coll *et al.*, 2016).

The First Dental Steps pilot study (Williams *et al.*, 2025) further highlights workforce challenges in practice. The pilot identified considerable differences between local authorities in how oral health is prioritised within SCPHN practice, the availability of specialist oral health training, and the level of collaboration with dental professionals. Time constraints, high caseloads, and competing priorities often limited SCPHNs' capacity to provide comprehensive oral health guidance to parents or caregivers. These findings reinforce concerns raised within wider literature about the fragmentation of early years public health services and the limited support available to SCPHNs in fulfilling their oral health responsibilities (Institute of Health Visiting, 2023; El-Yousfi *et al.*, 2022; Quinn & Freeman, 1991).

Taken together, these workforce, training, and regulatory challenges indicate a potential gap in early oral health provision for infants and toddlers. This context provides a compelling rationale for exploring whether dental nurses, who possess specialist oral health expertise, could contribute to or strengthen early intervention pathways. Understanding these workforce constraints and variations in local practice is therefore essential for situating the role of dental nurses within early years oral health promotion, which forms a central focus of this thesis.

2.5 Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were initially applied to filter research articles relevant to the research question (Tables 2.5). However, due to the limited number of articles retrieved, these criteria were revisited and refined. As a result, articles published more than ten years ago were not automatically excluded but instead assessed for their relevance to the research question. Where appropriate,

older studies were used to compare historical evidence to current findings (Aveyard *et al.*, 2021; Quinn & Freeman, 1991).

Further targeted searching was undertaken to identify additional articles relevant to the research question (Aveyard *et al.*, 2021). Many of the retrieved studies focused on SCPHNs providing oral healthcare advice to parents or caregivers of infants and toddlers. However, despite extensive searching, no research was identified that explored collaboration between dental nurses and SCPHNs to delivering oral healthcare advice to infants and toddlers during mandated contacts. This notable gap in the literature reinforces the rationale for conducting a scoping review to map existing evidence and highlight areas requiring further investigation.

Parameters	Inclusion
Research methodologies	Qualitative, quantitative, and mixed methods primary research articles conducted in the UK in answer to the research question 'Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by SCPHNs'
Language	Written in English language
Participants	Dental Nurses in the UK SCPHNs in the UK Children aged between 0 – 24 months in the UK Parents or Caregivers in the UK
Period	Published research literature during the period from 2012 – 2024 in the UK
Source	Peer-reviewed primary research journals articles from the UK written in English. To review articles written in English to minimise the potential risks of errors which may occur during the translation Non-empirical information from the UK useful for background information which is relevant to the research question

Table 2.5: Inclusion Criteria

Parameters	Exclusion
Research methodologies	Qualitative, quantitative, and mixed methods primary research articles not conducted in the UK in answer to the research question 'Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by SCPHNs'
Language	Articles not written in the English language
Participants	Not Dental Nurses in the UK Not SCPHNs in the UK Not children aged between 0 – 24 months in the UK Not Parents or Caregivers in the UK
Period	Primary research conducted in the UK prior to 2012 . However, articles published prior to 2012 would be viewed for historical relevance to the research question
Source	Non-primary research articles from peer-reviewed journals not from the UK of non-English language Unpublished research articles not conducted in the UK

Table 2.5: Exclusion Criteria

Articles meeting the inclusion criteria had their abstracts reviewed to assess relevance and suitability for in-depth reading (Aveyard *et al.*, 2021). Articles that

did not fully meet the inclusion criteria were not immediately disregarded, their reference lists were scrutinised to ensure all significant sources were captured (Chong Ho Shon, 2015; Hewitt-Taylor, 2011). To ensure a comprehensive exploration of the topic, theoretical book chapters were sourced from the University of Northampton (UoN) library, alongside publications from professional regulators, UK National Guidelines, policies, and current UK affairs reported in newspaper articles (Coughlin and Cronin, 2017).

2.6 Timeframe

Within academia, it is widely acknowledged that literature used in research, particularly in humanities, should be published within the last ten years to reflect studies of human society and culture (Pollock, Davies, Peters, Tricco, Alexander, McInerney, Godfreu, Khalil, and Munn 2021). In certain professional fields, research literature must have been published within the past two to three years to align with current theories or best clinical practices (Morris, Wooding, and Grant 2011). In dentistry, the prime objective is to apply the principles of evidence-based practice in clinical settings, ensuring that dental care provided is grounded in validated research to enhance the quality of patient care (Durr-e-Sadaf, 2019; Giannobile, Burt, and Genco 2010). However, the translation of dental research into clinical practice can experience delays of up to seventeen years due to various barriers, including clinicians' confidence, time constraints, and the application of clinical skills necessary for implementing new research (Durr-e-Sadaf, 2019).

2.7 Global Literature

To expand existing knowledge, literature from international healthcare system was included for comparison with the NHS (Oge, Douglas, Seymour, Adams, and Csikar, 2018). This approach provided insights into areas such as public health, preventive services, and dental care, as well as difficult choices people face, such as paying for their own dental treatment or enduring lengthy waiting time for dental care (The King's Fund, 2023).

A literature search identified that Portugal, Spain, and Italy operate similar healthcare models, known as their National Health Service. Countries such as Malta and New Zealand also share similarities with the UK model, though differences arise due to political climates, cultural factors, and historical contexts (Edwards, 2018). Globally, Denmark is recognised for having the best overall oral

health, while Sweden, Finland, Germany, and the UK are ranked among the top 10 countries for oral health (Bissett, 2020). However, these rankings are partly influenced by criteria such as the number of dental schools where the UK ranks fourth in Europe and alcohol consumption, the UK consuming less alcohol per capita than many other European countries (Bissett, 2020). However, the UK ranks high in sugar consumption, nearly double the amount of Spain (Bissett, 2020). Countries with health visiting systems like the UK include Denmark, Finland, and Norway (IHV, 2023). Literature from countries with public health systems not comparable to the UK were not excluded, as it provided valuable insights into alternative practices and policies (Arua, Ngwu, Agbo, Haggai, and Ucheka 2022).

2.8 Database Searches

After inputting the key terms into the databases, very few articles were retrieved. Despite extensive searches and modifications to the inclusion and exclusion criteria such as broadening the criteria to include articles beyond the 10-year window of academia only two articles were identified for further review (Whittle *et al.*, 2008; Quinn and Freeman, 1991).

Google Scholar was used to aid in retrieving additional research articles. The search yielded an extensive number of results, with 8,050 hits. However, information sourced from the internet was approached with caution emphasising the need to critically appraise the validity and reliability of the sources (Hornby and Brunette, 2007). After intense searching through the databases and Google Scholar 15 research articles were identified as potentially relevant based on their titles which bore some resemblance to the research question, with some studies mentioning SCPHNs and oral health but did not address any collaboration with dental nurses or any other healthcare professionals. Subsequently, 8,035 research articles were rejected as unrelated to the research question (Ridley, 2012).

Of the fifteen articles reviewed, seven focused on SCPHNs, children, and oral health, but were excluded because the research was conducted outside of the UK (Tantawi, Aly, Atteya, Abdellatif, and Yassin, 2022; Nancy, Barsby, Theillaud, Barbey-Massin, and Thebaud, 2020; Clementino, Gomes, de Almeida Pinto-Sarmiento, Martins, Granville-Garcia, and Palva, 2019; Maharani, Adiatman, Rahardjo, Burnside, and Pine, 2017; Loken, Wang, and Wigen 2016; Rabiei,

Mohebbi, Yazdani, and Virtanen, 2014; Skeie, Skaret, Espelid, and Misvaer, 2011). One article by Albers, Williams, El-Yousfi, Marshman, Patel, Kandiyali, Breheny, de-Vocht, Metcalfe, Witton, and Kipping, (2022) described a proposed pilot study in England of a health visitor led infant oral health improvement programme for children aged 0–5-years. While this study included elements relevant to the research question, only the applicable components were reviewed and are later discussed.

All fifteen research articles, along with their reference lists, were reviewed in depth for any information related to the research question (Aveyard *et al.*, 2021). Two articles were excluded as they were duplicates, resulting from the researchers submitting their work to multiple journals with slight variations in the titles and presentation order of the authors (Giles, Wray, Eskyte, Gray-Burrows, Owen, Bhatti, Zoltie, McEachan, Marshman, Pavitt, West, and Day, 2022; Eskyte *et al.*, 2018). The final selection comprised of five research articles and one proposed study protocol. These included four qualitative studies, one quantitative study, and one observational study. Although the six articles did not fully meet the inclusion criteria, they were deemed partially relevant as their focus was predominately on SCPHNs delivering oral health advice to parents of young children (Albers *et al.*, 2022; Bhatti, Wray, Eskyte, Gray-Burrows, Owen, Giles, Zoltie, Smith, Pavitt, West, McEachan, Marshman, and Day 2022; Eskyte *et al.*, 2021; Oge *et al.*, 2018; Lewney, Holmes, Rankin, and Exley, 2018; Coll, Filipponi, and Richards, 2016).

Scoping the literature had not identified any articles where dental nurses collaborated with SCPHNs to support the delivery of oral health advice. This lack of research posed a concern that some relevant databases might have been overlooked. To address this, a meeting was arranged with the academic librarian at UoN. During the meeting, various suggestions were made of suitable databases including CINAHL, Internurse, Health Professionals and Science Direct. While CINAHL, Health Professionals and Science Direct had already been searched, these were re-examined alongside Internurse, however, no new research evidence emerged.

It was suggested to explore the term dental assistants rather than dental nurses. In the UK, the term dental nurse officially replaced dental assistant in 1994/1995

(Ellwood, 2022). Globally, the term dental assistant is widely used across countries such as the United States of America, Pakistan, Australia, and New Zealand (National Institute of Dental and Craniofacial Research, 2021). While dental assistants and dental nurses perform similar clinical chairside support during patient treatment, this study specifically focused on dental nurses in the England. Therefore, articles referring to dental assistants from other countries were excluded, as they did not directly align to the research question (Ellwood, 2022).

Following a meeting with the academic librarian, a summary email was received outlining the databases discussed and recommending further exploration of the Web of Science database (Siddall, 2021). Despite additional searches, no further articles relevant to the research question were identified.

Table 2.8 illustrates examples of rejected articles due to the research studies not meeting the inclusion criteria, and from other countries outside of the UK.

Rejected articles which did not meet the inclusion criteria	Reasons for rejecting articles which did not meet the inclusion criteria
Parenting practices and oral health behaviours of children in rural Egypt: gender differences in a household survey (Tantawi, M. E., Aly, N. M., Atteya, S., Abdellatif, E., and Yassin, R., 2022).	A study aimed at assessing parental gender difference associated with children's oral health, a survey of 6–12-year-old children.
An assessment of the impacts of child oral health in Indonesia and associations with self-esteem, school performance and perceived employability, (Maharani, D. A., Adiatman, M., Rahardjo, A., Burnside, G., and Pine, C., 2017).	A study aimed at determining oral health in primary school children aged 6-7 and 10-11 age group.
Perceived Impact of Dental Pain on the Quality of Life of Preschool Children and Their Families, (Clementino, M. A., Gomes, M. C., de Ameida Pinto-Sarmiento, T., Martins, C. C., and Palva, S. M., 2019).	A study on the perceived impact of dental pain in early childhood through an oral examination.
Do public health nurses in Norway promote information on oral health, (Skeie, M. S., Skaret, E., Espelid, I., and Misvaer, N., 2011).	Two separate surveys, one on oral health promotion to parents of young children, and the other a telephone survey of public health nurses.
Primary care nurses' awareness of and willingness to perform children's oral health care, (Rabiei, S., Mohebbi, S. Z., Yazdani, R., and Virtanen, J. I., 2014).	A survey on nurses' attitudes towards oral healthcare.
Early childhood caries prevention: non-dental health professionals' viewpoint, (Nancy, J., Barsby, T., Theillaud, M.,	A questionnaire on oral health to health professionals.

Barbey-Massin, C., and Thebaud, N, B., 2020).	
Health nurses' experiences and attitudes regarding collaboration with dental personnel, (Loken, S. Y., Wang, N. J., and Wigen, T. I., 2016).	A study to describe health nurses' experiences regarding collaboration with dental personnel.

Table: 2.8 Database Searches

2.9 Critical Appraisal Tool

Although critical appraisal is not a mandatory component of scoping reviews, an assessment of methodological features was undertaken to enhance transparency and to contextualise the strength of the available evidence. Therefore, appropriate critical appraisal tools were selected to map the quality and relevance of the included studies rather than to provide an in-depth critique (Ellis, 2016). Given the diversity of methodologies, multiple tools were applied to ensure consistency. For qualitative studies, the appraisal framework by Ryan, Coughlan, and Cronin, (2013) was applied, while Coughlan *et al.*, (2017) informed the assessment of quantitative studies. The Mixed Methods Appraisal Tool (MMAT) Hong, Fabregues, Bartlett, Boardman, Cargo, Dagenais, Gagnon, Griffiths, Nicolau, O'Cathain, Rousseau, Vedel, and Pluye, (2018) was acknowledged as the appropriate tool for mixed-methods research, it was not applied because the included mixed-methods article was a protocol rather than an empirical study. Recognising the MMAT demonstrates awareness of a suitable tool for future reviews. My prior familiarity and experience with these tools supported a structured and confident assessment process.

2.10 Selected Research Articles for Critical Appraisal

Six research articles were identified as meeting the inclusion criteria and demonstrating relevance to the research question (Aveyard *et al.*, 2021). Each study was read in-depth with detailed notes taken to extract pertinent data and assess reliability (Moule and Hek, 2011). This process of appraisal enabled an informed decision on whether to retain each study, supported by existing knowledge and wider reading (Nash, 2012).

Key themes, concepts and preliminary themes began to emerge during this stage. (Aveyard, *et al.*, 2021). Ultimately, all six articles were retained as each contributed meaningful insights to the research question (Table 2.10). A detailed account of their methodological approaches is presented in Section 2.11.

1.	Coll, A. M., Filipponi, T., and Richards, W., (2016) <i>Health visitors' and school nurses' perceptions of promoting dental health in children.</i>
2.	Oge, O. A., Douglas, G. V. A., Seymour, D., Adams, C., and Csikar, J., (2018) <i>Knowledge, attitude, and practice among Health Visitors in the United Kingdom toward children's oral health.</i>
3.	Lewney, J., Holmes, R. D., Rankin, J., and Exley, C., (2018) <i>Health Visitors' view on promoting oral health and supporting clients with dental health problems: a qualitative study.</i>
4.	Eskeyte, I., Gray-Burrows, K., Owen, J., Sykes-Muskett, B., Pavitt, S. H., West, R., Marshman, Z., and Day, P., (2021) <i>Organizational Barriers to Oral Health Conversations Between Health Visitors and Parents of Children Aged 9-12 Months Old.</i>
5.	Bhatti, A., Wray, F., Eskeyte, I., Gray-Burrows, K. A., Owen, J., Giles, E., Zoltie, T., Smith, V., Pavitt, S., West, R., McEachan, R., Marshman, Z., and Day, P. F., (2022). <i>HABIT (Health visitors delivering Advice in Britain on Infant Toothbrushing): a qualitative exploration of the acceptability of a complex oral health intervention.</i>
6.	Albers, P. N., Williams, J. G., El-Yousfi, S., Marshman, Z., Patel, R., Kandiyali, R., Breheny, K., de Vocht, F., Metcalfe, C., Witton, R., and Kipping, R., (2022). <i>Study protocol for First Dental Steps Intervention: feasibility study of a health visitor led infant oral health improvement programme.</i>

Table 2.10: Selected research articles for critical appraisal

2.11 Synthesis of the Research Articles

The six retrieved research articles adopted a range of methodological approaches: four employed qualitative methods, one used a quantitative approach, and one was a proposed pilot observational study which outlined a mixed methods design. Of these, five articles that had completed the research process were directly used to address the research question, while the pilot study was included as supplementary evidence. Handwritten notes were taken for each article, and sub-themes and key-themes were identified within each article.

The findings were synthesised using Reflexive Thematic Analysis (RTA), following Braun and Clarke (2021). This process began with systematic coding to identify recurring patterns and meaningful concepts across the articles. Codes were then clustered into potential themes, each labelled descriptively to capture its core meaning. The relationships between themes were further examined, particularly how they interacted across studies and were supported by empirical data. This approach ensured a coherent and transparent synthesis of findings.

2.12 Methodological Approaches of the Six Retrieved Research Articles.

The six research articles employed a mix of qualitative, quantitative, and proposed mixed methods to explore oral health promotion in early childhood, with a particular focus on the role of SCPHNs. These studies examined health visitors and

school nurses' perspectives, organisational barriers, and intervention acceptability in the context of infants and toddlers' oral healthcare.

Qualitative Methodology	
1.	Coll, A. M., Filipponi, T., and Richards, W. (2016): Conducted a focus group with school nurses (n=6) and health visitors (n=3) who had recently completed the Evidence-Based Public Health core module as part of their higher degree Specialist Community Public Health Nurse (SCPHN) programme of study. Thematic analysis was undertaken in which themes and sub-themes were identified.
2.	Lewney, J., Holmes, R. D., Rankin, J., and Exley, C. (2018): Utilised semi-structured interviews to explore health visitors' (n=17) views on promoting oral health and supporting clients with dental health problems. Constructivist grounded theory was employed by developing a coding frame during the research process.
3.	Eskyte, I., Gray-Burrows, K., Owen, J., Sykes-Muskett, B., Pavitt, S. H., West, R., Marshman, Z., and Day, P. (2021): Utilised qualitative interviews and focus groups with health visiting teams (n=18) to explore the organisational factors that obstruct health visitors from engaging in meaningful conversations with parents about young children's oral health. Thematic analysis was adopted using an inductive approach.
4.	Bhatti, A., Wray, F., Eskyte, I., Gray-Burrows, K. A., Owen, J., Giles, E., Zoltie, T., Smith, V., Pavitt, S., West, R., McEachan, R. C., Marshman, Z., and Day, P. F. (2022): Utilised semi-structured interviews with parents (n=17), 2 focus groups of health visitors (n=5) and nursery nurses (n=3) to explore the acceptability of the oral health intervention, HABIT (Health visitors delivering Advice in Britain on Infant Toothbrushing) to parents with young children aged 9 – 12 months. Data was analysed using framework analysis guided by a theoretical framework of acceptability.
Quantitative Methodology	
1.	Oge, O. A., Douglas, G. V. A., Seymour, D., Adams, C., and Csikar, J. (2018): Utilised a web-based self-administered survey with health visitors (n=1,088) to determine knowledge, attitude, and practical behaviour of health visitors regarding children's oral health in the United Kingdom (UK). Data was analysed using statistical package for social sciences (SPSS) for descriptive and multivariate analysis.
Proposed Pilot Observational Methodology	
1.	Albers, P. N., Williams, J. G., El-Yousfi, S., Marshman, Z., Patel, R., Kandiyali, R., Breheny, K., de Vocht, F., Metcalfe, C., Witton, R., and Kipping, R. (2022). Propose to utilise a baseline, follow-up questionnaire and interviews. Suggested data analysis mixed methods quantitative and qualitative. Estimated participants 5 health visiting teams with as many as 789 families.

Table: 2.12: Methodological approach of the six retrieved research articles.

This overview demonstrates the diverse methodologies used to investigate SCPHNs' roles in early oral health promotion. Notably, while the studies capture health visitors' and school nurses' perspectives, none directly examine the potential role of dental nurses, underscoring the research gap that this thesis seeks to address.

2.13 Thematic Analysis of Literature: Coding Process, and Identifying Themes

A manual colour-coding approach was employed to identify recurring patterns, concepts, and themes across the five research articles analysed. This process involved examination of the text to identify key elements from the data. The identified themes were cross-referenced with relevant literature, policy documents, and organisational reports. This highlighted the alignment between the research findings, broader recommendations and key insights presented in the literature (Association of Dental Groups, (ADG) 2024; Denplan, 2024; GDC, 2024; Foxhall & Lowan, 2021; Chapman & Felton, 2021; GOV.UK, 2021).

The themes identified (Table 2.13) reflect the academic perspective and practical guidelines, reinforcing their relevance to the importance of oral health education and policy development (Association of Dental Groups, 2024; Denplan, 2024; GDC, 2024; Foxhall & Lowan, 2021; Chapman & Felton, 2021; GOV.UK, 2021).

Theme 1	SCPHNs' Knowledge and Training in Oral Health
Theme 2	Collaborative Working with Dental Professionals
Theme 3	Oral Health as a Low Priority
Theme 4	Challenges in Access to Dental Services
Theme 5	Limited Resources
Theme 6	Motivating Parents or Caregivers

Table 2.13: Themes Created from the Five Research Articles

2.14 Synthesis of Data Findings in Five Selected Research Articles

The findings synthesised from the five research articles reveal critical insights into the role of SCPHNs in promoting oral health. These studies employed a variety of data collection methods, Coll *et al.*, (2016), and Lewney *et al.*, (2018) used focus groups; Eskyte, (2021) conducted semi-structured interviews; Bhatti *et al.*, (2022) utilised both interviews and focus groups; and Oge *et al.*, (2018) implementing web-based surveys.

Theme 1: Knowledge and Training in Oral Health

Across all studies, a recurring theme was the limited oral health training provided to SCPHNs or school nurses. This was seen as a barrier to delivering key oral health messages effectively, contributing to a lack of confidence among health

visitors and school nurses (Bhatti *et al.*, 2022; Eskyte *et al.*, 2021; Lewney *et al.*, 2018; Oge *et al.*, 2018; Coll *et al.*, 2016).

Bhatti *et al.*, (2022); Eskyte *et al.*, (2021); and Lewney *et al.*, (2018) highlighted the minimal focus on oral health during SCPHN training programmes and continual professional development (CPD) initiatives. This limited focus negatively affected SCPHNs ability to deliver evidence-based advice during mandated contacts.

Theme 2: Collaborative Working with Dental Professionals

The importance of collaboration between SCPHNs and dental professionals was emphasised in studies by Eskyte *et al.*, (2021) and Coll *et al.*, (2016). Shared responsibility for delivering oral health messages could reduce SCPHNs workload and improve the outcomes for children and families (Eskyte *et al.*, 2021). Coll *et al.*, (2016) proposed tailoring oral health delivery based on individual patient needs, while Eskyte *et al.*, (2021) suggested that a multi-disciplinary collaboration could make oral health initiatives more sustainable.

Theme 3: Oral Health as a Low Priority

Three studies Eskyte *et al.*, (2021); Lewney *et al.*, (2018) and Coll *et al.*, (2016) indicated that oral health was not prioritised compared to other health topics. SCPHNs often perceived oral health promotion as a “tick-box exercise” due to time constraints and competing health priorities. This approach limited the impact on children and families and reduced recognition of oral health as a critical public health issue (Eskyte *et al.*, 2021; Lewney *et al.*, 2018 and Coll *et al.*, (2016).

Theme 4: Challenges in Access to Dental Services

Access to dental services emerged as a barrier compared to referrals to other health services (Bhatti *et al.*, 2022; Lewney *et al.*, 2018). Difficulties in referral processes and the lack of standardisation in dental referrals hampered SCPHNs ability to connect families with dental services. Bhatti *et al.*, (2022) reported that despite national campaigns encouraging dental check by 1 (DCby1), fewer than 5% of children had seen a dentist, due to limited access in certain regions.

Theme 5: Limited Resources

The issue of insufficient resources was highlighted by Bhatti *et al.*, (2022) and Eskyte *et al.*, (2021). SCPHNs expressed a need for oral health guides, scripts, or crib sheets to support oral health conversations with families. Resistance to

standardised action plans and inconsistency in delivery further intensified the resource gap (Bhatti *et al.*, 2022).

Theme 6: Motivating Parents or Caregivers

Motivating parents or caregivers in deprived areas remains a significant challenge (Oge *et al.*, 2018). Studies by Bhatti *et al.*, (2022) and Oge *et al.*, (2018) highlight that many parents showed limited interest in oral health practices. However, for some first-time mothers, reassurance and guidance were crucial (Eskyte *et al.*, 2021). Similarly, experienced mothers often felt uncertain when to commence toothbrushing for their children (Bhatti *et al.*, 2022). Families with complex needs benefit from additional support and tailored visits. To avoid overwhelming these families with information overload, a 'drip-feed' approach, providing tailored support overtime, was considered more beneficial (Bhatti *et al.*, 2022).

2.15 Scoping Literature Review: Reflexive Thematic Analysis Conclusions

The studies reviewed highlight a significant gap in oral health training for SCPHNs, which negatively impacted the delivery of key oral health messages to parents or caregivers. This issue, long-standing and first noted by Quinn and Freeman (1991), continues to persist, with health visitors often selectively offering oral health advice only to mothers they deemed receptive. While oral health advice is widely regarded as necessary, competing priorities frequently relegated oral health messages to a lower level of importance.

The recognised lack of training among SCPHNs may contribute to this diminished priority, as highlighted by El-Yousfi *et al.*, (2022), who identified critical knowledge gaps in SCPHNs/health visitors' regarding fluoride guidelines, toothbrushing recommendations, and children's toothbrushing behaviours. Their study further emphasised the scarcity of oral health training resources and stressed the need for enhanced formal education to empower SCPHNs in addressing children's oral health (El-Yousfi *et al.*, 2022).

Evidence suggests that employing the "tell, show, do" approach could greatly enhance the delivering of oral health messages to parents or caregivers. Practical demonstrations, such as teaching effective toothbrushing techniques for infants and toddlers, addressing common barriers, explaining fluoride content and toothpaste quantities, and identifying hidden sugars in food and drink, have shown

to enhance understanding and adherence (GOV.UK, 2021; Chapman and Felton, 2021). This evidence benefits not only parents or caregivers by improving oral health outcomes but also supports SCPHNs by equipping them with practical strategies for delivering clear oral health advice.

Collaboration with dental nurses offers a promising solution to these challenges, with the potential to reduce the prevalence of ECC, lower demand for extractions, and reduce the cost implication of general anaesthesia to the NHS (GDC, 2024; GOV.UK, 2021; Chapman and Felton, 2021). By working closely with dental nurses, families including those with complex needs could be given the time and support to embrace new technical skills and the reassurance needed for them to maintain good oral health throughout their lives. Dental nurses could also provide the appropriate resources and signpost parents or caregivers to additional information, ensuring continued guidance.

The current strain on dental services, exacerbated by limited access to high street dentistry, poses a long-term threat to children's oral health. This lack of access risks creating anxiety and dental phobias, posing further challenges to the NHS in the future (Association of Dental Groups, 2024; Denplan, 2024). Addressing these issues through preventative measures, supported by collaboration between SCPHNs and dental nurses, is essential to mitigating the long-term impact on children's oral health and the NHS healthcare system.

To align the scoping literature review with the research question 'Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by SCPHNs,' an empirical research study was undertaken to address this issue and explore its potential long-term impact on children's oral health.

2.16 Chapter Two Summary

This chapter presented a scoping review of the existing literature on oral health promotion in infants and toddlers, with a particular focus on the contributions of SCPHNs. The analysis identified several recurring themes, including limited oral health training, competing priorities, barriers to access, and the need for collaboration with dental professionals. These findings highlight the complex organisational and professional factors that influence SCPHNs ability to deliver oral health promotion.

While SCPHNs play an established role in supporting families and addressing ECC, a critical gap in the literature is evident: the absence of studies exploring how dental nurses could contribute to oral health interventions during mandated SCPHN contacts. Despite the emphasis on prevention within the wider public health framework, collaboration between SCPHNs and dental nurses remains under-researched and underutilised.

This lack of direct evidence underscores the need for further investigation into whether, and how, dental nurses could enhance early intervention in oral healthcare for infants and toddlers. Addressing this gap has the potential to inform evidence-based strategies, reduce inequalities, and strengthen policy and practice in children's oral health.

Consequently, Chapter Three introduces the empirical research design undertaken to examine this issue and to explore the potential role of dental nurses in supporting SCPHNs during mandated contacts.

Chapter Three: Methodology

3.1 Introduction to Chapter Three

This chapter outlines the methodology employed to address the study's aim, objectives, and research questions. The overarching aim was to explore whether dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by specialist community public health nurses.

The study pursued three research objectives **(ROs)**: **(RO1)**: To investigate the willingness of SCPHNs to collaborate with dental nurses to offer oral health support for infants and toddlers, **(RO2)**: To explore the lived experiences of parents or caregivers regarding oral health advice they have received, and **(RO3)**: To examine dental nurses' perspectives on the challenges and opportunities of collaborating with SCPHNs for the provision of early oral health interventions.

From these objectives, three research questions **(RQs)** were developed: **(RQ1)**: Are SCPHNs willing to collaborate with dental nurses to offer oral health support for infants and toddlers? **(RQ2)**: What are the experiences of parents or caregivers regarding oral health advice they have received? **(RQ3)**: What are dental nurses' perspectives on the challenges and opportunities of collaborating with SCPHNs in delivering early oral health interventions?

This chapter begins by outlining the philosophical foundations of the study, including its axiological, ontological, and epistemological positions. It then explains the interpretivist paradigm, justifies the qualitative research design, and discusses the rejection of a positivist, quantitative approach. Finally, it considers ethical issues, data collection methods, and outlines the chosen analytical strategy.

3.2 Philosophical Underpinning of the Research Study

The philosophical basis of this study is grounded in the interpretivist paradigm, which emphasises understanding subjective experiences and social contexts (Blaikie and Priest, 2017; Roberts and Condon, 2014; Edmunds and Brown, 2012). A paradigm reflects a framework of philosophical assumptions, including values (axiology), reality (ontology), and the nature of knowledge (epistemology) (Owe Omodan, 2024; Neale, 2009).

3.2.1 Axiological Position

Axiology concerns the role of values in research. My personal and professional commitments shaped both the topic and how participants were engaged. My dedication to improving public health outcomes, particularly oral healthcare for infants and toddlers, is rooted in professional experience, and a strong belief in addressing oral health inequalities (GDC, 2013).

These values, centred on collaboration and equity influenced decisions at every stage, from framing the study to engaging the participants and interpreting findings. Within interpretivism, values are not viewed as bias but integral to understanding and interpretation (Owe Omodan, 2024; Killam, 2013). By acknowledging my positionality, I remained reflexive about how my values shaped the process, ensuring ethical principles such as informed consent, confidentiality, and respect for participants were prioritised (Crotty, 2003).

3.2.2 Ontological Position

Ontology concerns the nature of reality. This study adopts a relativist stance, which holds that reality is subjective and varies according to individuals' perspectives and social contexts (Carter and Little, 2007). The roles of dental nurses in early oral healthcare, and the experiences of SCPHNs and parents or caregivers, cannot be understood as a single fixed reality but are shaped by professional roles, cultural contexts, and personal beliefs (Patton, 2015). This view underpins the interpretivist paradigm, which recognises that reality is socially constructed and best understood through the meanings that individuals assign to their experiences (Piantanida and Garman, 2009).

3.2.3 Epistemological Position

Epistemology addresses the nature of knowledge and how it is generated (Crotty, 2003). This study is grounded in a constructivist epistemology, which recognises that knowledge is actively co-constructed through social and cultural interactions (Denzin & Lincoln, 2018). This position aligns with interpretivism, which prioritises understanding the meanings people attach to their lived experiences (Harding, 2013).

Within this framework, the voices of SCPHNs, parents or caregivers, and dental nurses were central, as their perspectives on early oral healthcare are shaped by unique contexts and interactions (Piantanida & Garman, 2009). Constructivism

supports the view that knowledge emerges through dialogue between individuals and their environments (Guba & Lincoln, 2005). Reflexivity was therefore essential; I remained aware of how my professional background and assumptions might influence the research process. Reflexivity is recognised as critical in constructivist inquiry, acknowledging that the researcher is an active participant in the construction of knowledge (Braun & Clarke, 2021). This helped ensure that the research was conducted with integrity, respect, and transparency (King & Horrocks, 2010).

3.3 Research Paradigm and Approach

The interpretivist paradigm provided a suitable foundation for this study because it prioritises participants lived experiences and the meanings they assign to them (Killan, 2013; Weed, 2009). It enabled an in-depth exploration of how SCPHN's, parents or caregivers, and dental nurses perceive and experience early oral healthcare for infants and toddlers (Denzin and Lincoln, 2011).

Interpretivism was chosen over positivism, as positivist approaches seek objective truths and generalisable findings that would not adequately capture the complexity of individual and professional experiences (Moule, Aveyard, and Goodman, 2017). A positivist, quantitative approach would have reduced participants nuanced perspectives into variables, limiting the depth of insight required to understand collaboration in oral healthcare (Gerrish and Lathlean, 2015; Neuman, 2013). In contrast, interpretivism acknowledges that reality is socially constructed, allowing this study to explore the relational and contextual factors that shape early oral health practices, thereby providing valuable insights into how collaborative opportunities between SCPHNs and dental nurses can be developed and sustained (Bryman, 2016; Holliday, 2016).

3.3.1 Justification for a Qualitative Approach

A qualitative approach, situated with an interpretivist paradigm, was chosen as it best aligns with the study's aim and philosophical underpinnings (Killan, 2013; Weed, 2009). Qualitative inquiry provides depth, flexibility, and context sensitivity required to capture the complexity of the lived experiences of SCPHNs, parents or caregivers and dental nurses (Patton, 2015). By enabling participants to narrate their experiences in their own words, qualitative research produces rich detailed

accounts that capture the complexity of providing or receiving early oral health interventions (McClean, Bray, de Viggiani, Bird, and Pilkington, 2020).

When situated within interpretivism, qualitative research emphasises the understanding that subjective meanings individuals attach to their experiences, recognising that reality is socially constructed and varies across different contexts and individuals (Owe Omodan, 2024; Bryman, 2016). This alignment with interpretivism was particularly important for this study, which sought to uncover how SCPHNs, parents or caregivers, and dental nurses perceive and experience early oral health interventions.

Specifically, a narrative inquiry design was selected, as it centres participants' stories as a means of understanding how individuals interpret and make sense of their experiences (Clandinin, 2013). This design facilitated examination of how these narratives connect and diverge, offering valuable insights into both opportunities and challenges within collaborative early oral healthcare practice.

3.3.2 Reasons Against a Quantitative Approach

Quantitative research, which relies on numerical measurements and statistical analysis, was considered but rejected as unsuitable for this study. While quantitative methods can identify patterns and correlations, they are limited in their ability to capture subjective experiences and human interactions (Sanjari *et al.*, 2014; Neuman, 2013).

In contrast, qualitative inquiry allowed participants' voices to shape the data. This flexibility is particularly important when exploring early oral healthcare for infants and toddlers, as experiences are deeply context specific and influenced by individual, social, and professional factors. Consequently, a quantitative approach was deemed insufficient for addressing the research questions, as it would have restricted the exploration of meaning, interpretation, and lived experience essential to the research questions (Silverman, 2020).

3.4 Methodology and Data Analysis

A methodology provides the systematic framework that underpins a research study, outlining its theoretical foundations and the tools, techniques, and processes used to collect, analyse, and interpret data (Silverman, 2020; Creswell & Creswell, 2018). It ensures the research process is logical and transparent,

enabling readers to evaluate its credibility, strengths and limitations (Bryman, 2016; Mills and Birks, 2014).

3.4.1 Narrative Inquiry as Methodology

Narrative inquiry was employed to collect rich, in-depth accounts of participants lived experiences (Clandinin, 2013). Grounded in Clandinin's social constructivist framework, this approach allowed SCPHNs, parents or caregivers, and dental nurses to share detailed accounts in ways that were personally meaningful and contextually grounded. Narrative inquiry captures the complexity, subjectivity, and nuances of individual experiences. This made it particularly suitable for exploring the roles and perspectives of dental nurses in early oral healthcare interventions (Clandinin, 2013).

Data were collected through unstructured one-to-one interviews with SCPHNs and parents or caregivers, alongside semi-structured interviews with dental nurses. These methods allowed participants to share their experiences in their own words, positioning them as co-researchers (Andrews, Squire, and Tamboukou, 2013; Riessman, 2008). My role as an active participant allowed me to draw on my professional experience, positionality, and interpretations, while maintaining an ethical relationship grounded in trust and respect (Clandinin, 2013). Reflexive practice further ensured participants stories were faithfully represented throughout the research process (Braun and Clarke, 2021).

3.4.2 Alternative Methodologies Considered

To demonstrate the appropriateness of narrative inquiry, several alternative qualitative approaches were critically considered. Each was ultimately rejected due to its limitations in addressing the specific aims of this study (Clandinin, 2013).

Phenomenology focuses on shared experiences rather than individual stories and interpretations (Smith, Flowers, and Larkin, 2009). It was rejected because it does not align with the study's aim of capturing individual, contextual, and nuanced narratives, which are critical for exploring participants lived experiences and voices (Clandinin 2013).

Grounded Theory seeks to generate theory grounded in systematically collected and analysed data (Glaser and Strauss, 1967). It was deemed unsuitable as this

study aimed to explore participants' subjective experiences rather than develop new theory (Charmaz, 2014).

Case-study provides in-depth examination of a specific case or cases within a real-life context (Yin, 2018). It was rejected due to its reliance on clearly defined parameters or boundaries. This study instead sought to explore a broader range of experiences across varied contexts (Clandinin, 2013).

Ethnography involves prolonged engagement within a specific cultural or social group to understand their practices, behaviours, and beliefs (Hammersley and Atkinson, 2007). While potentially insightful, it was unsuitable as the study's focus was on individual lived experiences rather than group interactions.

Action Research combines problem-solving with the implementation or evaluation of interventions (Reason and Bradbury, 2001). It was rejected as the study sought in-depth explorations of participants' experiences rather than immediate solutions.

Narrative inquiry was therefore selected for its capacity to prioritise individual voices, embrace subjectivity, and capture the complexities of lived experiences (Clandinin 2013).

3.4.3 Reflexive Thematic Analysis for Data Analysis

While narrative inquiry guided data collection, Braun and Clarke's Reflexive Thematic Analysis (RTA) (2021) was used for analysing the data. RTA enables systematic identification and interpretation of patterns or themes across qualitative datasets, while acknowledging the researcher's role in shaping the analysis.

This approach was particularly suited to the exploratory research question on the role of dental nurses in England in the early intervention of oral healthcare during mandated contacts by SCPHNs. The detailed accounts obtained through interviews aligned well with RTA's flexibility, enabling nuanced understanding of participants perspectives (Braun and Clarke, 2021).

A key feature of RTA is reflexivity, which is a continuous consideration of how my professional background and assumptions influence the analysis. To support this, I maintained a reflexive journal documenting analytical decisions, insights, and evolving interpretations (Berger, 2015; Finlay, 2002). This practice enhanced

transparency, credibility, and trustworthiness, ensuring that the themes accurately represented participants' experiences.

3.4.4 Integrating Narrative Inquiry with RTA

Combining narrative inquiry with RTA preserved the richness of individual stories while enabling identification of shared patterns across participants. This dual approach strengthened the study's capacity to provide a detailed, credible understanding of participants' roles, challenges, and perceptions in early oral healthcare interventions. Importantly, it also captured parents or caregivers' perspectives, contextualising both the practical and emotional dimensions of early oral healthcare.

This methodological integration directly supported the thesis aim of exploring whether dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by SCPHNs.

3.5 Sampling Strategy

Purposive sampling was employed to recruit SCPHNs, parents or caregivers, and dental nurses, as this approach facilitated the inclusion of participants with relevant experiences in providing or receiving oral healthcare interventions (Palinkas, Hortwitz, Green, Wisdom, Duan, and Hoagwood, 2015).

For SCPHNs, recruitment was initiated through email to the Public Health Matron of the local Foundation Healthcare Trust (LHFT). This communication sought permission to post details of the research study in the LHFT weekly newsletter. Following a positive response from the LHFT formal gatekeeper, further communication with the Head of 0-19 services led to consent for the study details to be included in the newsletter. Email was selected as a recruitment tool due to its widespread use and accessibility with the healthcare sector, enabling the dissemination of information to broad audiences (Creswell, and Creswell, 2017). The LHFT weekly newsletter ensured that the research study reached relevant individuals who might not have been accessible through other methods (Smith, Flowers, and Larkin, 2012).

For parents or caregivers, the recruitment was conducted through a local nursery's WhatsApp group. Initial contact was made via email to the nursery, which subsequently shared information about the research study on their social media platform. WhatsApp was chosen due to its frequent use by parents or caregivers

for nursery related activities (Friese, 2019). Its accessibility and regular usage made it an effective platform for disseminating information and inviting participation. Additionally, using WhatsApp incurred no costs, making it an economically efficient recruitment strategy (Moss, McDowell, and O'Carroll, 2021). This approach aligned with the research objectives of obtaining rich and diverse data from parents or caregivers.

Dental nurses were recruited from both primary and secondary dental services to capture a comprehensive range of perspectives on early oral health interventions. Recruitment in secondary care was facilitated through the LHFT dental project manager, while in primary care it was undertaken via mentors in general dental practice who were familiar with the university's research processes. The use of established professional relationships and networks proved instrumental in building trust and encouraging participation (Bryman, 2016). In both settings, key contacts acted as gatekeepers, disseminating information about the study to potential participants (Robinson, 2014). Incorporating dental nurses from both service contexts ensured that the study reflected a diversity of experiences, thereby strengthening the validity and generalisability of the research findings.

3.5.1 Formal Gatekeeper

Collaboration with LHFT gatekeepers ensured that the recruitment process aligned with the Trust's communication policies and procedures. This approach reinforced the legitimacy and transparency of the research, which enhanced trust among potential SCPHNs and secondary care dental nurse participants (Wanat, 2008). Comprehensive details of the research study were included in the newsletter, providing busy SCPHNs and dental nurses with an opportunity to understand the study's purpose, methods, and their roles before contacting myself.

Assurances were given to the formal gatekeepers that the organisation would not be referenced in the research write-up (Parahoo, 2014). Participant anonymity was guaranteed for all staff members, and responses from the participant interviews were not disclosed to the formal gatekeepers (King *et al.*, 2010).

Using emails and digital newsletters as communication methods proved to be cost-effective compared to traditional materials and postage. This approach streamlined the dissemination of information, enhancing accessibility and transparency (Parahoo, 2014). For parents or caregivers, research information

was shared via a parent in the nursery's WhatsApp group. This method used a familiar and informal platform, which potentially made participants feel more comfortable and willing to engage.

3.5.2 Recruitment of Participants

The plan for the recruitment process for this research study featured a specified number of participants in three distinct groups:

- Specialist Community Public health Nurses: (SCPHNs) 5-6 participants
- Parents or Caregivers: 5-6 participants
- Dental Nurses: 5-6: participants

Participants were purposively selected based on their specific knowledge or experience relevant to the research question (Merriam and Tisdell, 2016). As the study progressed, purposive sampling evolved into snowball sampling, guided by recommendations from initial participants. This adaptive approach expanded the sample to include 8 SCPHNs, 4 single parents or caregivers, 2 pairs of parents or caregivers, and 7 dental nurses. While this exceeded the original target, it enriched the data by providing a more diverse and comprehensive sample (Creswell, and Creswell, 2018).

Sample size determination was guided by the principle of data saturation rather than fixed numerical requirements. Guest, Bunce, and Johnson, (2006) suggests that saturation is often achieved with 12 interviews, whereas Marshall, Cardon, Poddar, and Fontenot, (2013) recommend 15-30 interviews for in-depth qualitative studies. Gerrish *et al.*, (2015) argue that smaller sampling sizes are acceptable when participants are highly knowledgeable, and the research is focused.

3.5.3 Participant Groups

Group	Desired Number	Actual Number
SCPHNs	5-6	8
Parents/Caregivers (single/pairs)	5-6	8
Dental Nurses	5-6	7

Table 3.5.3: Participant Groups

This adaption of the original recruitment plan mirrored the study's central focus, participants' perspectives and experiences. The inclusion of additional participants

was a methodological enhancement, ensuring the findings were informed by a more diverse and comprehensive sample (Marshall *et al.*, 2013).

In this study, the sample size was considered manageable, balancing the need for thorough data analysis within the allocated timeframe (Merriam *et al.*, 2016). The flexibility to recruit additional participants respected the willingness of those who met the inclusion criterion and wished to contribute. Rejecting willing participants could have been seen as disrespectful and might have discouraged future engagement. Equally, the inclusion of additional participants mitigates potential issues, such as withdrawals or incomplete data (Mason, 2010).

3.5.4 Inclusion and Exclusion Criteria

Inclusion and exclusion criteria were created to ensure that all the participants recruited to the study had direct experience relevant to the research question Appendix 2: Inclusion and Exclusion Criteria, (Silverman, 2013). Only SCPHNs, parents or caregivers and dental nurses were included in the inclusion criterion as they were the participant population groups that the research aimed to understand. Having an inclusion criterion helped to quickly identify suitable participants, reducing time spent screening out those who were not eligible (Bryman, 2016). An exclusion criterion was essential for maintaining the focus of the study, ensuring that participants who did not directly contribute to the research objectives were not included (Silverman, 2013). This approach helped streamlined the research process and maintained the relevance of the data collected to the research question.

3.6 Data Collection Methods: Unstructured and Semi-Structured Interviews

Selecting the appropriate interview techniques was fundamental to gather rich, detailed, and meaningful data to answer the research question. Unstructured and semi-structured interviews were chosen as they align well with qualitative research goals, when seeking to understand participants lived experiences, beliefs, and their perceptions in-depth (Rubin *et al.*, 2011). These approaches are especially effective in exploring complex, subjective phenomena, as they allow participants to articulate their thoughts and experiences freely, without the rigid confines of structured interviews or surveys (King *et al.*, 2010).

Unstructured interviews began with broad open-ended questions which allowed the conversations to flow naturally (Kvale, 2007). This approach adopted a more natural interaction between the participants and me, building rapport and creating a space where the participants felt comfortable sharing their perspectives in detail (Mills and Birks, 2014). By starting without a predefined structure, this method allowed for the emergence of unexpected themes and insights that might have been overlooked in a more structured format (Merriam & Tisdell, 2016). For instance, SCPHNs were able to provide vivid descriptions of their roles in promoting oral healthcare, while parents or caregivers, shared personal narratives about their experiences receiving such advice.

In contrast, semi-structured interviews offered a balance between flexibility and consistency. Using predefined guiding questions ensured that key topics relevant to the research objectives were covered, while allowing participants to elaborate and explore related themes that arose during the discussion (Holliday, 2016). This approach was particularly valuable in engaging dental nurses as it allowed me to probe their insights into their professional roles while addressing predetermined areas of inquiry.

The combination of unstructured and semi-structured interviews provided a methodological advantage by capturing both breadth and depth in the data (Latimer, 2009). Unstructured interviews revealed the unique and varied experience of participants, uncovering nuances that might have been missed in a more rigid format. Semi-structured interviews, ensured that essential topics were consistently addressed across participants, enabling comparative analysis while still capturing the individuality of participants' responses (Creswell & Poth, 2018).

Unstructured and semi-structured interviews were justified as the most appropriate data collection methods for this study. The richness of the data obtained through these interviews validated their selection as a suitable method for exploring the intricate realities of providing and receiving oral healthcare advice.

Interview schedules were developed for three participant groups, SCPHNs, parents or caregivers, and dental nurses using a combination of unstructured and semi-structured approaches to capture diverse perspectives on early oral healthcare interventions.

3.6.1 Unstructured Interviews

Unstructured interviews were conducted with SCPHNs, and parents or caregivers to elicit broad, narrative-driven insights into their experiences of providing and receiving early oral healthcare advice and prevention. This approach allowed participants to share their experiential stories without being constrained by a rigid question structure, nurturing a deeper understanding of their perspectives (Kvale and Brinkmann, 2015; Piantanida & Garman, 2009).

Example of an unstructured question for SCPHNs:

Main question to capture the participant storytelling
Can you describe your experience of providing early oral healthcare advice and prevention to parents or caregivers of infants or toddlers during the mandated contacts?

Example of unstructured questions for parents or caregivers:

Main questions to capture the participant storytelling
What has been your experience, if any, of receiving oral healthcare advice and prevention during the mandated contacts?
Can you describe your experience of introducing toothbrushing to your infant or toddler, and were there any barriers?

These unstructured questions encouraged participants to narrate their stories, challenges, and insights, providing rich, detailed data (Cresswell & Poth, 2018). The findings from these interviews were instrumental in identifying key themes for further explanation.

3.6.2 Semi-Structured Interviews

The data gathered during the unstructured interviews with SCPHNs, and parents or caregivers informed the development of semi-structured interview questions for dental nurses. Semi-structured interviews were chosen for this group of participants as they allowed for flexibility while enabling the exploration of specific themes that emerged during the initial data collection phase (King & Horrocks, 2010; Gill, Stewart, Treasure, and Chadwick, 2008).

Example of a semi-structured question for dental nurses:

Main questions to capture the participant storytelling
If a role was to be created and an opportunity arose to provide oral health advice to parents or caregivers of infants and toddlers in collaboration with SCPHNs, is this something that you think dental nurses would be willing to be involved with?

The rationale for adopting differentiated questioning strategies arose from the varying roles and perspectives of SCPHNs, parents or caregivers, and dental nurses. SCPHNs and parents or caregivers were able to provide a broad perspective on the provision and receipt of early oral healthcare interventions. Unstructured interviews were conducted with these participant groups to capture their experiences and perceptions, allowing them to narrate their stories and challenges without being confined by predetermined questions (Cresswell & Poth, 2018).

In contrast, dental nurses, who are directly involved in implementing oral healthcare interventions, were engaged through semi-structured interviews. This approach ensured that specific areas of interest identified during the unstructured interviews, were thoroughly explored while maintaining the flexibility for an in-depth discussion (King and Horrocks, 2010). Semi-structured interviews provided an effective means of gathering insights into dental nurses' views on potential roles, their willingness to participate, and their perceptions of collaborative opportunities with SCPHNs.

3.6.3 Exploratory Initial Interviews

The exploratory phase of this study involved a series of interviews designed to examine the roles, perspectives, and potential collaboration among SCPHNs and dental nurses in the delivery of oral health education and prevention strategies to parents or caregivers for infants and toddlers. The interviews were structured as follows:

3.6.3i Unstructured Interviews with SCPHNs

Unstructured one-to-one interviews were conducted with SCPHNs to explore their willingness to either relinquish certain aspects of their role or collaborate with dental nurses during mandated contacts with parents or caregivers of infants and toddlers. These mandated contacts occur at key developmental milestones: 6-8 weeks, 9-12 months, and 2-2½ years. The interviews aimed to explore SCPHNs perceptions of integrating oral health education and preventative measures such as supervised toothbrushing and dietary advice into their practice, as well as their willingness to share these responsibilities with dental nurses to enhance service delivery and improve outcomes.

3.6.3ii Unstructured Interviews with Parents or Caregivers

Unstructured interviews were conducted with parents or caregivers of infants and toddlers aged 0 - 2½ years to explore their thoughts, feelings and experiences regarding oral health education and prevention provided by SCPHNs during mandated contacts. These interviews also aimed to assess whether parents or caregivers would be receptive to the involvement of dental nurses in delivering technical aspects of oral healthcare, such as supervised toothbrushing and dietary advice for the prevention of tooth decay. This feedback was essential in evaluating parents or caregivers' acceptance of an interdisciplinary approach to early oral health education.

3.6.3iii Semi-structured Interviews with Dental Nurses

Semi-structured interviews were conducted with dental nurses to explore their interest in upskilling and their readiness to collaborate with SCPHNs in delivering oral health education and preventative support. The interviews focused on assessing whether dental nurses were willing to take on additional responsibilities, such as providing supervised toothbrushing and offering dietary advice to parents or caregivers of infants and toddlers during mandated contact times. These interviews also explored the perceived feasibility of interdisciplinary collaboration with SCPHNs.

3.6.4 Interview Guide

An interview guide was developed for both the unstructured and semi-structured interviews with some prompts to be used if required. The unstructured interview guide identified the topics to be covered during the interview rather than pre-defined questions which was aimed to encourage the participants to relive and retell their stories in providing or receiving early childhood oral healthcare (King and Horrocks, 2010). The analysis of the data collected from the unstructured interviews with the SCPHNs, parents or caregivers provided the framework for the semi-structured interviews with the dental nurses.

The unstructured and semi-structured interviews began with a set of general questions to help me build rapport with the participants. For SCPHNs and dental nurses, these included the number of years they had work as qualified registered professionals and whether they felt confident in delivering early oral health

messages. For parents or caregivers, questions focused on the age of the child and whether they were offered oral healthcare advice during the SCPHN visits.

These general questions helped to create a comfortable and trusting environment which was crucial for encouraging the participants to share their experiences (Ellis, 2016). They also served as an icebreaker which allowed me to connect with the participants which potentially led to more meaningful and in-depth responses during the interviews (Creswell *et al.*, 2018). Starting with general questions provided essential contextual information which enhances the quality and depth of the data collection (Gill, Stewart, Treasure, and Chadwick, 2008).

All the participant interviews started with a brief introduction and the purpose of the interview, the format of the interview and an explanation that general questions will be followed by the main question. I confirmed that confidentiality will be maintained throughout the interviews, and I recapped how the data will be used to inform the outcomes of the study. The participants were asked to confirm verbal consent to the recording of the interviews both through Teams and the digital recorder before proceeding (Creswell and Poth, 2017).

3.6.4i Interview Guide: SCPHN

General Demographic Questions - SCPHNs
Are you a registered SCPHN with the NMC?
How many years of experience do you have as a registered SCPHN?
Do you provide oral health advice to parents or caregivers on mandated contacts with infants or toddlers?

The main question encouraged the participants to share their experiential stories to provide rich, detailed data (Kvale and Brinkmann, 2015).

Main question to capture the participant storytelling
Can you describe your experience of providing early oral healthcare advice and prevention to parents or caregivers of infants or toddlers at the mandated contacts?

The prompts were designed to elicit specific information related to oral healthcare advice, challenges and perceptions (Seidman, 2013).

Prompts for Main Question
Do you address oral healthcare advice at the 9–12-month mandated contact?
On average how long is oral healthcare allocated to the visit?

Are the mandated visits carried out in the families' home or via the telephone, internet, or clinic?
When during the visit is oral health discussed?
Do you have resources with which to deliver oral health interventions?
If oral health materials are available are the resources paper-based or electronic?
If the child's first tooth has not erupted, do you still offer oral health advice?
Do you feel there are gaps in your oral healthcare knowledge?
What are your thoughts of collaborative working with dental nurses to provide oral health advice and support?
Do you provide information on how to locate and access local dentists and the importance of dental check-ups by 1 (DCby1) (this question was added following participant 4 SCPHNs interview)

An additional question "Do you provide information on how to locate and access local dentists and the importance of dental check-ups by 1 (DCby1)" was added following the interview with participant four SCPHN. This adaptation was based on the data collected from that interview and ensured that the interview guide remained flexible and responsive to emerging themes and current issues (Patton, 2015). At the conclusion of all interviews, participants from each group were thanked for their valuable time and insights. They were invited to ask any questions or provide additional comments and were informed about the next steps in the research process, including how they would receive a copy of the final report (King and Horrocks, 2010).

3.6.4ii Interview Guide: Parents or Caregivers

General Demographic Questions - Parents or Caregivers
Are you a parent or caregiver of an infant or toddler aged between 0 - 2½ years old?
Have you received any oral health advice from SCPHN's during the mandated contacts?

Main questions to capture the participant storytelling
What has been your experience, if any, of receiving oral healthcare advice and prevention during the mandated contacts?
What is your experience of introducing toothbrushing to your infant or toddler and were there any barriers?

If participants had not received any oral healthcare advice during the SCPHN mandated visit, a follow-up question was included to explore whether they had received oral health advice from other sources. Including this secondary question

ensured that the interview guide remained flexible and allowed all participants to contribute their valuable insights (Patton, 2015).

Prompts for Main Questions
For receiving oral healthcare advice
Can you describe the type of advice you received?
How was the advice communicated to you e.g. verbally, through leaflets, or demonstrations?
Did you find the advice helpful and easy to follow?
Were there any follow-up discussions or additional support provided?
For introducing toothbrushing to your infant or toddler
What was difficult about introducing toothbrushing?
How did your child react e.g. upset, resistant, interested?
Did your child try to grab the toothbrush or play with it?
Were there specific times of the day that were more challenging for toothbrushing?
Have you found any strategies that made toothbrushing easier?
Barriers to gaining dental appointments
Were you aware of the importance of a dental check by 1 (DCby1)?
Did you experience any difficulties with locating or accessing local dentists?

This structured interview guide was designed to facilitate meaningful data collection, beginning with general questions and then using detailed prompts to explore the participants experiences. Insights gained from these interviews with parents or caregivers also informed the development of questions for the dental nurses, ensuring continuity across of participant groups.

3.6.4iii Interview Guide: Dental Nurses

General Demographic Questions – Dental Nurses
Are you a registered dental nurse with the General Dental Council?
How many years of experience do you have as a dental nurse?
Do you provide oral healthcare advice and prevention as part of your normal duties in general or secondary dental practice?

The main areas explored with dental nurses were shaped by insights from the unstructured interviews with SCPHNs and parents or caregivers. This ensured that the interview guide was relevant and tailored to address specific themes and issues identified in the early stages of the data collection. Patton (2015) supports this iterative approach, where interview guides are refined in response to emerging findings to enable a deeper exploration of key themes.

Main question to capture the participant storytelling
If a role were to be created and an opportunity arose to provide oral health advice to parents or caregivers of infants and toddlers in collaboration with

SCPHNs, is this something that you think dental nurses would be willing to be involved with?
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Prompt for Main Question
If a new role was created to upskill dental nurses into a dental nurse - public health role, would this be of interest to you?
How would you feel about holding online clinics or being part of SCPHNs visits?
How would you feel if SCPHNs were to refer parents or caregivers to you for oral health advice?
Would you be willing to use oral health aids and resources to provide practical demonstrations e.g. toothbrushing?
Would you be willing to discuss fluoride use, including the recommended amounts in toothpaste?
As accessing a dentist can be challenging for parents or caregivers, would you be willing to offer support with oral health concerns?

3.7 Initial Pilot Study

Prior to collecting the main data, an initial pilot study was conducted with one representative from each participant group to test the proposed questions for clarity (Harding, 2013). This process provided an opportunity to assess the relevance and appropriateness of the questions. Each pilot participant was verbally thanked for their contribution and informed that they would be excluded from the main data collection (Smith, Flowers, and Larkin, 2009).

Feedback from the SCPHN and parent or caregiver participants led me to adjust the wording of certain questions. For example, the first demographic question was identified as overly complex. One parent or caregiver also highlighted that asking about the area in which participants lived might feel intrusive, so this element was removed to simplify the question and protect participant comfort (Ridley, 2012). For the dental nurses interview guide, a colleague from UoN was consulted to review the questions, focusing on clarity, appropriateness, and overall suitability (Duijster, de Long-Lenters, Verrips, and Lovern, 2015).

To build confidence in conducting the interviews, I carried out a mock interview with the same colleague. This exercise helped me to practise maintaining neutrality, manage the flow of conversation, and ensuring participant comfort. It also confirmed the functionality of the digital recorder and demonstrated that interviews could be conducted within the allocated time. Together, these steps contributed to the rigour and quality of the data collection (Moule, Aveyard, and Goodman, 2017; Ridley, 2012).

3.8 Participants' Information Guidance

Participation in the study was voluntary, and each participant receive an information guide outlining the research question along with the aim and objectives of the study (Appendix 3): Participants' Information Guidance (Aveyard, Payne, and Preston, 2021). Anonymity was assured throughout, and participants were informed that they would not be identified or acknowledged in the final report (Ross, 2012). They were also advised that ethical approval had been granted by the University of Northampton and that ethical principles would be adhered to and maintained throughout the study (Holloway and Wheeler, 2010; Andrew and Halcomb, 2009).

3.9 Changing Face-to-Face Interviews to Online Teams Interviews

It was initially proposed that the interviews would be conducted for SCPHNs, parents or caregivers at a local Foundation Healthcare Trust centre at a time convenient to the health centre and participants. The dental nurses' interviews were to be held at local primary and secondary dental practices at a time suitable for the dental practice and the dental nurses (Davies and Hughes, 2014). Due to COVID-19 pandemic, public health guidelines and government regulations face-to-face interactions were restricted to minimise the spread of the virus (UK Government, 2020). Therefore, it was necessary to change to an online platform to reduce the risk and safety to the participants and allowed the research study to continue without delays (WHO, 2020). This form of media allowed for participants who were not geographically local to be interviewed which increased the diversity and representation of the sample (Creswell et al., 2018). Microsoft Teams was the online platform used for all interviews thereby ensuring consistency in the interview process and the data collection methods. This enabled the participants to join the interviews from their own homes or workspaces at a convenient time, it eliminated travel costs making the research more cost effective (Lobe, Morgan, and Hoffman, 2020). Participants were invited to suggest suitable times for the interviews which covered daytimes, evenings, and weekends. Prior to conducting the interviews participants were asked to electronically sign the consent form and return by email before arranging a suitable time for interview (Appendix 4): Consent Form. When a suitable time for interview was arranged the participants were asked if they were familiar with Microsoft Teams to avoid technical issues although a stable internet connection was crucial, which can be

beyond the participant and the researcher's control. A calendar Teams invite was sent to the participants to accept, and a reminder email was sent the day before the interview to reconfirm the date and time (Lobe et al., 2020).

3.10 Ethical Considerations in Research

Ethics pertains to the principles and values that guide human behaviour, ensuring that actions are respectful, and morally sound. In research, ethics involves applying these principles to the inquiry process, emphasising respect for participants, integrity in data handling, and responsibility toward societal impact (Hickson, 2008). Adhering to ethical principles safeguards the participants rights, dignity, and well-being while enhancing the credibility, validity, and transparency of the research (Resnik, 2024).

This study followed key ethical principles, including informed consent, confidentiality, beneficence, non-maleficence, and justice, ensuring that participants' interest were prioritised over the research objectives (Beauchamp & Childress, 2013). The study also complied with the University of Northampton Research Ethics Code and Procedures (Version 4.0, 2024).

3.10.1 Informed Consent

Informed consent ensures participants voluntarily engage with full awareness of the study's purpose, procedures, risks, and benefits (Beauchamp & Childress, 2019). Participants received detailed information about the online interview process, including Microsoft Teams usage, and written electronic consent was obtained prior to the interviews, with verbal consent recorded at the start of each interview. This dual approach aligned with best practice in qualitative research, providing participants with clear opportunities to confirm their willingness to take part, while also safeguarding their right to withdraw at any stage without any negative repercussions, reflecting respect for their autonomy (Harding, 2013). Potential risks were minimal, limited mainly to possible discomfort in reflecting on professional challenges or confidentiality within an online interview environment. Anticipated benefits included the opportunity for participants to share their experiences and support potential improvements in early oral healthcare interventions.

3.10.2 Confidentiality and Data Security

Confidentiality was central to maintaining trust and safeguarding participants' privacy. Microsoft Teams was selected for the interviews due to its secure communication, and as an additional precaution, a digital voice recorder was used as a backup to minimise the risk of data loss. Participants were fully informed about these methods, which promoted transparency. To protect identities, participant codes were assigned and will be used in the research report and any subsequent publications, preventing potential breaches of privacy. All recordings and transcripts were securely stored on institutional cloud storage, accessible only to me and, if necessary, the supervisory team, in line with established ethical guidelines for data protection and privacy (Sanjari, Bahramnezhad, Omani, Shoghi, and Ali Cheraghi, 2014; Markham and Buchanan, 2012).

3.10.3 Participant Safety and Comfort

The safety and well-being of participants were prioritised throughout the research process. Due to COVID-19 restrictions, interviews were conducted online at times convenient to the participants. I was mindful to be sensitive to the participants' comfort, offering breaks and reiterating their right to withdraw at any point. For instance, when a parent or caregiver became visibly distressed while discussing systemic issues in the NHS, I maintained neutrality, while actively listening and validating the participants' emotions. Supportive measures, such as pausing the interview, or providing additional resources, were planned if required (Holloway and Galvin, 2016).

3.10.4 Research Integrity and Transparency

Maintaining integrity and transparency in research is essential for building trust and ensuring accountability. Participants were fully informed about the study's aim, methods, and potential social impacts, and were given the option to receive the final report, with all participants indicating interest. This open approach supported credibility and fostered participant confidence in the research process (Patton, 2015; Davies & Hughes, 2014).

3.10.5 Ethical Standards and Institutional Approval

Ethical approval was obtained from the University of Northampton ethics committee prior to the commencement of the study. This ensured compliance with established ethical standards and guidelines, including those related to data protection and participant welfare (Ridley, 2012).

3.10.6 Voluntary Participation

Participation in the study was entirely voluntary, with participants given the freedom to withdraw at any stage without negative consequences. They also retained the right to request the removal of their data if they chose to withdraw. Respect for the participants' decisions and autonomy was prioritised throughout, with an openness to conducted debriefing sessions if required. These measures upheld ethical rigor and trustworthiness in line with qualitative research best practice (Davies and Hughes, 2014).

3.10.7 Linking Ethics to Reflexivity

While the ethical procedures established a formal framework for protecting participants, ethical research also required ongoing self-awareness throughout the study. Procedural safeguards such as informed consent, confidentiality, and participant safety ensured that participants' rights and well-being were formally respected. However, reflexivity involved critically examining my own assumptions, biases, and professional perspectives to minimise the risk of these inadvertently influencing interactions or data interpretation. In this way, reflexivity complemented the formal ethical measures by embedding ethical practice into the research process (Clandinin, 2013).

3.11 Reflexivity as an Ethical Consideration

Reflexivity was embedded throughout the research process as an ongoing practice of self-examination, during which I critically considered how my professional identity and prior knowledge might influence the study (Berger, 2015). As a dental nurse, I was aware that my background could shape interactions with participants, particularly during interviews with dental nurses, compared to those with SCPHNs and parents or caregivers. I remained mindful of the possibility that my interpretations might be influenced by presuppositions drawn from existing literature, which suggests that SCPHNs may have limited in-depth oral health knowledge due to lack of formal training (Coll et al., 2016).

To manage potential bias, I kept a reflexive journal throughout the study. This provided a space to record my thoughts, emotions, and assumptions, enabling me to critically monitor how my perspectives might shape the research process. It also helped me refine my interview technique, as I noted my progression from initial nervousness to greater confidence and more relaxed engagement with the

participants. Importantly, the journal gave me a structured way to process emotions, ensuring they did not interfere with participants contributions (Patton, 2015; Seidman, 2013).

Positioning reflexivity as an ethical practice was central to respecting participants perspectives and experiences. My post interview reflexive notes, further discussed in the data analysis chapter, illustrate how the reflexive journal served as an acknowledgement of my continuous learning journey and documented my development as a researcher from initial fears about conducting interviews to becoming more confident and proficient (Guillemin and Gillam, 2004).

3.12 Triangulation of Data

Triangulation was incorporated into this study to strengthen the validity, credibility and overall trustworthiness of the findings (Flick, 2004). By drawing on multiple perspectives and methodological approaches supported a more robust and nuanced understanding of the potential role of dental nurses in early oral healthcare interventions for infants and toddlers during mandated SCPHNs contacts (Moule et al., 2017).

Two forms of triangulation were used:

Data triangulation involved collecting insights from three participant groups: SCPHNs, parents or caregivers, and dental nurses. Bringing these perspectives together enabled comparison across groups, the identification of convergent experiences, and the exploration of meaningful differences. Divergent views were treated as analytically valuable, prompting deeper reflection and contributing to balanced interpretation of the data.

Methodological triangulation was achieved using both unstructured and semi-structured interviews (Patton, 2002). Unstructured interviews allowed participants to narrate their experiences freely, while semi-structured interviews provided the flexibility to explore specific areas relevant to the research questions. Together, these methods enriched the dataset by generating both spontaneous accounts and focused reflections.

These triangulation strategies supported the rigour of the analysis, supported the development of early codes and emerging categories, challenged assumptions

where necessary, and ensured that the findings reflected shared patterns rather than isolated viewpoints (Creswell et al., 2017).

3.13 Data Preparation and Analysis Process

Reflexive Thematic Analysis (RTA) was used to analyse the qualitative data (Braun and Clarke, 2021). RTA is iterative, flexible, and reflexive, acknowledging the researcher's active role in interpreting data. The aim was to generate findings that were grounded in the participants accounts while offering meaningful insights into early childhood oral healthcare and the potential role of dental nurses during mandated SCPHN contacts.

The analysis followed a cyclical pattern, moving repeatedly between raw data, codes, categories, and themes. This iterative movement allowed for continual refinement and ensured that the final thematic structure remained coherent and firmly grounded in the data. Reflexivity, iterative coding, and triangulation underpinned the robustness of the overall approach.

3.13.1 Transcription

Interviews were conducted via Microsoft Teams, with a digital voice recorder used as a backup. Although Microsoft Teams generates automated transcripts, these were not fully accurate (Bazeley and Jackson, 2014). Each transcript was therefore meticulously checked against the audio recordings, with inaccuracies corrected and features such as pauses, hesitations and notable non-verbal cues incorporated to preserve meaning.

Transcription is recognised as an interpretive process (Oliver, Serovich, and Mason, 2005). Engaging closely with the recordings, deepened familiarity with the data and provide a strong foundation for subsequent analysis (Kvale, 2007). To protect anonymity, each participant was assigned a numbered audio file and transcript accessible only to me (Saunders, Kitzinger, and Kitzinger, 2015; Holloway and Wheeler, 2010). Files were securely stored on a cloud-based platform, with hard copies kept in a locked drawer ensuring confidentiality and data integrity (Parahoo, 2014; Holloway and Wheeler, 2010).

3.13.2 Familiarisation with the Data

Following transcription, each transcript was read multiple times to develop a deep understanding of its content and to begin identifying potential patterns (Braun and Clarke, 2021). Significant comments and initial impressions were highlighted, and

reflective notes were recorded in a research journal. Early codes began to emerge particularly within SCPHN transcripts, based on recurring concepts and key phases (Saldana, 2016).

Throughout this phase, reflexivity was central. The research journal provided space to critically consider how my professional background might shape interpretation (Finlay, 2002). This reflexive awareness ensured alignment with Braun and Clarke's (2021) approach and helped maintain sensitivity to participants lived experiences.

3.13.3 Coding and Category Development

Building on the familiarisation phase, initial coding involved systematically labelling segments of the data relevant to the research question (Coughlan and Cronin, 2017). Codes were recorded in the research journal and linked to participant quotations. This open coding process allowed key concepts within the dataset to be identified and labelled. Sub-codes were subsequently developed to refine and organise the emerging categories (Saldana 2016; Burnard, Gill, Stewart, Treasure, and Chadwick, 2008).

To support reflection and comparison, codes were transferred onto flip-chart paper and arranged within a dedicated workspace. This visual method facilitated iterative review, enabling patterns to be reorganisation and refined as they developed (Gill et al., 2008). Photographs documented the evolving clusters of codes (see Appendix 5).

Related codes were clustered into preliminary categories. Such as codes relating to communication, access to information, and toothbrushing practices formed Parental Engagement with Early Oral Healthcare. While codes concerning collaboration, professional messaging, and dental nurse involvement formed Interprofessional Approaches to Early Intervention. This iterative process, grounded in constant comparison ensured coherence and consistency across the dataset (Braun and Clarke, 2021).

3.13.4 Theme Development and Refinement

Themes were generated by organising related codes into broader patterns of meaning. Overlapping codes were consolidated, and sub-codes refined into coherent thematic structures that reflected participants lived experiences. This

stage involving continuous comparison and checking of emerging themes against the dataset to ensure accuracy and coherence (Braun and Clarke, 2021).

Once preliminary themes were established, they were reviewed and refined to ensure clarity, relevance, and distinction. Each theme was assigned a concise, descriptive label that captured its core meaning and thematic summaries were written to describe how each theme contributed to addressing the research question (Braun and Clarke, 2021).

A key reflexive decision involved distinguishing between semantic or latent codes, as this influenced both the depth and focus of the analysis (Braun and Clarke, 2021). To strengthen my understanding of this distinction, I engaged with Braun and Clarke RTA lectures on YouTube (Braun and Clarke, [YouTube Lecture], 2021). Semantic codes were prioritised, as they reflected explicit participant meanings and aligned with the study's aim to remain close to participants own descriptions. While latent codes can be useful for interrogating deeper assumptions, it risked introducing researcher-driven interpretations beyond participants expressed perspectives (Terry, Hayfield, Clarke, and Braun, 2017; Joffe, 2012).

Themes were finalised, defined and supported by direct participant quotations to maintain authenticity and illustrate their relevance to the research question (Joffe and Yardley, 2004). Reflexivity remained integral throughout, informing decisions and ensuring transparency regarding my role in shaping the analysis (Braun and Clarke, 2021).

3.13.5 Measures to Support Rigour and Credibility

Several strategies were employed to strengthen the trustworthiness of the analysis, summarised in Table 3.13.5

Strategy	Purpose and Contribution
Audit trail	Provided transparent documentation of coding decisions, theme development, and analytical rationale.
Peer debriefing	Enabled supervisory dialogue that challenged interpretations, supported reflexivity, and strengthen analytical clarity.
Iterative recoding	Ensured consistency and coherence by repeated checking of transcripts and confirming alignment with emerging themes.

Reflexive journal	Captured positionality, decisions, analytical reflections throughout the research process.
Triangulation	Enabled comparison across participant groups, reducing bias and supporting a balanced and credible thematic interpretation.

Table 3.13.5: Measures Employed to Enhance the Robustness of the Analysis

Together, these strategies ensured a systematic, transparent, and reflexive analytical process that strengthened the credibility of the findings.

3.14 Conclusion of the Methodology Chapter

In this chapter, I outlined the research design and methods used to explore the potential role of dental nurses in England in the early intervention of oral healthcare for infants and toddlers during mandated contacts by SCPHNs. A qualitative approach, grounded in an interpretivist paradigm, was adopted to capture the in-depth, subjective experiences of SCPHNs, parents or caregivers and dental nurses.

Reflexive Thematic Analysis (RTA) provided a systematic yet flexible framework for analysing the data, enabling the identification, development, and refinement of themes through an iterative and reflexive process. Triangulation, reflexive journalling, an audit trail, and peer debriefing contributed to the rigour and credibility of the analysis. Illustrative excerpts are drawn upon in Chapter Four to support the presentation of findings.

While SCPHNs hold a central role in delivering early public health interventions, the integration of dental nurses into these mandated contacts remains underexplored. This study seeks to address this gap by examining how dental nurses might collaborate with SCPHNs to support early oral healthcare, with the aim of improving outcomes for infants and toddlers.

Chapter four presents the findings, beginning with the initial codes and progressing to the themes developed through the analytical process.

Chapter Four: Findings

4.1 Introduction to Chapter Four

Building on the methodological foundations and reflexive analytical process outlined in Chapter Three, this chapter presents the findings generated through Reflexive Thematic Analysis (RTA). The analysis revealed a series of themes and subthemes that offer insight into participants' perspectives, lived experiences, and views on the potential contributions of dental nurses to oral healthcare during mandated contacts with SCPHNs.

This chapter begins with an overview of the participants' demographic and professional characteristics to provide context for the findings. It then presents the themes developed through the iterative analytical process, supported by direct excerpts from participants' accounts. These extracts help ensure that participants' voices remain central and demonstrate the interpretive engagement that underpins RTA.

Throughout the presentation of findings, I remain reflexively aware of my active role in shaping the interpretation and of the co-constructed nature of meaning within qualitative research. The themes therefore represent both participants' accounts and my interpretive engagement as a researcher.

The findings presented in this chapter provide the foundation for Chapter Five, where they are critically discussed in relation to the research aim, the wider literature, and relevant theoretical frameworks concerning early oral healthcare intervention and interdisciplinary collaboration.

4.2 Participants' Characteristics

Table 4.2 outlines the demographic characteristics of the SCPHN participants. Eight professionals took part, including seven practicing SCPHNs and one community nursery nurse, with experience ranging from 7 to 25 years. All participants were actively involved in providing oral health advice as part of their role, demonstrating consistent engagement with early oral health promotion. Participants were based in cities and towns across England, offering perspectives from a range of geographical settings.

Demographic Aspect	Details	Notes
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Number of participants	8	Seven participants were practicing SCPHNs and one community nursery nurse
Years of experience	7 - 25 years	Reflects a wide range of professional expertise
Oral healthcare provided	All participants provided oral health advice	Consistent involvement in early oral health promotion
Location distribution	Cities and towns across England	Indicates geographic diversity

SCPHN - Participant Pseudonym	Years of Experience	Oral Healthcare provided	Location Distribution
S-Participant 1 (SP1)	7	Yes	East Midlands
S-Participant 2 (SP2)	9	Yes	East Midlands
S-Participant 3 (SP3)	18	Yes	Northern England
S-Participant 4 (SP4)	13	Yes	East Midlands
S-Participant 5 (SP5)	9	Yes	East Midlands
S-Participant 6 (SP6)	25	Yes	East Midlands
S-Participant 7 (SP7)	25	Yes	East Midlands
S-Participant 8 (SP8)	8	Yes	East Midlands

Table 4.2: Characteristics of SCPHNs in the Study

Table 4.2.1 presents the characteristics of the parents or caregivers who took part in the study. Eight participants were included: four single parents or caregivers and two pairs of parents or caregivers. All participants had young children aged between 10 months and 2 years, aligning with the study's focus on early childhood oral health.

Six participants (including two pairs of parents or caregivers) reported that they had not received oral health advice from a SCPHN during mandated contacts, while two participants had. Participants were based in a range of cities and towns across England, extending the geographical scope beyond the East Midlands.

Demographic Aspect	Details	Notes
Parents or caregivers	4 single parents or caregivers, 2 pairs of parents or caregivers	Participants were all parents or caregivers of young children
Age of infant or toddler	10 months – 2 years	Focused on early childhood age group
Received oral healthcare advice from SCPHNs	6 participants (including 2 pairs of parents or caregivers) did not receive oral health advice, and 2 participants did receive oral health advice	Highlights variation in access to oral health advice during mandated contacts
Location	Cities and towns across England	Indicates geographic spread beyond the East Midlands

Parent/Caregiver Participant Pseudonym	Age of infant/toddler	Oral Healthcare Advice received from SCPHN	Location Distribution
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PC-Participant 1 (PC1)	2 years	No	East Midlands
PC-Participant 2 (PC2)	2 years	No	East Midlands
PC-Participant 3 (PC3)	18 months	No	East Midlands
PC-Participant 4 (PC4)	18 months	Yes	West Midlands
PC-Participant 5 (PC5)	10 months	Yes	Southeast England
PC-Participant 6 (PC6)	2 years	No	East Midlands
PC-Participant 7 (PC7)	15 months	No	East Midlands
PC-Participant 8 (PC8)	15 months	No	East Midlands

Table 4.2.1: Characteristics of Parents or Caregivers in the Study

Participants 1 and 2, and participants 7 and 8, represented two pairs of parents or caregivers. While several participants were based in the East Midlands region, others were in the West Midlands and Southeast England, reflecting a wider geographical distribution across England.

Table 4.2.3 outlines the demographic characteristics of the dental nurse participants. Seven qualified participants took part, all of whom were registered with the General Dental Council (GDC). Their experience ranging from 2.5 to 46 years, reflecting a broad spectrum of expertise. All participants were actively engaged in providing oral health advice, reflecting their role in preventive oral healthcare. Four dental nurses worked in community-based settings and three in general dental practices, offering perspectives from different professional environments.

Demographic Aspect	Details	Notes
Registered with GDC	7	All participants were qualified and registered
Years of experience	2.5 – 46 years	Reflects varying levels of experience among dental nurses
Oral healthcare provided	All participants provided oral health advice	Participants actively involved in oral health prevention
Practice type	4 community based, and 3 general practices	Indicate perspectives from different practice settings

Dental Nurse Participant Pseudonym	Registered with the GDC	Years of Experience	Oral Healthcare provided	Practice Type
DN-Participant 1 (DN1)	Yes	30	Yes	Community
DN-Participant 2 (DN2)	Yes	46	Yes	General Practice
DN-Participant 3 (DN3)	Yes	36	Yes	Community
DN-Participant 4 (DN4)	Yes	18	Yes	Community
DN-Participant 5 (DN5)	Yes	11	Yes	Community
DN-Participant 6 (DN6)	Yes	2.5	Yes	General Practice
DN-Participant 7 (DN7)	Yes	35	Yes	General Practice

Table 4.2.3: Characteristics of Dental Nurses in the Study

4.3 SCPHNs' Data: Reflexive Thematic Analysis (RTA)

The data collected from SCPHNs were analysed using Braun and Clarke (2021) six-phase Reflexive Thematic Analysis (RTA). This framework provided a rigorous and iterative exploration of SCPHNs perspectives on their role in promoting early oral healthcare for infants and toddlers.

1. **Familiarisation with the Data** – This involved repeated reading of the interview transcripts to develop a deep understanding of participants' perspectives, professional experiences, and the contexts in which oral health was addressed during mandated contacts.
2. **Generating Initial Codes** – Key features of the data were systematically identified and coded, with attention to recurring ideas related to SCPHNs roles, challenges, interprofessional collaboration, and approaches to oral health promotion.
3. **Searching for Themes** – The initial codes were grouped into potential themes by identifying patterns and shared meanings across the dataset. Themes reflected commonalities in SCPHNs narratives regarding their capacity, training, and confidence in delivering oral healthcare advice.
4. **Reviewing Themes** – Through an iterative process, the initial themes were refined and validated to ensure coherence and alignment with the research aim.
5. **Defining and Naming Themes** – Each theme was clearly defined and named to encapsulate its central organising concept. Themes such as "Knowledge and Competency in Oral health" and "Collaborative Approaches to Enhancing Access to Oral Health Services for Families" reflected core dimensions of the SCPHNs' experiences.
6. **Writing Up** – The final stage involved synthesising the themes into a coherent narrative, supported by illustrative quotations. This ensured that the analysis was grounded in the data and meaningfully contributed to understanding the role of SCPHNs' in early oral healthcare interventions.

Applying Braun and Clarke (2021) RTA framework, this analysis provided a structured and reflexive account of SCPHNs insights, highlighting the complexities, constraints, and opportunities within their role in supporting early oral healthcare for infants and toddlers.

4.3.1 SCPHNs – Initial Coding: Initial Knowledge

The code 'Existing Knowledge' summarises the various dimensions of the participants knowledge base. These dimensions are further broken down into sub-codes, which capture more specific elements of the overarching category. By categorising knowledge in this way, it became possible to gain a detailed understanding of what constitutes the participants existing knowledge such as experience, gaps in knowledge, training, and resources. By structuring the data in this way, it became easier to identify where the participants felt confident and where additional support or resources may be required (Braun and Clarke, 2021).

Code Existing Knowledge Sub-codes	
Experience	Refers to the practical experience that participants have which contributes to their existing knowledge.
Gaps in knowledge	Areas where participants feel they lack understanding or information.
Training	Instances where participants discuss formal or informal training that influences their knowledge.
Information	Facts that participants refer to as part of their knowledge base.
Advise	Guidance or recommendations that participants have received or provided, contributing to their knowledge.
Confidence	Relates to the self-assurance participants feel in their knowledge or skills.
Language	How language or terminology influences or reflects existing knowledge.
Toolkit	Refers to the tools or methods the participants use to apply their knowledge.
Resources	Materials, or aids that support or enhance existing knowledge.

Table 4.3.1 SCPHNs - Initial Coding: Existing Knowledge

4.3.2 SCPHNs - Initial Coding: Interprofessional Collaboration and Access to Dental Services

The code 'Interprofessional Collaboration and Access to Dental Services' brings together the key elements of the collaboration between SCPHNs, community nursery nurses, and dental nurses to support family's oral health needs. While considering the systemic challenges such as accessibility to dental services and referral pathways which can hinder these efforts making collaboration between SCPHNs, community nursery nurses and dental nurses even more critical (Braun and Clarke, 2021).

Code Interprofessional Collaboration and Access to Dental Services Sub-codes	
Collaboration	The focus is on teamwork and communication between SCPHNs, community nursery nurses and dental nurses.
Community Nursery Nurses	The involvement of community nursery nurses in supporting oral health interventions.
Needs of the family	Understanding and responding to the individualised needs of the family.
Child Protection	Involvement in safeguarding children during the provision of health services.
Hubs	For coordinating oral health care delivery.
COVID-19	Impact of the pandemic on dental service provision and interprofessional collaboration.
Register with a dentist	Ensuring families have access to dental care as part of early oral health intervention.
Contacts	Mandated contacts between health professionals and families.
Referral	The process of referring families to additional and specialised services.

Table 4.3.2 SCPHNs - Initial Coding: Interprofessional Collaboration and Access to Dental Services

4.3.3 SCPHNs - Initial Coding: Challenges in Implementing Preventive Oral Health Practice

The code 'Challenges in Implementing Preventive Oral Health Practice' highlights the barriers SCPHNs encounter when delivering oral health advice to families. These include practical constraints, such as limited time during mandated visits, and behavioural challenges, such as encouraging families to adopt preventative measures like fluoride use and healthier dietary practices. This code emphasises the complexity of implementing preventative oral healthcare advice within a limited timeframe, especially when SCPHNs must balance providing general health advice with specialist dental health advice.

Code Challenges in Implementing Preventive Oral Health Practice Sub-codes	
Toothbrushing	Focus on the daily practice of maintaining oral hygiene.
Challenges	Broader obstacles encountered by SCPHNs in promoting oral health behaviours.
Difficulties	General difficulties SCPHNs face when promoting oral health during visits.
Barriers	Language, cultural beliefs, or family priorities that prevent effective oral health interventions.
Time	Time constraints during mandated visits that limit the ability to thoroughly address oral health with families.
Lift the lip	The lack of formal training for this simple but essential oral health check, leading to reliance on informal methods such as observing children's smiles.
Fluoride	Focuses on the use of fluoride to prevent tooth decay and promote dental health.
Extractions	The result of untreated dental issues.
Food	The impact of diet on oral health, how food choices contribute to decay.
Dummies	The use of pacifiers and their potential effect on oral development and dental health.

Table 4.3.3: SCPHNs - Initial Coding: Challenges in Implementing Preventive Oral Health Practice

4.3.4 SCPHNs - Creating Themes

The next step in the analysis process involved creating themes from the existing codes, specific to each of the participant groups. This method allowed me to identify differences or similarities in how each group engaged with the topic. The process involved identifying overarching concepts that connected the codes in a meaningful way, focusing on relationships, patterns, and commonalities within the data. By examining these patterns, I grouped the codes into broader categories, which helped in forming potential themes.

Once these categories were defined, I reflected on what each theme represented in relation to the research question. This reflective process required extensive

deliberation to ensure that the themes accurately represented the data and were relevant to the research question. Each theme was assigned a descriptive title that encapsulated significant aspects of the data (Braun and Clarke 2021). This method ensured that the themes were well-grounded in the data and effectively addressed the research aim (Braun and Clarke, 2021).

4.3.5 SCPHNs – Final Themes

The following table presents the final themes generated from the analysis of the SCPHN data, reflecting their perspectives on oral healthcare for infants and toddlers during mandated contacts. These themes were developed through Braun and Clarke's RTA (2021) and provide a comprehensive understanding of the key factors influencing SCPHNs roles in early oral health intervention. Each theme captures a distinct aspect of SCPHNs experiences, knowledge, and practices, offering valuable insight into the challenges and opportunities for integrating oral healthcare more effectively into their public health responsibilities.

Theme 1	Knowledge and Competency in Oral Health
The theme reflects the foundational knowledge, experience that SCPHN's possess, including any gaps or areas where further training is needed.	
Sub-themes under the broader theme 'Knowledge and Competency in Oral Health'. Gaps in Professional training and Knowledge on Oral Healthcare: SP1, "I would say when I did my training that there was no formal training as such". "I can direct parents to resources and that I can give them basic information on how to prevent um, tooth decay". SP2, "So, when I was actually a student, you only learned what your mentor teaches you, I think it's something that needs further development because I don't think there's enough of it". SP2, "I don't know exactly when each tooth is supposed to come through, I think my own knowledge is quite basic. I think it would be good if you had more information provided while you are a student". SP4, "We haven't had an update for quite a long time probably before COVID yeah definitely it's been several years since we've had an update. It's only when they start questioning about the fluoride content, I would say some of the Eastern European families that don't want to use the higher fluoride". SP5, "Yeah, I wouldn't know what I am looking for if I was looking into other than obvious signs of decay. You know, if you're having one-year old having their teeth extracted we've missed that window of opportunity".	

These quotes capture SCPHNs, and a Community Nursery Nurse concerns about the lack of formal education, training updates and confidence in addressing oral health issues.

Lack of Resources for Oral Health Advice:

SP6, *"We did historically do it, but that was withdrawn. So, we have no resources, no toothpaste, no toothbrush". "If it becomes a behaviour problem, maybe community dental nurses can help us with that as well. If there is such a thing, and we could do some really good joint working together". We could do a development clinic, and you could be next door, you see me and then go next door, that would be good".*

This quote highlights both the practical resource limitations and the need for joint working with dental nurses.

Theme 2	Collaborative Approaches to Enhancing Access to Oral Health Services for Families
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The theme reflects how collaboration between SCPHNs, Community Nursery Nurses and Dental Nurses facilitates better access to dental care for families, emphasising teamwork, and the individualised needs of the families.

Sub-themes under the broader theme 'Collaborative Approaches to Enhancing Access to Oral Health Service for Families'.

Team-based care:

SP1, *"I think it would be extremely valuable. We can't be specialists in all areas and that's where collaborating with other specialists can be really valuable for families. If we could bring dental health into that when we know that there's a significant amount of concern around dental health for young children in the county. So, I think the more we could bring that in and work collaboratively, particularly with oral health assessment".*

SP2, *"I think that would be brilliant because they're the experts, and sometimes oral health although we understand the importance, it's not always the most important thing at the time. I think parents maybe more accepting of the information coming from somebody who's a specialist in that area".*

SP4, *"Yeah, yeah, and I think that'll be really good and I think parents would be happy to see somebody and have more information on it that would be good".*

SP6, *"I think there's a possibility of if we've not got enough NHS dentists could we have an NHS Dental Nurse clinic for children". So, if we could, if we could have a community clinic, which is about prevention that would be wonderful".*

SP6, *"I'll talk about the big challenge have you got a dentist. So, I would say that's been massive. Most families I see nowadays don't have a registered dentist and can't get an appointment".*

SP7, *"So, where you've got any families that couldn't register with the dentist and knew that they had a potential of 12 to 24 month wait ahead of them for an appointment, it would be good for them to speak to a practitioner with more qualifications and expertise than I have".*

These quotes emphasise the need for joint efforts between SCPHNs, Community Nursery Nurses and Dental Nurses to bridge the gap in providing oral healthcare for families.

Impact on oral health delivery:

SP1, "However, since COVID a lot of them are done online, so it might be even Microsoft Teams or various other platforms. But parents can actually request a face-to-face contact if they prefer that".

SP3, "I have noticed a difference since COVID though it's been, yeah, a lot more dental decay than I've ever seen before".

SP5, "But most of our contacts will be in a clinic or online now because since COVID we've kind of gone to hybrid. So, it's better than nothing".

These quotes capture how COVID-19 has impacted on service delivery and interactions with families.

Theme 3**Barriers to Effective Oral Health in Early Childhood**

The theme 'Barriers to Effective Oral Health in Early Childhood', highlights the practical and social challenges faced by SCPHNs in delivering oral health advice during mandated contacts with families. This theme explores the multifaceted obstacles that hinder effective oral health practices, including time constraints, cultural barriers and family resistance.

Sub-themes under the broader theme 'Barriers to Effective Oral Health in Early Childhood'.**Time Constraints:**

SP1, "It could be a relatively quick conversation, so it could be part of an hour-long visit, actually 5 to 10 minutes of that might be discussing dental health".

SP2, "To be honest we do have to cover a lot of things in the short space of time. So, if I'm honest, probably less than 5 minutes is devoted to dental hygiene and oral health".

SP8, "Not long, probably I mean by the time it takes ok, about 5 minutes in a contact I would think."

These quotes reveal the challenge SCPHNs face in covering oral health during their mandated contacts, where the competing priorities and limited time prevent a more thorough engagement with families.

Fluoride Content in Toothpaste:

SP1, "So, we talk a lot about using a family toothpaste, to just put them onto a family toothpaste as long as it's got a high enough fluoride content, just to make sure that they're aware of that right from the beginning, before the teeth come through".

SP2, "Well, I'll talk about how much toothpaste to use because we tend to find that parents overuse the amount of toothpaste".

SP6, "When I started health visiting, we saw children a lot more. I usually just say it's ok to use adult toothpaste, I don't go into the parts per million, but it needs to be between 1350 and 1500, I think".

These quotes capture the specific focus on the importance of fluoride in oral health and how SCPHNs communicate this information to families.

Variability in Service Delivery:

SP3, "We don't do 3 to 4 months; we do have baby clinics, but you have to book and there's only about four and it's a big place. The nursery nurse health workers do a contact at 9 to 12 months, and they talk about it again".

SP6, "I'm fortunate in that the family's tend to have probably other health challenges or other social challenges. So, if I'm doing an assessment, it will be face to face. But in our organisation, if everything's ok it might be a virtual appointment".

SP8, "So, if they're a safeguarding family or they're what we would call a Level 3 or Partnership Plus where they need some extra support then they would have a named health visitor who would potentially go and do that at home".

These quotes capture the inconsistency in how service delivery methods and resources affect the provision of oral health care during mandated contacts with families.

Barriers to Dental Care Access:

SP2, "That is a 100% challenge, and I think it's got even more of a challenge since COVID. Well, I've definitely seen that because we've had so many more parents asking us for help to try to find a dentist".

SP3, "Oh, my God yeah and it's oh yeah, definitely it's one of our major worries, nobody can get a dentist".

SP4, "No, definitely not since COVID. Hardly anybody's been able to get registered with the dentist. But it is ringing round the local dentists and going on a waiting list with the family dentist".

SP6, "My clients have had to come to outer West to see the dentist as that's one that's commissioned. A lot of them don't have access to cars, they say they don't have money for a bus".

These quotes capture the systemic and social factors families face to find and register with a dentist.

Oral Health Care Challenges in Early Childhood:

SP3, "I've actually got a family on my caseload at the moment with the worst, worst dental caries I've seen in a long time. And I was doing the first visit for the younger child, and I notice that the other children had rotten teeth. Mom said she was gonna take them, this has been going on for years now. This baby's now started nursery".

SP6, "We used to look in the mouth, but I've stopped that a long time ago, so I'll usually try and have a little peek and see if there's any teeth there".

SP8, "I think all of us are really passionate about oral hygiene because we then see the consequences later on when children have many teeth removed and it's just it's one of those things isn't it that is completely preventable and 100% did not need to happen and then that makes us sad".

These quotes highlight ongoing challenges in early oral healthcare, from parental follow-through, a decline in routine oral checks, and the emotional impact on SCPHNs who encounter avoidable dental disease in children.

Table 4.3.5: SCPHNs - Final Themes

4.3.6 Parents or Caregivers Data: Reflexive Thematic Analysis (RTA)

The data collected from eight parent or caregivers (six females and two males, including two couples) were analysed using Braun and Clarke (2021) six-phase Reflexive Thematic Analysis (RTA). This structured and iterative process enabled a rigorous and reflective exploration of the parents or caregivers' perspectives on early oral health interventions.

1. **Familiarisation with the Data** – This involved repeated reading of the interview transcripts to develop a deep understanding of participants' experiences and concerns regarding infant and toddler oral healthcare. Preliminary notes were made to capture recurring ideas, emotional tones, and potential patterns within the data.
2. **Generating Initial Codes** – Initial codes were systematically applied to meaningful data extracts. These codes highlighted key aspects of parent's or caregivers' narratives, including challenges in accessing dental services, varied sources of oral health advice, and perceived barriers to early interventions.
3. **Searching for Themes** – The codes were organised into potential themes by identifying patterns across the dataset. Emergent themes included parental or caregiver awareness of oral health practices, the influence of healthcare professionals, and difficulties in maintaining consistent oral healthcare routines.
4. **Reviewing Themes** – The themes were reviewed and refined to ensure they accurately represented the dataset. Some were merged or redefined to improve coherence and conceptual clarity. Cross-case comparisons supported a deeper understanding of shared and divergent perspectives.
5. **Defining and Naming Themes** – Each theme was then clearly defined and named to reflect its core meaning. Themes such as "Establishing Oral Healthcare Routines in Early Childhood" and "Accessing and Evaluating Oral Health Information" encapsulated key aspects of parents' or caregivers' views.
6. **Writing-up** – The final stage involved synthesising the themes into a coherent narrative, supported by illustrative quotations from participants. This ensured that the findings were meaningfully connected to the research questions and contributed to broader discussions regarding the role of dental nurses in early oral health interventions.

By applying Braun and Clarke (2021) RTA framework, this analysis provided a structured and reflexive account of parents' or caregivers lived experiences, highlighting perspectives surrounding infant and toddler oral healthcare.

4.3.7 Parents' or Caregivers' Data – Initial Coding: Introducing Toothbrushing

The code 'Introducing Toothbrushing' captures the various experiences and knowledge that parents or caregivers have when introducing toothbrushing to

their children. It includes the strategies used, challenges faced, resources used and concerns about oral health.

Code Introducing Toothbrushing Sub-codes	
Challenges with toothbrushing	Instances where the child refuses or resist toothbrushing.
Information on toothbrushing	Hands on demonstration to show parents or caregivers how to brush their children's teeth. Printed information provided by healthcare professionals. Digital apps used to engage children with toothbrushing.
Fluoride toothpaste	Use of fluoride toothpaste, concerns about the safety of using fluoride, amount of toothpaste applied.
Finger puppet	Parents or caregivers' perception of finger puppets, useful aid or unnecessary addition to the brushing routine.

Table 4.3.7 Parents' or Caregivers' – Initial Coding: Introducing Toothbrushing

4.3.8 Parents' or Caregivers' Data – Initial Coding: Discussing and Accessing Oral Health Information

The code 'Discussing and Accessing Oral Health Information' captures how parents or caregivers engage with oral health topics, how they assess the value of the information they receive, and the resources they are given to support their children's oral healthcare.

Code Discussing and Accessing Oral Health Information Sub-codes	
Discussed oral health	Frequency of discussions, importance of brushing, the impact of diet on dental health and the necessity of regular dental visits.
Information useful	Parents or caregivers' views on how helpful or unhelpful the information is. Areas where parents or caregivers felt they lacked adequate information and would like more guidance.
Finding out own information	Where parents or caregivers seek oral health information, internet, and social media.
Resources given	Materials provided by healthcare professionals including toothbrush packs, leaflets, websites.

Table 4.3.8: Parents' or Caregivers' – Initial Coding: Discussing and Accessing Oral Health Information

4.3.9 Parents' or Caregivers' Data – Initial Coding: Support and Communication Methods for Oral Healthcare and Child Development

The code 'Support and Communication Methods for Oral Healthcare and Child Development' captures the various ways in which SCPHNs and Community Nursery Nurses communicated with and supported parents or caregivers regarding their children's oral health and overall health development. It also reflects contextual influences, such as the COVID-19 pandemic and the involvement of early years settings that shaped the nature and delivery of these interactions.

Code Support and Communication Methods for Oral Healthcare and Child Development Sub-codes	
Internet calls	How often virtual consultations or video calls were used.
Telephone calls	How often telephone calls were used for communication.
Home visits	How often healthcare professionals visited the home.
Red book	Whether the parents or caregivers used the Red Book (a UK health record for children) to track their child's dental and developmental progress.
Length of time	The amount of time discussing oral healthcare during a contact visit.
COVID -19 pandemic	Challenges during the COVID-19 pandemic in accessing support due to restrictions in care provided.
Early years nursery settings	Whether oral health practices were encouraged or implemented at early years nursery settings.
Dental nurse support	The specific support that dental nurses could provide for example oral health advice and toothbrushing demonstrations.
Dental nurses as part of the service	Whether dental nurses were seen as a key part of the child's oral healthcare and development support team.

Table 4.3.9: Parents' or Caregivers' Data – Initial Coding: Support and Communication Methods for Oral Healthcare and Child Development

4.4. Parents' or Caregivers' Data - Initial Coding: Registering with a Dentist

The code 'Registering with a Dentist' focuses on the process of registering with a dentist, the recommended timeline, challenges faced by parents or caregivers, and how they receive contact information for registration.

Code Registering with a Dentist Sub-codes	
Register by the age of 1	Age at which parents or caregivers register their children with a dentist.
Barriers or challenges of registering with a dentist	Difficulties in finding or accessing a local dentist.
Contact information to register	How parents or caregivers receive contact information for registering.

Table 4.4: Parents' or Caregivers' Data - Initial Coding: Registering with a Dentist

4.4.1 Parents or Caregivers Data: Creating the Themes

The next stage of the analysis involved creating themes from the existing codes specific to parents or caregivers. This process enabled the identification of similarities or differences in how participants perceived and engaged with early childhood oral health. It involved recognising overarching concepts that meaningfully connected the codes with a focus on common concerns, attitudes, and behaviours related to oral health practices.

By examining these patterns, the codes were grouped into broader categories, which served as a foundation for generating potential themes. Once these categories were established, I engaged in a reflexive process to determine what each emerging theme represented in relation to the research question, particularly in understanding parents or caregivers' awareness, challenges, and support needs in early oral health. This reflexive engagement required ongoing critical consideration of my own role in the interpretation of the data, ensuring that the themes accurately represented the participants lived experiences. Descriptive titles were assigned to encapsulate the essence of each theme, highlighting key aspects such as oral health education, barriers to implementation, and interactions with SCPHNs. This approach ensured that the themes were grounded in the data and aligned with the research aim (Braun and Clarke, 2021).

4.4.2 Parents or Caregivers – Final Themes

The following table presents the final themes generated from the analysis of the parents or caregivers' data, reflecting their perspectives on oral healthcare for their infants and toddlers during SCPHN mandated contacts. These themes were developed using Braun and Clarke's Reflexive Thematic Analysis (RTA) (2021) offering a comprehensive understanding of the key factors influencing early oral healthcare practices.

Each theme captures a distinct aspect, including parents or caregivers' oral health routines, access to oral health information, perceptions of the role of dental nurses in providing oral health advice in collaboration with SCPHNs, and barriers to dental access and registration. Together, these insights highlight both the challenges and opportunities for integrating oral healthcare into SCPHN led interventions with the involvement of dental nurses.

Theme 1	Establishing Oral Healthcare Routines in Early Childhood
This theme captures the practices, challenges, and oral health aids parents or caregivers were provided to introduce and maintain oral healthcare routines for their children.	
Sub-themes under the broader theme 'Establishing Oral Healthcare Routines'.	
Challenges with Toothbrushing:	
PC1-2 , <i>"He doesn't like doing it, we have to force him, it is a struggle to get him to brush his teeth sometimes, but he will do it eventually".</i>	

PC5, "He just gets upset, yeah, he sees it as a bit of a game. Now he just refuses to open his mouth".

Fluoride Toothpaste:

PC3, "We didn't even know what kind of toothbrush to get, which are probably quite basic thing but because they're so small and they're so kind of sensitive, we just wanted to make sure that we were doing the right thing".

PC4, "I've got no idea how much toothpaste do you use, I just sort of use a small amount that seems right for the toothbrush".

Resources and Aids:

PC3, "We definitely weren't given anything because we keep everything, so, we didn't miss anything, and we were definitely not given anything like a toothbrush or anything".

PC6, "No toothpaste, no toothbrush, no like chewy things or whatever that can help them, you know with teething. Like the first bit I got on oral health was when he was about one and half and that was from his nursery, and they were giving out um packs with a song and stuff".

These quotes effectively capture the parents or caregivers' experiences; challenges and available resources related to introducing and maintaining oral healthcare for infants and toddlers.

Theme 2

Accessing and Evaluating Oral Health Information

This theme explores how parents or caregivers engage with oral health information, the sources they use, and the gaps in knowledge they experience.

Sub-themes under the broader theme 'Accessing and Evaluating Oral Health Information'.

Information Provided by Professionals:

PC3, "No, not that I can recall. When I had a doctor's appointment for my little boy, I mentioned like how often should he be going to the dentist". And they were kind of like oh, he should have gone already".

PC4, "To be honest I've not really had any sort of reference to dental health at all, and there's never been. The only thing that they've ever sort of mentioned is dummies that dummies can affect the teeth".

PC5, "No, it was only common sense, yeah, yeah, it was just stuff that I already knew to brush them twice a day".

Finding Independent Information:

PC1-2 "I think we've Googled the odd thing in terms of like, yeah, in terms of teething, the best toothpaste to use and that sort of thing. But um, nothing major I don't think and then we just used our judgment from there".

PC5, "I've tried to Google like how to get the child to brush their teeth, the advice seems to be for older toddlers and there's nothing much on babies".

PC7-8, "I spoke to our neighbour at the time, and she was a dental nurse, and she just said just let him walk around and kind of chew the toothbrush or chew something with bristles on initially".

Usefulness of Information:

PC4, "I mean they didn't tell me when I needed to book like the first dentist appointment, so I didn't know whether you go when they have one tooth whether you wait for them to have a full set and it was just from calling the dentist that I found out that information".

PC5, "No, it wasn't I did think to myself if I try and put my finger in his mouth it would be bitten off and so I haven't tried that approach".

These quotes effectively capture how parents or caregivers seek, receive, and assess oral health information for their infants or toddlers.

Theme 3	Communication and the perceived value of SCPHNs and Dental Nurses in supporting early oral health interventions
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This theme explores parents' or caregivers experience of communication and support regarding oral healthcare from SCPNs during mandated contacts. It examines how SCPHNs currently provide oral health advice and considers the potential contribution of dental nurses in strengthening this support.

Sub-themes under the broader theme 'Communication and Potential Collaborative Support from SCPHNs and Dental Nurses'.

Communication as a Key Factor:

PC3, "So most appointments were done in person, so they were face to face. But as he got older, they were kind of just telephone calls, kind of quite casual check-ups".

PC5, "She just asked if I brushed his teeth at night. I try and the advice was to keep trying and to, if I couldn't actually brush his teeth, just to put toothpaste on my finger and try and brush it onto his teeth myself and that yes that was the advice".

PC7-8, "We've seen them I can't recall anybody mentioning anything about his oral health".

Pandemic Challenges:

PC3, "So I don't know whether that changed things necessarily because the visits were very kind of short and they kind of did what they needed to do and then they left immediately".

PC6, "I can appreciate this was in a technically COVID period but there're still supposed to be looking after a new mum".

Current Role of SCPHNs and the Emerging Potential of Dental Nurses:

PC3, "I mean, nothing bad about health visitors at all they're absolutely incredible but I think there's just so much that they have to go through that maybe having that additional support would be a good reminder of where they can give education, where perhaps maybe that they're not too sure".

PC6, "If I had specific questions, I'm not sure that they're gonna be able to answer me rather than what a dental nurse could answer they've had the correct training. So, I think actually there should be more dental nurses or any dental person coming out to

do that and it probably would prevent a lot of younger kids needing the extra dental care”.

PC7-8, *“If people had the option in the future, it would be nice to be told because you almost need everything given to you as first-time parents”.*

By acknowledging both the strengths and limitations of current SCPHN communication, these quotes highlight the potential for a collaborative approach between SCPHNs and dental nurses to improve early oral health outcomes.

Theme 4	Dental Check-up by 1 (DCby1) and access to Dental Services
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This theme examines the challenges parents or caregivers face when attempting to access appointments with local dental services.

Sub-themes under the broader theme ‘Dental check-up by 1 (DCby1) and access to dental services.’

Dental Check-up by 1:

PC3, *“I didn’t even realise that it was from one that they were supposed to have dental appointments. He’s only just had his first appointment about a month ago and he would have been 18 months”.*

PC4, *“There was nothing sort of from the health visitor to say I needed to book by a certain time, and he probably would have had the appointment just after he was one and if I’d have been able to get in but as I say it’s such a nightmare”.*

Barriers to Access:

PC3, *“We were calling around and so many dentists they all said that they didn’t have a place for kind of NHS children. So, we ended-up having to book an appointment kind of further away, so we have to travel half an hour for him to go to his dental appointment”.*

PC5, *“I have tried to phone my dentist it rang for so long I gave up phoning so I probably I’ve just put off doing it”.*

PC7-8, *“I must admit I was quite shocked because I thought that all children were eligible for NHS places, but the amount of them I had to ring to find an NHS place”.*

These quotes examine the structural challenges parents or caregivers are faced when attempting to access dental services for their infant or toddler. These systemic barriers reinforce the need for improved awareness and access to dental services.

Table 4.4.2 Parents’ or Caregivers’ Data – Final Themes

4.5 Dental Nurses’ Data: Reflexive Thematic Analysis (RTA)

The data collected from the seven dental nurse participants were analysed using Braun and Clarke’s (2021) six-phase Reflexive Thematic Analysis (RTA). This structured and iterative approach enabled a rigorous exploration of dental nurses’ perspectives on their potential integration into early oral healthcare during SCPHN mandated contacts.

- 1. Familiarisation with the Data** – This involved repeated reading of the interview transcripts to develop a comprehensive understanding of participants' perspectives. Initial reflections and analytic notes were documented to facilitate deeper engagement with the data.
- 2. Generating Initial Codes** – Initial codes were systematically applied to meaningful data extracts, highlighting recurring patterns and features related to dental nurses' roles in early oral healthcare. This stage ensured a structured and transparent recognition of key insights.
- 3. Searching for Themes** – The codes were organised into potential themes by identifying patterns and shared meanings across the dataset. Emerging themes focused on the integration of dental nurses into SCPHN contacts, their perceived responsibilities, and the challenges with early intervention.
- 4. Reviewing Themes** – The identified themes were reviewed and refined in relation to the coded data and the dataset. This ensured internal coherence and fidelity of participants' experiences, while allowing for modifications or the identification of additional themes where required.
- 5. Defining and Naming Themes** – Final themes were defined and named to capture their core meaning in relation to the research question. The theme names were crafted to reflect the depth and nuance of participants' contributions while maintaining alignment with the overall study's narrative.
- 6. Writing up** – The final phase involved synthesising the themes into a coherent narrative, supported by illustrative data extracts. This ensured that the voices of dental nurses remained central to the interpretation of the findings.

By applying Braun and Clarke (2021) RTA framework, the analysis provided a structured and reflexive account of dental nurses' insights, offering valuable perspectives on their potential role in early oral health interventions during SCPHN mandated contacts.

4.5.1 Dental Nurses – Initial Coding: Integrating Dental Nurses into Collaboration with SCPHNs for Early Oral Health Interventions

The code 'Integrating Dental Nurses into Collaboration with SCPHNs for Early Oral Health Interventions' reflects how dental nurses perceive their role, the challenges and potential areas for growth within early oral health interventions for infants and toddlers'.

Code Integrating Dental Nurses into Collaboration with SCPHNs for Early Oral Health Interventions Sub-codes	
Collaboration	Working with SCPHNs/health visitors.
Upskilling Dental Nurses	Professional development opportunities, confidence in delivering oral health advice.
Scope of Practice	Perceptions of current role boundaries.
Dental Nurse – Public Health	Interest in a formalised public health role.
Workforce	Job satisfaction and motivation.
Dental Nurse Led Clinics	Feasibility and willingness to lead early oral health interventions.

Referrals	Understanding referral pathways for infants and toddlers.
Clinical Notes	Documentation practices in record-keeping.

Table 4.5.1: Dental Nurses – Initial Coding: Integrating Dental Nurses into Collaboration with SCPHNs for Early Oral Health Interventions

4.5.2 Dental Nurses – Initial Coding: The Role of Dental Nurses in Early Childhood Oral Health Prevention and Education

The code 'The Role of Dental Nurses in Early Childhood Oral Health Prevention and Education' highlights the multifaceted role of dental nurses in providing early oral healthcare through education and demonstration.

Code The Role of Dental Nurses in Early Childhood Oral Health Prevention and Education Sub-codes	
Aids and resources	Refers to aids, resources and strategies used to support oral health education and prevention.
Hidden Sugars	Awareness of sugars present in everyday foods and drinks.
Foods and snacks	Guidance on healthy dietary choices that reduce the risk of early childhood caries.
Toothpaste	The fluoride content and amount of toothpaste suitable for infants and toddlers.
Demonstration	Practical demonstration showing parents or caregivers how to brush their child's teeth correctly.
Toothbrushing	Frequency, to encourage twice daily toothbrushing with a fluoride toothpaste.
Decay	The prevention, causes, and the impact of dental decay in infants and toddlers.
Tell, show, do	Explain, demonstrate and encourage with guidance from a dental nurse.

Table 4.5.2: Dental Nurses – Initial Coding: The Role of Dental Nurses in Early Childhood Oral Health Prevention and Education

4.5.3 Dental Nurses – Initial Coding: Barriers to Early Oral Health Interventions by Dental Nurses

The code 'Barriers to Early Oral Health Interventions by Dental Nurses' reflect conflicting messages, the need for early oral health intervention, access issues and the role of key stakeholders in providing oral health advice.

Code Barriers to Early Oral Health Interventions by Dental Nurses. Sub-codes	
Mixed messages	Conflicting or inconsistent oral health advice given by healthcare professionals, social media or other sources.
Prevention	Proactive measures to reduce the risk of early childhood caries in infants and toddlers.
Access to a dentist	The availability of accessing a dentist, and the lack of awareness of the importance of dental visits.
Oral health advice	Guidance to parents or caregivers on maintaining good oral health for their infants or toddlers.
Parents or caregivers	The primary figures who are responsible for a child's oral health who play a significant role in a child's oral health outcome.
Lack of information	Gaps in receiving knowledge about implementing oral health or lack of resources.
Register by 1	All children should have their first dental check-up by the age of one.

Time	Time constraints which affect SCPHNs making it difficult to provide detailed oral healthcare education.
SCPHNs	Healthcare professionals who play a key role in early childhood health and development.

Table 4.5.3 Dental Nurses – Initial Coding: Barriers to Early Oral Health Interventions by Dental Nurses

4.5.4 Dental Nurses’ Data: Creating the Themes

The next step in the analysis process involved generating themes from the existing codes specific to the dental nurses’ dataset. This approach enabled me to identify patterns, differences, and similarities in how dental nurses perceived their role in early oral health interventions and their collaboration with SCPHNs. The process required recognising overarching concepts that meaningfully connected the codes, particularly those related to professional responsibilities, perceived barriers, and opportunities for engagement in early childhood oral healthcare.

By closely examining these patterns, I grouped related codes into broader categories, which laid the foundation for developing coherent and conceptually sound themes. Once these preliminary categories were established, I engaged in reflexive interpretation to understand what each theme potentially represented in relation to the central research question. This was particularly important in capturing the dental nurses’ perspectives on their professional identity, interdisciplinary collaboration, and systematic challenges they may encounter.

Throughout this process, I remained attentive to the nuances of the data, ensuring that each theme authentically reflected the dental nurses’ experiences, training needs, and potential barriers in delivering early oral healthcare. Each theme was given a descriptive title that encapsulated significant aspects of the data. This approach ensured that the resulting themes were both analytically robust and grounded in the lived realities of dental nurses, aligning with the principles of reflexive thematic analysis (Braun and Clarke, 2021).

4.5.5 Final Themes – Dental Nurses

The following table presents the final themes generated from the analysis of the dental nurse’s dataset, reflecting their perspectives on oral healthcare for infants and toddlers during SCPHN mandated contacts. These themes were developed using Braun and Clarke’s RTA framework (2021) providing a comprehensive understanding of the key factors influencing early oral healthcare practices.

Each theme captures a distinct dimension of the data, including parents or caregivers' oral health routines, access to oral health information; perceptions of the role of dental nurses in delivering oral health advice collaboratively with SCPHNs; and the barriers related to dental access and registration. Collectively, these themes illuminate both the challenges and opportunities for integrating oral healthcare into SCPHN led interventions with the meaningful involvement of dental nurses.

Theme 1	Dental Nurses Perspectives on Their Role in Early Oral Health Interventions for Infants and Toddlers during Mandated Contacts by SCPHNs.
This theme reflects the dental nurses' perspectives of their potential contribution in early oral health interventions during mandated contacts by SCPHNs for infants and toddlers.	
Sub-themes under the broader theme 'Dental Nurses Perspectives on Their Role in Early Oral Health Interventions for Infants and Toddlers during Mandated Contact by SCPHNs'. Collaboration with SCPHNs during mandated contacts. DN1, "Yes, because we're only doing oral hygiene. The health visitors, they're covering everything all the body and everything, but we have just got the mouth. And diet, that's all we've got. So, it would be much easier for us than the health visitors". DN2, "Yeah, definitely because the thing is, it is our profession. So, I think a dental nurse or somebody in that profession should actually provide that information. The health visitor – midwife obviously they're more to deal with in their own area so they may have some knowledge, but probably not as in-depth as obviously a dental nurse". DN3, "And obviously we have additional skills we obviously learn about oral health as part of our primary qualification. So, I see it as an obvious route of progression, really working with other healthcare professionals, particularly now where collaboration seems to be the key in terms of the way forward, it seems a natural thing to do". DN6, "I do, because I think it would kind of maybe give dental nurses a bit more sort of responsibility and it's certainly something that I would like personally". Upskilling Dental Nurse Workforce, Public Health Role within the Scope of Practice. DN3, "I mean, dental nurses, they are keen, a lot of them are keen to progress and one of the things that they do progress in is oral health. And I think for a dental nurse, it will be really good seeing the wider public health model rather than just what happens chairside as well. I think it will be a good thing to understand the wider picture and to understand about interprofessional working as well". DN5, "I think it's an exciting time for dental nursing our Scope of Practice is just continually evolving. I think it's an exciting time for dental nursing and I think it's putting that excitement back into dental nursing. We're often the forgotten heroes". DN6, "That's a lot more responsibility, which I think would be great for myself as a dental nurse and also being able to work, you know, alongside health visitors. It would be nice to be able to combine the two disciplines together to get results".	

DN7, "That's a good development for the role of a dental nurse. Yeah, if people didn't want to stagnate, it's a good way to progress further, definitely".

Oral Health Referrals to Dental Nurses, and Clinical Notes.

DN3, "I think in terms of digital technology, I think that is the way things are going anyway. So, I think it fits in quite nice with that agenda in terms of digital transformation. I think it makes us more accessible rather than having face to face house visits. I think it's good for the parents or the carers as well because they're actually getting that sort of specialism and it's that professional person who's got the right skills to deliver those messages".

DN7, "Yep, I think that's a good idea because you have referrals now to practice for extractions or anything else from other dentists or other healthcare providers. So yeah, why not extend it to something else that's a good idea".

These quotes reflect the dental nurses' perspectives of their potential contribution in early oral health interventions during mandated contacts by SCPHNs for infants and toddlers.

Theme 2	Enhancing the Role of Dental Nurses in Supporting Parents or Caregivers in Early Oral Health Interventions.
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This theme expands on the educational and practical aspect by focusing on how dental nurses can support and educate parents or caregivers, reinforcing the role in preventive oral healthcare.

Sub-themes under the broader theme 'Enhancing the Role of Dental Nurses in Supporting Parents or Caregivers in Early Oral Health Interventions'.

The Role of Dental Nurses in Parental or Caregivers Education on Infant Oral Healthcare.

DN2, "I think it's something that's needed and I think you need to start at a very young age and obviously the parents or carers need to be educated and because how do they know how to look after a child's teeth if they're not educated themselves or know what to do".

DN4, "I think it is an absolute fantastic idea that dental nurse become more involved with oral health education advice from that early age is so important. This week we've had a 3-year-old that's having a full clearance, and I booked them onto our general anaesthetic list. I see it quite a lot and yeah, it's very sad".

DN7, "From birth age to two is a crucial time of educating parents. And so, I think dental nurses being involved with that is a definite help to reduce child decay".

Practical Interventions for Dental Nurses in Supporting Parents or Caregivers.

DN2, "I think with visual aids, not everybody learns to take things on board just by giving information, so you've got to adapt to everybody's needs. So, I think if you have visual things, people will remember more. Oh, I saw that's how much toothpaste I need because you say to somebody a pea size amount of toothpaste. But actually, what is a pea size is it a small pea, big pea".

DN4, "Parents can't register their children with an NHS dentist. And so that's one of the issues but prevention is key. The brushing daily, controlling the sugar intake, the bottle going to a sippy cup, and yeah, that will help maintain good oral health. And if dental nurses can lead on that more and that's like a key area to target. And a lot of

them do have premade meals, and we I always encourage them to use the food scanner app Change for Life. It scans the barcode of everything, and it will tell you exactly the amount of sugar that's in it because sometimes it's hard to work out with the packaging".

The Impact of Dental Nurse-Led Early Oral Health Interventions

DN1, *"When I first started, there was a lot of children needing extractions and now it hasn't gone away there's still decay. Nothing's changed, no, nothing's changed".*

DN5, *"And I know research shows us that if we can instil lifelong habits in younger children, they do take those into adult life, and if they can build up those habits of toothbrushing from a young age that significantly improves their chances of not developing dental disease and decay in adult life".*

DN7, *"You know or informal drop in whatever would work best. But even if it was done on a trial thing once a month, you've tried it, it's something".*

These quotes focus on the educational and practical aspects on how dental nurses can support and educate parents or caregivers in preventive oral healthcare.

Theme 3	Navigating Challenges in Providing Early Oral Healthcare for Infants and Toddlers.
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This theme addresses the challenges in infant oral health with access, information and professional roles.

Sub-themes under the broader theme "Navigating Challenges in Providing Early Oral Healthcare for Infants and Toddlers".

Promoting Evidence-based Oral Health Practice:

DN2, *"How things are now, lifestyle and cost of living, and you know there's not much access to an NHS dentist. So, they're having to pay privately so if they had a point of contact where they could actually have some of this information given to them, whether this is online or clinics held, then I think it would be beneficial because it would actually help to relieve some of the anxiety parents have with their young children".*

DN5, *"And I think as well when, especially when emphasis is put on toothbrushing because you think oral health equals good toothbrushing when actually we think of decay the majority, is down to diet and the Stephan Curve".*

Limitations in Current NHS and Community Frameworks

DN3, *"We know with oral health it tends to get put on the periphery, even in terms of the NHS long term plan, when the chief dental officer said about putting the mouth back in the body. But is should start at that young age and hence the campaign dental check by one. It's educating those parents right from the start isn't it to know what's right. And I think that definitely dental nurses can have an impact there".*

DN4, *"And yeah if they're in pain we direct them to an 8 to 8 and their nearest 8 to 8 emergency dentist because the referral process can take a few weeks. So, if it's immediate pain and concern, we direct them to the local emergency dentist"*

DN4, *"The oral health promotion service within the trust do deliver training, we've gone through quite a recruitment process where we haven't had more health specialists in post and currently the person in post is off ill, so there is a slight delay with it".*

The Importance of Clear, Consistent Oral Health Messages.

DN5, "I think it's really important to look at sort of resources that you give to parents. Historically when we've developed our resource pack and each parent has been given something like 7 leaflets on oral health. And you've got to think when you're got a health visitor going into a family home, all the information that they are being given, how well is that information gonna be received when you're got literally a textbook to go through".

DN6, To actually feel like you're making a difference to somebody and to be able to gently remind parents of the importance you know of good oral hygiene, I think it could massively benefit both the dental and the parents".

These quotes address the challenges faced in providing infant oral health with access, information and professional roles.

Table 4.5.5: Dental Nurses – Final Themes

4.5.6 Overview of SCPHN, Parents or Caregivers and Dental Nurses Themes.

These themes examine the roles and perspectives of SCPHNs, parents or caregivers, and dental nurses in the early intervention of oral healthcare for infants and toddlers. They highlight the knowledge, experiences, challenges, and collaborative efforts required to promote early oral healthcare for infants and toddlers.

Final Themes of SCPHN, Parents or Caregivers and Dental Nurses	
SCPHNs	Theme 1 - Knowledge and Competency in Oral Health
SCPHNs	Theme 2 - Collaborative Approaches to Enhancing Access to Oral Health Services for Families
SCPHNs	Theme 3 - Barriers to Effective Oral Health in Early Childhood
Parents/Caregivers	Theme 1 - Establishing Oral Healthcare Routines in Early Childhood
Parents/Caregivers	Theme 2 - Accessing and Evaluating Oral Health Information
Parents/Caregivers	Theme 3 - Communication and the perceived value of SCPHNs and Dental Nurses in supporting early oral health interventions
Parents/Caregivers	Theme 4 - Dental Check-up by 1 (DCby1) and access to Dental Services
Dental Nurses	Theme 1 - Dental Nurses Perspectives on Their Role in Early Oral Health Interventions for Infants and Toddlers during Mandated Contacts by SCPHNs
Dental Nurses	Theme 2 - Enhancing the Role of Dental Nurses in Supporting Parents or Caregivers in Early Oral Health Interventions
Dental Nurses	Theme 3 - Navigating Challenges in Providing Early Oral Healthcare for Infants and Toddlers

Table 4.5.6: Final themes – SCPHNs, Parents or Caregivers, and Dental Nurses

4.5.7 Integrated Presentation of Findings

Rationale for Presenting Large Tables

Presenting qualitative data in detailed tables allows for full transparency in the analytical process, enabling readers to trace how initial codes were developed into sub-themes and focused categories, and how these contributed to the development of themes. This approach ensures that the analytical decisions and connections between the raw data, emerging categories, and final themes remain clear, auditable, and accessible.

This section presents the integrated findings from the qualitative analysis across all participant groups: SCPHNs, parents or caregivers, and dental nurses. Using Braun and Clarke's Reflexive Thematic Analysis (2021), the data were systematically coded, categorised, and synthesised to identify key themes that capture the perspectives, experiences, and challenges in early oral health interventions for infants and toddlers during mandated SCPHN contacts.

Tables 4.3.1 – 4.5.6 provide a comprehensive overview of the initial codes, sub-codes, focused categories, and illustrative quotations for each participant group. These tables demonstrate transparency in the analytical process and show how raw data informed the development of categories. While they reflect the early stages of coding, the final themes for each participant group are presented separately in Sections 4.3.5 (SCPHNs), 4.4.2 (Parents or Caregivers), and 4.5.5 (Dental Nurses). This ensures readers can clearly distinguish between initial coding, category development, and the final interpretive themes.

Integrated Themes Overview

Through a synthesis of the data across participant groups, four overarching themes emerged:

1. Knowledge, Competency, and Confidence in Early Oral Health Interventions – captures professional knowledge, parents or caregivers' experiences of oral health routines, and dental nurses' expertise.
2. Interdisciplinary Collaboration and the Role of Healthcare Professionals – highlights joint working between SCPHNs, dental nurses, and parents or caregivers.
3. Barriers and Challenges to Implementing Early Oral Healthcare – addresses practical, systemic, and social obstacles affecting all participants groups.

4.Improving Access to Dental Service and Early Oral Healthcare Support – explores awareness of “Dental Check by 1”, appointment challenges, and systemic barriers.

The synthesis process involved identifying points of convergence and divergence across SCPHNs, parents or caregivers, and dental nurses. While each group offered unique insights, the overarching themes reflect the key issues affecting early oral health interventions and the collaborative roles of professionals and parents or caregivers.

By grouping related themes together, this integrated presentation provides a cohesive and structured understanding of the data, facilitating a comparative discussion across participant groups while maintaining the integrity of each group’s perspectives. Full quotations supporting the final themes are provided in Sections 4.3.5, 4.4.2, and 4.5.5, ensuring transparency and grounding in participants’ voices.

Table 4.5.7 presents an integrated overview of the final overarching themes identified across SCPHNs, parents or caregivers, and dental nurses. The table synthesises the findings from each participant group, showing how their respective themes contribute to the four overarching themes of early oral health interventions. This approach allows for a clear, cohesive understanding of the data and highlights points of alignment and divergence across the groups.

1. Knowledge, Competency, and Confidence in Early Oral Health Interventions

- SCPHNs: Knowledge and Competency in Oral Health
- Parents or Caregivers: Accessing and Evaluating Oral Health Information
- Dental Nurses: Perspectives on Their Role in Early Oral Health Interventions

Rationale: This theme unites the perspectives of SCPHNs, parents or caregivers, and dental nurses on their understanding of early oral health. It explores the competency of SCPHNs, and dental nurses, their confidence in providing oral health guidance, and how parents or caregivers access and interpret oral health information.

2. Interdisciplinary Collaboration and the Role of Healthcare Professionals in Early Oral Health

- SCPHNs: Collaborative Approaches to Enhancing Access to Oral Health Services for Families
- Parents or Caregivers: Communication and the Perceived Value of SCPHNs and Dental Nurses in Supporting Early Oral Health Interventions
- Dental Nurses: Enhancing the Role of Dental Nurses in Supporting Parents or Caregivers in Early Oral Health Interventions.

Rationale: This theme captures the importance of teamwork between SCPHNs, dental nurses, and parents or caregivers in ensuring effective early oral health interventions. It reflects how each group perceives the role of healthcare professionals in promoting oral health.

3. Barriers and Challenges to Implementing Early Oral Healthcare

- SCPHNs: Barriers to Effective Oral Health in Early Childhood
- Parents or Caregivers: Establishing Oral Healthcare Routines in Early Childhood
- Dental Nurses: Navigating Challenges in Providing Early Oral Healthcare for Infants and Toddlers

Rationale: This theme synthesises the common obstacles faced by all participant groups, including systemic barriers, workforce constraints, parental or caregivers' challenges in maintaining oral health routines, and professional limitations in providing effective support.

4. Improving Access to Dental Service and Early Oral Healthcare Support

- Parents or Caregivers: Dental Check by 1 (DCby1) and Access to Dental Services
- SCPHNs and Dental Nurses: Collaborative Approaches to Enhancing Access to Oral Health Services for Families.

Rationale: This theme highlights the accessibility of dental services and the importance of early dental visits, aligning with public health initiatives such as "Dental Check by 1". It ensures the discussion remains focused on practical strategies for improving access to oral health care.

Table 4.5.7: Synthesising the Final Themes Across Participant Groups

Tables 4.5.7i-4.5.7vi present the coding and theme development for each participant group. Tables 4.5.7i–iii summarise initial codes and focused categories for SCPHNs, parents or caregivers, and dental nurses, while Tables 4.5.7iv–vi map selected codes to sub-themes and final overarching themes, with illustrative quotations. These tables demonstrate how the raw data were systematically analysed and synthesised, providing transparency and grounding the final four overarching themes in participants' perspectives.

Table: 4.5.7i SCPHN – Code List

Initial Code	Focused Code/Category
Lack of formal oral health training	Gaps in professional knowledge
Limited knowledge of tooth eruption	Gaps in professional knowledge
Lack of resources (toothpaste, toothbrush)	Resource limitations
Need for joint working with dental nurses	Collaboration / Multidisciplinary approach
COVID impact on service delivery	Service delivery adaptations
Difficulty accessing dentists for families	Barriers to dental care access
Time constraints during mandated contacts	Time limitations
Cultural differences/fluoride concerns	Communication / Cultural barriers

Variability in service delivery (virtual vs. face-to-face)	Service delivery variations
Emotional impact of preventable dental decay	Professional challenges / Motivation

Signposting: Full SCPHNs quotations are provided in Section 4.3.5

Table: 4.5.7ii - Parents or Caregivers Code List

Initial Code	Focused Code/Category
Difficulty brushing child's teeth	Oral healthcare routines
Uncertainty about toothpaste amount	Oral healthcare routines
Lack of toothbrushes/toothpaste	Resources and aids
Limited guidance from professionals	Accessing and evaluating information
Searching online for advice	Independent information seeking
Receiving advice from family/friends	Informal sources
Limited awareness of first dental visit	Access to dental services
Challenges booking dental appointments	Barriers to access of dental services
Mixed communication experiences with SCPHNs	Communication and support
COVID related disruptions to visits	Pandemic impact

Signposting: Full Parents or Caregivers quotations in Section: 4.4.2

Table: 4.5.7iv – SCPHN Codes > Sub-themes > Themes > Quotes

Code	Sub-theme	Final Theme	Illustrative Quotations
Lack of formal oral health training	Gaps in professional knowledge	Knowledge, Competency, and Confidence in Early Oral Health Interventions	"I would say when I did my training that there was no formal training as such" (SP1)
Need for joint working with dental nurses	Gaps in professional knowledge	Interdisciplinary Collaboration and the Role of Healthcare Professionals in Early Oral Health	"We can't be specialists in all areas...collaborating with other specialists can be really valuable for families" (SP1)
Time constraints during contacts	Time limitations	Barriers and Challenges to Implementing Early Oral Healthcare	"Probably less than 5 minutes is devoted to dental hygiene and oral health" (SP2)
Difficulty accessing dentists for families	Barriers to dental care access	Improving Access to Dental Services and Early Oral Healthcare Support	"Most families I see nowadays don't have a registered dentist and can't get an appointment." (SP6)

Signposting: Full Dental Nurses quotations are provided in Section 4.5.5

Table: 4.5.7v - Parent/Caregiver Codes > Sub-themes > Themes > Quotes

Code	Sub-theme	Final Theme	Illustrative Quotations
Difficulty brushing child's teeth	Oral healthcare routines	Knowledge, Competency, and Confidence in Early Oral Health Interventions	"He doesn't like doing it, we have to force him... but he will do it eventually." (PC1-2)

Limited guidance from professionals	Accessing and evaluating information	Knowledge, Competency, and Confidence in Early Oral Health Interventions	"The only thing they've ever mentioned is dummies that dummies can affect the teeth." (PC4)
Mixed communication experiences with SCPHNs	Communication and support	Interdisciplinary Collaboration and the Role of Healthcare Professionals in Early Oral Health	"She just asked if I brushed his teeth at night... that was the advice." (PC5)
Challenges booking dental appointments	Access to dental services	Improving Access to Dental Services and Early Oral Healthcare Support	"I must admit I was quite shocked because I thought all children were eligible for NHS places..." (PC7-8)

Signposting: Additional Parents or Caregivers quotations are provided in Section: 4.4.2

Table: 4.5.7vi – Dental Nurse Codes > Sub-themes > Themes > Quotes

Code	Sub-theme	Final Theme	Illustrative Quotations
Collaboration with SCPHNs	Role in mandated contacts	Interdisciplinary Collaboration and the Role of Healthcare Professionals in Early Oral Health	"We're only doing oral hygiene... it would be much easier for us than the health visitors." (DN1)
Professional expertise in oral health	Knowledge and competency	Knowledge, Competency, and Confidence in Early Oral Health Interventions	"It is our profession... a dental nurse should provide that information." (DN2)
Parents or caregivers' education using visual aids	Supporting parents or caregivers	Interdisciplinary Collaboration and the Role of Healthcare Professionals in Early Oral Health	"If you have visual things, people will remember more like how much toothpaste I need" (DN2)
Challenges in NHS access / frameworks	Systemic barriers	Improving Access to Dental Service and Early Oral Healthcare Support	"How things are now... not much access to an NHS dentist." (DN2)

Signposting: Additional Dental Nurse quotations are provided in Section 4.5.5

4.6 Chapter Four Summary

Chapter four critically examines the research findings, structured around the four final themes refined through the thematic analytical process: Knowledge, Competency, and Confidence in Early Oral Health Interventions; Interdisciplinary Collaboration and the Role of Healthcare Professionals in Early Oral Health; Barriers and Challenges and the Role to Implementing Early Oral Healthcare, and Improving Access to Dental Services and Early Oral Healthcare Support. These

themes were developed through an iterative and reflexive process, ensuring that the perspectives of SCPHNs, parents or caregivers, and dental nurses were authentically represented. Reflexivity was central to maintaining analytical rigour, particularly given my professional background in dental nursing and oral health promotion, helping to minimise bias and ensure that themes remained grounded in participant accounts (Braun & Clarke, 2021).

Tables 4.5.7i-vi provide a transparent account of how initial codes, focused categories, sub-themes, and illustrative quotations contributed to the final overarching themes. This approach demonstrates the systematic development of themes and supports the credibility and transparency of the analysis. Together, these findings provide a coherent understanding of the professional, systemic, and social factors shaping early oral health interventions.

On this basis, Chapter Five will critically examine these findings, situating them within the broader literature and relevant theoretical frameworks.

Chapter Five: Discussion

5.1 Introduction to Chapter Five

This chapter discusses the findings in relation to the study's aim, to explore whether dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by Specialist Community Public Health Nurses. It also considers the research objectives and questions outlined in Chapter One. Drawing on participants' perspectives alongside the wider evidence-base, the chapter examines how the present findings align with, challenge, or extend existing literature. Particular attention is given to the potential contributions of dental nurses and the challenges they face in supporting SCPHNs during mandated contacts.

This chapter situates the findings within the broader debates surrounding early oral healthcare provision and interprofessional collaboration within the public health and community settings. It highlights the implications for practice, policy, workforce development, and future research.

5.2 Theme 1 – Knowledge, Competency, and Confidence in Early Oral Health Interventions

This theme explores SCPHNs participants perspectives on their oral healthcare knowledge, experiences, and confidence levels, revealing significant gaps in training and resources that affect their ability to provide effective early oral health interventions. A recurring concern was the lack of formal training in oral health, many SCPHNs reported relying on knowledge passed down from mentors, or gained through self-directed learning, rather than structured educational programmes. Participants widely acknowledged the importance of oral health but highlighted the absence of systematic updates following qualification. This created a perceived knowledge gap and affected their confidence in delivering oral health messages to families.

The perception of limited knowledge was echoed across several interviews, with some SCPHN participants describing their knowledge as quite basic and expressing a desire for more comprehensive education at pre-registration level. These insights are consistent with findings by Coll *et al.*, (2016), who reported that a lack of understanding of the science behind oral health messages, coupled with low confidence, contributed to ineffective delivery of key messages. Similarly, Oge *et al.*, (2018) demonstrated that SCPHNs who had received oral health training

demonstrated stronger knowledge and greater confidence in their roles. Lewney *et al.*, (2018) and Eskyte *et al.*, (2021) also identified a reliance on peer learning in the absence of formal training, reinforcing the urgent need for structured programmes that standardise oral health education across the workforce.

The impact of this training gap is further compounded by systemic challenges. SCPHN participants voiced frustration at the lack of access to oral health resources particularly toothbrushing packs during mandated visits. These limitations were attributed to financial cuts with the NHS and local government, which hinder the practical implementation of oral health promotion. This aligns with findings by Eskyte *et al.*, (2021), where one SCPHN remarked “nothing for oral health, we don’t sort of have anything like that”. Bhatti *et al.*, (2022) similarly noted that when resources were available, they enhanced conversations with families and were well-received by parents. These insights support recommendations by the Local Government Association (LGA, 2013) and DBOH (2007), both of which advocate for the provision of oral health packs as a key component of early prevention strategies.

Toothbrushing, as an essential element of oral hygiene, plays a critical role in establishing lifelong oral health habits. Promoting these practices from the eruption of the first tooth reflects a proactive, preventative approach (Oral Health Foundation, 2021). This aligns with guidance from the College of General Dentistry (CGDent) (2023), which emphasises empowering parents or caregivers with the knowledge and resources needed to maintain their child’s oral health. However, without adequate training and resources, SCPHNs may struggle to effectively communicate these practices during early interactions with families (CGDent, 2023).

These findings highlight a broader systemic issue but also present an opportunity for interprofessional collaboration. Dental nurses, as registered professionals with specialist oral health knowledge, are well positioned to support SCPHNs in bridging training and resource gaps. Their involvement in mandated contacts whether in a direct advisory capacity or through co-delivered interventions could enhance the consistency and quality of oral health messaging delivered to families. This integration could contribute to more cohesive early oral health intervention strategies and improved oral health outcomes for infants and toddlers.

In summary, while SCPHNs are willing and motivated to deliver oral health advice, they are often limited by insufficient training and a lack of resources. The literature consistently supports the need for enhanced oral health education, both at the pre-registration and post-registration levels. Importantly, this theme also points to a largely untapped opportunity for the integration of dental nurses into early years oral health promotion. Exploring this potential could inform future workforce models, strengthen interprofessional practice, and ultimately support better oral health outcomes in early childhood.

5.3 Theme 2 - Interdisciplinary, Collaboration and the Role of Healthcare Professionals in Early Oral Health

This theme examines the role of interdisciplinary collaboration in promoting early oral health, focusing on the interactions between SCPHNs, community nursery nurses and dental nurses. Participants emphasised that integrated working enables a more cohesive and effective delivery of oral health advice, particularly when such messages are reinforced consistently throughout various early child health interventions. SCPHNs and a community nursery nurse agreed that parental or caregiver engagement improves when oral health messages are reiterated by multiple professionals, enhancing trust and understanding.

A key challenge identified by participants was the growing difficulty parents or caregivers face in accessing NHS dental care, primarily due to workforce shortages and reduced service availability. Some SCPHNs and a community nursery nurse proposed the establishment of dental nurse led oral health clinics. Dental nurses with extended duties in oral health education (DNOHEs) are particularly well placed to fill this gap. Their Scope of Practice includes preventative advice, oral health promotion, and support with oral disease prevention strategies all of which can be delivered within community settings, such as health visiting clinics or via digital platforms (Chapman and Felton, 2021; Brooks, 2015). These capabilities position dental nurses as a valuable yet underutilised resource in the delivery of early years oral health care.

Beyond their direct working with families, DNOHEs can also support the wider healthcare team by delivering oral health training to professionals, helping to standardise advice and reduce inconsistencies in oral health messages.

Chapman and Felton (2021) advocate for this educator role, arguing that consistent, evidence-based oral health communication across disciplines reduces confusion for parents or caregivers and enhances credibility. These findings are echoed by Eskyte *et al.*, (2021), who explored the benefits of interdisciplinary collaboration in oral health education. Although their research focused more on partnerships between children's centres, general practitioners, and dental practices. The omission of SCPHNs and dental nurses in these collaborative frameworks highlights a missed opportunity to embed oral health provision into early years healthcare delivery.

Despite the recognised value of interdisciplinary collaboration, engagement with dental services remains limited due to significant barriers in accessing dental appointments. Bhatti, *et al.*, (2022) underscored the importance of "joined-up care", stressing the importance of integrating dental teams with health visitors. However, current literature offers little exploration of direct collaboration with SCPHNs and dental nurses, signalling an urgent need for research into how such collaborations might enhance early oral health interventions and reduce oral health inequalities.

The Covid-19 pandemic further exposed the fragility of existing oral healthcare systems. SCPHNs reported that lockdown restrictions severely disrupted face-to-face services, making it difficult to deliver meaningful oral health advice. Although digital platforms provided a temporary solution, professionals highlighted the limitations of remote engagement particularly for families with lower digital literacy or unstable internet access. The extent of this disruption to routine dental services was severe; an analysis of NHS dental activity data reported a 98% drop in access for children during the first lockdown (Shah and Wordley, 2022), while the GDC (2020) noted that most dental practices prioritised urgent care only. The fallout included a significant increase in untreated dental decay, underscoring the urgency of community-based preventative strategies (Harnagea, Couturier, Shrivastava, Girard, Lamothe, Bedos, and Emami, 2023).

Beyond the pandemic, ongoing economic pressures have further widened disparities in oral health. According to the Social Mobility Commission (2021), the pandemic has widened existing inequalities approximately one in three children, equivalent to 4.3 million were living in poverty as from March 2020, a sharp rise

from earlier years. Financial hardship continues to limit many families' access to routine dental care, deepening existing inequalities and disproportionately affecting young children in disadvantaged communities (Social Mobility Commission, 2021). Given these challenges, embedding dental nurses within SCPHN led interventions could offer a practical and sustainable way to bring oral health support directly to families, reducing barriers and promoting equity.

In conclusion, this theme highlights the untapped potential of interdisciplinary collaboration in early oral health promotion. Dental nurses could significantly enhance the quality and reach of oral health interventions delivered during mandated SCPHN contacts. While the concept of integrated working is well supported in theory and literature, its practical application particularly involving dental nurses remains limited. Addressing this gap could lead to more effective early intervention models and improved oral health outcomes for children across England.

5.4 Theme 3 – Barriers and Challenges to Implementing Early Oral Healthcare

This theme highlights the barriers to effective oral health promotion, including time constraints, fluoride discussions, cultural challenges, family resistance, and systemic limitations. SCPHNs narratives revealed that oral health is often a secondary priority during visits, with limited opportunities to engage with parents or caregivers meaningfully. Conversations on oral health were generally brief, lasting between 5 to 10 minutes, and in some cases, less than 5 minutes. This supports findings by El-Yousfi et al., (2022) and Eskyte et al., (2021), which show that oral health discussions are often deprioritised and left until the end of visits. SCPHNs also reported that wider workforce shortages within the health visiting service reduced overall capacity, which in turn limited opportunities for sustained and meaningful engagement in oral health conversations (Eskyte et al., 2021).

Lewney et al., (2018) further noted that SCPHNs are required to deliver a wide volume of information during each visit, raising concerns about parental retention, especially concerning oral health guidance. SCPHNs working in more affluent areas reported that parents or caregivers often required detailed oral health guidance, suggesting that assumptions about higher oral health literacy in such populations may need to be reconsidered. Bhatti et al., (2022) examined the feasibility of dedicating ten minutes during a one-hour standard health visit to oral health

discussions, yet even within this timeframe, SCPHNs struggled to cover key oral health messages, highlighting the challenge of integrating oral health into an already demanding workload.

While healthcare professionals play a vital role in delivering oral health advice, the responsibility for implementation ultimately lies with parents or caregivers. Their knowledge, attitudes, and behaviours strongly influence the establishment of oral health habits in young children. Many rely on various sources for guidance, but not all information is accurate, accessible, or easy to interpret. Misinformation and conflicting advice, often act as barriers to developing consistent oral health habits for their children.

Parents or caregivers' narratives reveal significant gaps in knowledge and resources. Some were unaware of the availability of starter packs for toothbrushing, while others were uncertain about suitable toothbrush types or the correct quantities of fluoride toothpaste. Resistance from children particularly refusal to open their mouths, often resulted in forceful brushing attempts. Bhatti et al., (2022) highlighted that SCPHNs frequently lacked specialised knowledge to support parents or caregivers in addressing such challenges, and oral health resources are often insufficient to aid their efforts (Eskyte et al., 2021). Collectively, these findings underscore the need for targeted support, with dental nurses well placed to equip parents or caregivers with the skills required to establish positive oral health routines.

Despite the Department of Health (DoH, 2021) guidance on twice daily toothbrushing, dietary changes, and regular dental visits, parents or caregiver's adherence remains low (Huebner and Milgrom, 2015). ECC is largely preventable, yet various obstacles continue to drive its prevalence. Influencing factors include irregular tooth-brushing, poor dietary habits, and infrequent dental attendance (Mostofsky, Forgione, and Giddon, 2014). These are further shaped by socioeconomic factors such as education, occupation, environmental, and income (Peres and Marco, 2019; Duijster et al., 2015).

Children's oral health habits, especially toothbrushing and dietary choices, are closely linked to the behaviours and beliefs of their parents or caregivers (Chapman and Felton, 2021). Public Health England (PHE, 2019) and Hollins (2019) advise starting toothbrushing at the eruption of the first tooth (6-12

months), with habits established by 24 months. This period represents a critical window for preventive intervention (ElKarmi et al., 2015).

To provide effective guidance, parents or caregivers need evidence-based advice on toothbrush selection and brushing techniques. Coates (2012) recommends small-to-medium sized, soft-bristled toothbrushes for children. Among the various toothbrushing techniques, including Stillman's, Bass, Charter's and Fones, the Fones method is often recommended for its simplicity (Levine et al., 2009). Supporting parents or caregivers in using age-appropriate toothbrushes and toothbrushing fosters positive healthy habits (Chapman and Felton, 2021).

Huebner and Milgrom (2015) found only 59% of surveyed parents brushed their children's teeth twice daily. Clinical studies have shown significantly improved outcomes among children who brush twice-daily compared to those who brushed once a day or less (Trubey, Moore, and Chestnutt, 2015; Public Health England (PHE), 2013; Walsh, Worthington, Glenny, Appelbe, Marinho and Shi, 2010). Ghazal, Levy, Childers, Broffitt, Cutter, Wiener, Kempf, Warrem and Cavanaugh, (2015) also found a statistically significant link between ECC and the absence of bedtime toothbrushing. Given reduced saliva flow at night, effective plaque removal before sleep is especially critical (DoH, 2021).

Untreated ECC significantly impacts quality of life, leading to pain, antibiotic use, malnutrition, dehydration, and sleep deprivation (FDI World Dental Federation, 2020; HEE 2019). It can also affect school readiness, attendance, performance, and in severe cases, result in malocclusion or the need for general anaesthesia to extract multiple teeth (FDI World Dental Federation, 2020; Krisdapong, Prasertsom, Rattananangsim, Sheiham, 2013; Arora, Schwarz, and Blinkhorn, 2011).

In 2021-2022, 42,180 hospital extractions were recorded for children aged 0–19, with, 26,741 (63%) due to dental decay (GOV.UK, 2023). These procedures cost approximately £51 million and represent an increase from the 2020-2021 financial year, partially due to the recovery of hospital services following the disruptions caused by COVID 19 pandemic (GOV.UK, 2023; BDJ, 2023). In some regions, children aged 0-4 years have required the extraction of five or more primary teeth under a single general anaesthetic (Plymouth City Council, 2024). This is particularly concerning, as these teeth typically erupt between 6-30 months of age

(Chapman & Felton, 2021), indicating that very young children are losing primary teeth shortly after eruption.

Although SCPHNS acknowledged the benefits of fluoride in dental caries prevention, many lacked detailed knowledge about appropriate fluoride concentrations and toothpaste quantities for young children. This is consistent with findings by El-Yousfi et al., (2022); Eskyte et al., (2021), Oge et al., (2018), and Coll et al., (2016). However, SCPHNS who had received specific training demonstrated greater awareness (Bhatti, et al., 2022). Strategies to increase parental or caregivers understanding of fluoride content measured in parts per million (ppm) are essential. The DoH (2021) recommends that children aged 0-2 years use a smear of toothpaste with no less than 1,000 ppm fluoride. Yet some over the counter products contain little or no fluoride (HEE, 2019).

However, systemic challenges hinder effective early oral health interventions. These include a lack of accessible dental services, inadequate oral health education among parents or caregivers, and missed opportunities during routine healthcare contacts. The role of SCPHNS in delivering early oral health advice is well documented, yet gaps remain in the integration of dental professionals, into these early intervention frameworks. Expanding the role of dental nurses within SCPHN-led contacts could help bridge these gaps by providing targeted oral health education, reinforcing key messages on preventive oral health care, and supporting parents or caregivers in establishing positive oral health routines (Amin, Harrison and Weinstein, 2009).

SCPHNS also highlighted that not all families are seen during mandated contacts, some 9–12-month checks are carried out by community nursery nurses. This aligns with findings by Oge et al, (2018) and Bhatti, et al., (2022), who describe the delivery of services through Universal, Universal Plus, and Universal Partnership Plus (NHS England, 2016). Although oral health advice is generally delivered during the 9-12 month and 2-3 years review (Lewney et al., 2018; Oge et al, 2018), the latest guidance recommends oral health advice should be addressed during all five mandated development checks (El-Yousfi et al., 2022).

SCPHNS and a community nursery nurse reported challenges parents or caregivers face in accessing NHS dental care. Financial limitations, travel distances, and language barriers complicate this process. Many SCPHNS described witnessing

severe dental caries yet found it difficult to secure referrals for families due to backlogs and service limitations (Eskyte et al., 2021). Coll et al., (2016) note that community dental service waiting times can exceed two years, and Lewney et al., (2018) describe pain related difficulties common among children awaiting care.

To improve attendance, the British Society of Paediatric Dentistry (BSPD), in collaboration with the Office of the Chief Dental Officer England (OCDO), launched the 'Dental Check by One' (DCby1) campaign in 2017 (BSPD, 2017; NICE, 2020). However, NHS data from 2019 showed that nearly 60% of children did not attend an NHS dental appointment in 2018, including around 77% of two-year-olds approximately one million children (NHS Data, 2019). Between 2021-2022, the BDA reported that 6.5 million children missed essential dental appointments.

Access remains a national concern, in 2018, only 27% of dental practices in Wales accepted new child patients (Office for Health Improvement and Disparities, 2022). The College of General Dentistry (CGDent, 2023) highlights widespread 'dental deserts' across the UK, with North Lincolnshire recording 3,199 patients per NHS dentist well above the national average of 2,330 (UK Parliament NHS Dentistry 2022-2023). In contrast, Norway provides a model where health nurses assess children's teeth at age two, and all children receive a dental appointment at age three (Loken et al., 2016; Skeie et al., 2011). If dental issues are noted, referrals are made earlier demonstrating the value of structured, interdisciplinary intervention.

Dental nurses expressed concern over the persistent rates of dental decay among young children but conveyed a strong commitment to early prevention strategies. Many advocated piloting collaborative programmes with SCPHNs to document the impact of integrated approaches on improving oral health outcomes. They also highlighted how rising living costs and limited NHS dental access have compelled some families to consider private dental care, potentially exacerbating inequalities. To help mitigate these challenges, dental nurses proposed acting as accessible points of contact within clinics or through online platforms, offering up-to-date, evidence-based oral health guidance. Visual aids were emphasised as particularly beneficial in supporting parents or caregivers with diverse learning needs, ensuring that key prevention messages are effectively communicated.

Dental nurses observed that current oral health education tends to overemphasise toothbrushing while neglecting wider determinants such as diet and the Stephan Curve. They recognised that SCPHNs face challenges in consistently delivering these messages and suggested that dental nurses could take the lead in areas such as supporting parents or caregivers to reduce sugar intake and introducing appropriate drinking behaviours such as Sippy cups. In taking on this responsibility, they emphasised the importance of improving access to clear and practical oral health resources. While some parents or caregivers were provided with up to seven leaflets, interviews indicated that this was not always consistent. Dental nurses felt that, where multiple leaflets were distributed, the volume of information risked overwhelming parents or caregivers. They proposed that streamlining and standardising these resources into a single, more accessible format would enhance engagement and reduce barriers to understanding.

Strengthening collaboration between SCPHNs, community nursery nurses, and dental nurses offers a promising pathway to address these challenges. While existing literature explores partnerships between SCPHNs and other professionals, the potential role of dental nurses in early intervention remains unexplored. This study seeks to examine whether integrating dental nurses into early intervention frameworks can reduce barriers to oral healthcare and enhance outcomes for infants and toddlers.

5.5 Theme 4 - Improving Access to Dental Services and Early Oral Healthcare Support

A recurrent issue identified by parents or caregivers was uncertainty regarding the recommended timing of a child's first dental visit. Many were uncertain whether attendance should occur at the eruption of the first tooth or once the dentition was more established. When seeking clarification, several parents or caregivers contacted dental practices but reported mixed experiences. Some were unable to obtain clear guidance, while others were informed that NHS appointments for children were unavailable. These difficulties not only compounded parents or caregivers' uncertainty but also generated frustration, particularly considering the widespread assumption that all children were automatically entitled to NHS dental care. For some families, the discouraging experience of repeatedly contacting dental practices ultimately led to the postponement of their child's first dental visit. NHS appointments for children were unavailable. These difficulties not only

compounded parents or caregivers' uncertainty but also generated frustration, particularly considering the widespread assumption that all children were automatically entitled to NHS dental care. For some families, the discouraging experience of repeatedly contacting dental practices ultimately led to the postponement of their child's first dental visit.

Dental nurse participants strongly emphasised the importance of early oral health education to parents or caregivers. They noted without foundational knowledge; it becomes significantly more difficult for parents or caregivers to support good oral health in their children. The period from birth age to two years was highlighted as a crucial window for oral health intervention. One participant recounted a striking case in which a three-year-old child required a full dental clearance, potentially involving the extraction of 20 teeth underscoring the consequences of delayed preventive care.

Parents or caregivers commented on their evolving nature of their interactions with SCPHNs. While initial appointments following birth were conducted in person, later interactions as the children grew older were increasingly conducted over the telephone. The COVID-19 pandemic further disrupted these visits, often rendering them brief and at times less impactful. Regardless of the pandemic disruptions, many participants felt that new mothers required ongoing, in person support in various aspects of child health, including oral health. Several parents or caregivers reported that they had not received any oral health advice during these early visits, suggesting a gap in the delivery of vital oral health education by SCPHNs.

While SCPHNs were acknowledged to have broad and demanding responsibilities, participants questioned whether they had sufficient time or specialist knowledge to provide meaningful oral health advice. Some suggested that dental nurses could fill this gap, working alongside SCPHNs to deliver targeted, evidence-base guidance. First-time mothers expressed a desire for more detailed support, feeling that oral health was an essential but often neglected aspect of early parenting.

Where oral health advice was provided, it was frequently limited in scope often centred on dummy use rather than comprehensive preventive care. Not all parents or caregivers were aware that oral health advice fell within the remit of SCPHNs, and many turned to alternative sources such as general practitioners, nurseries, or even a neighbour who was a dental nurse. Online searches, including Google,

were commonly used, but parents or caregivers found little guidance on how to initiate toothbrushing routines for infants and toddlers. Suggestions such as using a finger to clean teeth were dismissed by some due to a fear of being bitten, reflecting a need for more practical, reassuring and accessible advice.

Oge *et al.*, (2018) found that while nearly all health visitors were aware of the official “Institute of Health Visiting” website, only 18.4% directed parents or caregivers to the oral health parenting tips fact sheet, limiting access to reliable information. Similarly, Coll *et al.*, (2016) found that while some health visitors supported using the Knowledge, Attitude, Behaviour (KAB) model to influence parental practices, this model is now considered overly simplistic and fails to address the complexities of real-world parenting behaviours (Sheiham and Watt, 2003).

Even when families did manage to access dental services, Eskyte *et al.*, (2021) reported that oral health advice was often only provided once the child was older missing key information for early oral health prevention. Health visitors voiced frustration when their advice to seek dental care was undermined by systemic barriers, such as lack of appointments or inconsistent messaging from dental practices. They called for a more initiative-taking role from dental professionals and greater clarity in service pathways.

While most health visitors (95%) reported providing oral health advice, including the importance of toothbrushing, sugar reduction, and regular dental attendance Oge *et al.*, (2018) noted that they were constrained by limited time, resources, and training. Lewney *et al.*, (2018) suggested that examining a child’s mouth could be beneficial but emphasised that health visitors would require appropriate training. The combination of brief home visits and a lack of practical oral health resources prevented some families from fully understanding the importance of preventive behaviours. Bhatti *et al.*, (2022) highlighted that continuity from the same health visitor strengthened rapport with the families, whereas rotating different health visitors led to frustration and disengagement an issue that also negatively affected oral health communication.

Repeated contact and relationship building were seen as key to influencing long-term oral health behaviours (Bhatti *et al.*, 2022). Similarly, Lewney *et al.*, (2018) identified a lack of communication between dental services and SCPHNs as a major

barrier to supporting families with oral health. Health visitor participants suggested more accessible community-based options, such as drop-in sessions at dental practices which could be more accessible for families who struggle with attending routine appointments. Furthermore, families with additional challenges including language barriers or children with special healthcare needs faced further disadvantages due to a lack of awareness about interpreting services or specialist dental care.

Training for the wider professional workforce was seen as a cost-effective way to expand oral health support (Oge *et al.*, 2018). Coll *et al.*, (2016) questioned whether health visitors are effective oral health promoters, as some participants felt their role in this area was limited. Encouragingly, Eskyte *et al.*, (2021) reported that health visitors were open to collaboration and saw interprofessional working reducing the burden on health visitors while improving oral health delivery.

Overall, the dental nurses' narratives indicated that collaboration with SCPHNs would be a natural and logical step in enhancing early oral health intervention. They emphasised that providing oral health advice falls within their remit, enabling SCPHNs to dedicate more time to addressing other family-related concerns. Many viewed such collaboration as a key component and a natural progression in public health efforts. They highlighted that their skills set allows them to address oral health and dietary issues, creating opportunities to expand their role within broader public health initiatives. Additionally, they believed this approach would deepen their understanding of the broader public health model and welcomed the prospect of interprofessional collaboration. Many expressed enthusiasm about the evolving GDC Scope of Practice (2013), describing this as an exciting time for the dental profession. However, they also noted that dental nurses often feel like the "forgotten heroes" of oral healthcare, viewing this potential role expansion as a valuable means of career progression and professional development.

Importantly, digital technology was not perceived as a barrier. Dental nurses reported being well equipped to manage electronic referrals and documentation, noting that these practices were already embedded in primary and secondary care. Rather than viewing digital systems as an obstacle, participants identified them as enablers that supported the delivery of consistent and accurate oral health

messages. This readiness to engage with digital tools further reinforced their willingness to collaborate with SCPHNs in providing timely oral health interventions during early childhood.

Despite extensive literature on oral health promotion and the involvement of SCPHNs, no studies were identified that explicitly examined collaboration between dental nurses and SCPHNs during mandated contacts. Nevertheless, both professional groups expressed enthusiasm about this potential partnership. Dental nurses believed that by strengthening their role in educating parents or caregivers about oral health, they could contribute to a more proactive, preventive approach.

5.6 Conclusion of the Discussion Chapter

This chapter has examined the perspectives of participants in regarding the role of dental nurses in early oral healthcare intervention during mandated SCPHN contacts.

The analysis generated four overarching themes: (1) Knowledge, Competency, and Confidence in Early Oral Health Interventions; (2) Interdisciplinary, Collaboration and the Role of Healthcare Professionals in Early Oral Health; (3) Barriers and Challenges to Implementing Early Oral Healthcare; and (4) Improving Access to Dental Services and Early Oral Healthcare Support.

The discussion has highlighted both the potential contributions of dental nurses and the challenges associated with embedding oral health promotion into early years care. When situated within existing literature, the findings revealed areas of alignment, while also exposing gaps that warrant further exploration. Importantly, the chapter underscored the significance of workforce collaboration, highlighting that while dental nurses are well placed to support SCPHNs, structural and training-related barriers must be addressed to realise this potential.

The following tables synthesise the findings in relation to the central aim of this study: to explore whether dental nurses in England have a role in delivering early oral healthcare for infants and toddlers during mandated contacts with SCPHNs.

Theme	Description
Knowledge, Competency, and Confidence in Early Oral Health Interventions	SCPHNs preparedness and confidence in delivering oral health advice during early years contacts.
Interdisciplinary Collaboration and the Role of Healthcare Professionals	The importance of communication and partnership between dental nurses and

	SCPHNs in strengthening oral health promotion.
Barriers and Challenges to Implementing Early Oral Healthcare	Structural, organisational, and training-related obstacles to embedding oral health within mandated contacts.
Improving Access to Dental Services and Early Oral Healthcare Support	Parents' and caregivers' difficulties in accessing timely dental care, and opportunities for enhanced outreach and digital innovation.

Table 5.6: Key Themes Emerging from the Study

Core themes	Sub-themes	Description	Implication
Role of dental nurses	Early oral health advice. Intergration during mandated visits.	Dental nurses can deliver preventive oral health advice to parents or caregivers during early years contacts.	Potential to reduce oral health inequalities and support SCPHNs in early intervention strategies.
Workforce collaboration	Interprofessional relationships. Communication channels.	Collaboration enhances consistency and improves quality of care.	Supports integrated care models and maximises existing workforce strengths.
Structural barriers	Commissioning constraints. Absence of formal pathways.	Current frameworks often exclude dental nurses from early years public health interventions.	Highlights the need for systemic reforms and formal role recognition.
Training and competency development	Gaps in paediatric oral health training.	Dental nurses require targeted public health and child focused training.	Investment in education would enhance workforce readiness and sustainability.
Parent/Caregiver engagement	Building trust. Enhancing oral health literacy.	Dental nurses as approachable figures who support parents or caregivers with oral and practical oral health advice, reinforcing messages from SCPHNs.	Improves family-level adherence to early oral health prevention practices.
Opportunities for innovation	Community outreach initiatives. Digital health education.	Exploring innovative delivery models can expand outreach especially for the underserved communities.	Open opportunities for inclusive and adaptive oral health promotion.

Table 5.6.1 Conceptual Framework Emerging from the Data.

These tables demonstrate that, if adequately supported through training, commissioning, and collaborative structures, dental nurses in England could play a pivotal role in delivering early oral healthcare for infants and toddlers during

mandated SCPHN contacts, offering a tangible means of addressing persistent oral health inequalities in early childhood. Building on these insights, Chapter Six presents the study's overall conclusions, highlighting implications for policy, practice, and future research. A reflexive account of the research process is also provided, alongside recommendations for future exploration and development of dental nurses' roles in early oral health promotion.

Chapter Six: Conclusions

6.1 Introduction to Chapter Six.

This concluding chapter presents a reflective and interpretive evaluation of the study, guided by the principles of Narrative Inquiry. It begins by summarising the key findings drawn from participants' stories before interpreting these findings in relation to existing literature, policy, and practice. The chapter also considers the strengths and limitations of the research, identifies recommendations, and explores the implications for future research and professional practice. In offering these reflections, I remain mindful of my own positioning as a dental nurse and oral health advocate, recognising that my professional background has shaped both the framing of the research question and the interpretation of participants narratives.

The chapter is structured around the core tenets of Narrative Inquiry outlined by Clandinin (2013), with the analysis grounded in participants lived experiences. In keeping with narrative methodology, the voices of the participants remain central, while my positionality and reflexive engagement are explicitly acknowledged to ensure transparency in interpretation. The chapter concludes with a personal reflection on the research journey and the transformative insights it has offered.

The study's aim, research objectives (ROs), and research questions (RQs), are restated as follows:

Study's Aim:

'To explore whether dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by specialist community public health nurses.'

Research Objectives (ROs):

RO1: To investigate the willingness of SCPHNs to collaborate with dental nurses to offer oral health support for infants and toddlers.

RO2: To explore the lived experiences of parents or caregivers regarding oral health advice they have received.

RO3: To examine dental nurses' perspectives on the challenges and opportunities of collaborating with SCPHNs for the provision of early oral health interventions.

Research Questions (RQs):

RQ1: Are SCPHNs willing to collaborate with dental nurses to offer oral health support for infants and toddlers?

RQ2: What are the experiences of parents or caregivers regarding oral health advice they have received?

RQ3: What are dental nurses' perspectives on the challenges and opportunities of collaborating with SCPHNs in delivering of early oral health interventions?

6.2 Summary of Findings

6.2.1 In response to RQ1: Are SCPHNs willing to collaborate with dental nurses to offer oral health support for infants and toddlers?

The findings indicate that SCPHNs, along with a community nursery nurse, recognise the importance of integrating oral health advice into early child health interventions and generally express a willingness to collaborate with dental nurses. They noted that such collaboration could strengthen the support offered to families by providing tailored advice to parents or caregivers, ensuring that oral health is embedded within routine child health visits.

Given the increasing challenges in accessing dental appointments, embedding dental nurse-led services within SCPHN clinics or through digital platforms was seen as a practical solution. This approach would enable dental nurses to deliver oral disease prevention advice, oral health education, and oral health promotion directly to parents or caregivers. Additionally, dental nurses could serve as a valuable resource for other healthcare professionals, ensuring that oral health messages are evidence-based and consistent, thereby reducing the risk of conflicting advice.

A key advantage of this collaboration is that it could help alleviate the workload of SCPHNs by allowing dental nurses to take primary responsibility for oral health education. This would enable SCPHNs to focus on other pressing child health priorities while ensuring that oral health remains a core component of early years support.

Furthermore, practical demonstrations of toothbrushing by dental nurses were highlighted as particularly beneficial. Many parents or caregivers expressed uncertainty about correct toothbrushing techniques, the appropriate use of

fluoride toothpaste, and strategies for managing resistance from their child. Hands-on-guidance from a dental nurse could empower parents or caregivers with the confidence and skills needed to establish effective oral healthcare routines, ultimately improving oral health outcomes for infants and toddlers.

However, while there was a general willingness to collaborate, some challenges were noted, including logistical barriers, role clarity, and the need for adequate training and resources. To facilitate successful integration, clear guidelines on the scope of dental nurses' involvement within SCPHN-led services would be essential.

Overall, the findings suggest that SCPHNs are open to collaboration with dental nurses, recognising the potential benefits for both families and healthcare professionals. However, ensuring the success of this integration would require addressing structural and training-related challenges to fully integrate oral health promotion into early years support.

6.2.2 In response to RQ2: What are the experiences of parents or caregivers regarding oral health advice they have received?

Parents or caregivers reported varying experiences regarding the oral health advice they received. As their children grew older, face-to-face SCPHN appointments were often replaced by telephone conversations, reducing opportunities for direct engagement. The COVID-19 pandemic further disrupted these visits, sometimes making them brief and less comprehensive.

New mothers expressed a need for support in various aspects of their child health, included oral health. While some parents or caregivers received guidance, others felt key information was missing or insufficiently emphasised.

As a result, many sought advice elsewhere, including online sources, dentists, or even informal sources such as family members or neighbours. This lack of structured and consistent guidance led to confusion about best evidence-based practices in early oral healthcare.

Parents or caregivers recognised that SCPHNs had a broad range of topics to cover during their visits, which may have contributed to the limited focus on oral health.

Many welcomed the idea of receiving oral health advice from dental nurses and believed that integrating them into SCPHN visits would ensure that oral health messages are delivered effectively and consistently.

Overall, the findings suggest that while parents or caregivers value oral health advice, their experiences in receiving it have been inconsistent. Many found that existing SCPHNs consultations did not always prioritise oral health, leading them to seek information from alternative sources. Both SCPHNs and parents or caregivers expressed strong support for the involvement of dental nurses, viewing their role as a potential solution to bridging the gap in early oral health education.

6.2.3 In response to RQ3: What are dental nurses' perspectives on the challenges and opportunities of collaborating with SCPHNs for the provision of early oral health interventions?

Participants recognised that limited access to NHS dental services has made it challenging for parents or caregivers to receive timely oral health advice. They suggested that dental nurse led clinics or online platforms in collaboration with SCPHNs could help bridge this gap by ensuring that oral health advice remains current and accessible. This approach would not only alleviate parental or caregivers' anxieties but support the establishment of positive oral healthcare routines.

Many participants strongly believed in the benefits of collaboration. They suggested that integrating dental nurses could alleviate some of the pressures faced by SCPHNs, particularly by providing dedicated oral health support. Several emphasised the importance of moving beyond reactive approaches, where oral health concerns are addressed only when problems arise, and instead focusing on proactive, initiative-taking strategies. Dental nurses noted that current guidance often prioritises toothbrushing while overlooking other crucial factors such as fluoride exposure, the Stephan Curve, and diet. By working alongside SCPHNs, dental nurses could reinforce preventative oral health messages, ensuring that parents or caregivers receive structured, evidence-based guidance from infancy onwards.

Overall, the findings indicate that while SCPHNs recognise the importance of oral health promotion, there is a lack of formalised collaboration with dental nurses. Parents or caregivers reported varying experiences regarding the oral health advice they received, underscoring the need for consistent and accessible

guidance. Dental nurses expressed both willingness and concerns about their involvement, with challenges such as professional boundaries, role clarity, and training needs emerging as key considerations.

6.2.4 How responses to the research questions address the study's aim.

In response to the study's aim: 'To explore whether dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by specialist community public health nurses', the study's findings highlight both the challenges and opportunities in integrating dental nurses into early childhood health interventions. These insights directly inform the study's key recommendation, which focus on collaboration between SCPHNs and dental nurses, securing support from Integrated Care Boards (ICBs) in commissioning services, local authority involvement, enhancing workforce development, and ensuring alignment with the NHS Long Term Plan. Addressing these factors will help establish a sustainable and effective model for early oral health interventions.

6.3. Key Recommendations

The NHS currently faces significant challenges in commissioning dental services to meet the needs of the population across England and the UK (Williams *et al.*, 2023). This has led to widespread access issues and the emergence of "dental deserts", where many people are unable to access NHS dentistry (Association of Dental Groups, 2024). Early oral healthcare offers an important opportunity to strengthen public health, as many oral diseases share risk factors with non-communicable diseases such as cardiovascular disease, respiratory disease, and diabetes. Adopting a preventative, holistic approach to oral health can reduce the need for complex interventions while supporting better health outcomes (WHO, 2020). Integrating dental nurses into early intervention initiatives, particularly during mandated contacts by SCPHNs, could help address these gaps by providing structured, evidence-based oral health support to infants, toddlers, and their parents or caregivers.

6.3.1 Immediate and Interim Next Steps

The findings of this thesis highlight several actionable, evidence-based informed steps that can be taken in the short term to strengthen early oral health interventions delivered during SCPHN mandated contacts. These immediate and

interim steps are designed to bridge the gap between research evidence and practical service improvement, offering a structured approach to testing feasibility before wider implementation.

1. Local Pilot Implementation to Assess Feasibility and Cost-Effectiveness

A key next step emerging from the evidence is the establishment of a local pilot programme in which dental nurses are integrated into selected SCPHN mandated contacts, such as the 9-12 month and the 2-2½ year reviews. This would allow services to evaluate:

- the practical feasibility of joint or shared-contact models
- the workforce implications for SCPHNs and dental nurses
- the adequacy of training and support resources
- the cost-effectiveness of enhanced early oral health support

The pilot approach provides a manageable and controlled environment to assess potential benefits, including improved early detection of oral health risk, more consistent parent or caregiver messaging, and strengthened referral pathways to dental services.

2. Co-development of a Shared Early Oral Health Pathway

Alongside the pilot, an interim step is the collaboration development of a shared early oral health pathway between dental services and public health nursing teams. This would ensure consistency in messaging, define clear referral processes, and align the role around oral health prevention at mandated contacts.

3. Introduction of a Brief Shared Competency Module

Findings across participant groups revealed variation in oral health knowledge, confidence, and clarity of role when supporting infants and toddlers. An immediate and practical step is the development of a short, targeted competency module delivered jointly to SCPHNs and dental nurses. The module should include:

- early childhood caries risk factors and key preventative messages
- use of visual aids and anticipatory guidance
- working confidently with young children, including core principles of child development
- interprofessional collaboration and shared working practices
- communicating sensitively with families whose first language is not English

This low-cost intervention would strengthen workforce consistency and directly address the knowledge, communication, and confidence gaps highlighted in the

data. Implementing it during or prior to a local pilot would further support integrated practice.

6.3.2 Collaboration Between SCPHNs and Dental Nurses

To strengthen early oral health intervention, effective collaboration between SCPHNs and dental nurses is essential. Such partnerships align with the NHS Long Term Plan emphasis on prevention and early intervention (NHS, England, 2019). The findings of this study highlighted that dental nurses possess both the expertise and motivation to contribute meaningfully to promoting oral health during mandated SCPHN contacts.

Proposed Actions Include:

6.3.2.i Embedding dental nurses into SCPHN teams would provide a structured, evidence-based approach to oral health guidance during mandated contacts.

This recommendation is supported by findings that highlight the inconsistent and often minimal attention given to oral health during SCPHN visits. For example, **SP2** remarked, *"To be honest we do have to cover a lot of things in the short space of time, probably 20 topics if I'm honest, probably less than 5 minutes is devoted to oral health"*. This suggests that despite the intention to cover oral health, time constraints and competing priorities limit the depth and consistency of guidance provided. Embedding dental nurses who have specific training in oral health into SCPH teams would ensure that oral health is addressed systematically and with adequate expertise, reducing variability and enhancing the quality of support offered to families.

6.3.2.ii Dental Nurses Taking the Lead in Oral Health Education

Dental nurses should lead oral health education within SCPHN contacts, helping to align messaging and reduce conflicting advice. This is reinforced by concerns expressed by parents or caregivers about the limitations of current oral health guidance. One parent or caregiver stated, **PC6**, *"If I had specific questions, I'm not sure that they're gonna be able to answer me rather than what a dental nurse could answer they've had the correct training. So, I think actually there should be more dental nurses or any dental person coming out to do that"*. This comment highlights a perceived gap in expertise and confidence among SCPHNs regarding oral health queries. Placing trained dental nurses at the forefront of oral health

education within the SCPHN framework would ensure that families receive consistent, evidence-based oral health guidance, while also supporting SCPHNs with specialised knowledge and reducing the risk of conflicting messages.

6.3.2.iii Providing Hands-on Toothbrushing Demonstrations

Practical demonstrations were identified as particularly effective in improving parental or caregiver engagement and understanding. As one dental nurse stated, **DN2**, *"I think with visual aids, not everybody learns to take things on board just by giving information, so you've got to adapt to everybody's needs. So, I think if you have visual things, people will remember more. Oh, I saw that's how much toothpaste I need because you say to somebody a pea size amount of toothpaste. But actually, what is a pea size is it a small pea, big pea"*. This comment illustrates the limitations of verbal-only advice and underscores the need for tailored visual teaching strategies. Incorporating hands-on demonstrations during SCPHN contacts would offer tangible support to parents or caregivers, increasing the likelihood that oral health routines are adopted early and consistently.

These proposed actions are grounded in the perspectives of both dental nurses and SCPHNs as explored in Chapters 4 and 5. The integration of dental nurses into SCPHN teams represents a feasible and impactful strategy to address oral health inequalities in infants and toddlers.

6.3.3 Role of Integrated Care Boards (ICBs) and Commissioning of Dental-Nurse Led Services

ICBs should fund and evaluate pilot programmes that integrate dental nurses into SCPHN teams. These pilot programmes should assess:

6.3.3.i The effectiveness of dental nurse-led oral health clinics within SCPHN services, measuring impact on parental or caregivers' knowledge, engagement, and early childhood oral health interventions.

This recommendation is underpinned by participants' reflections on the marginalisation of oral health in broader health policy and practice. As one dental nurse commented, **DN3**, *"We know with oral health it tends to get put on the periphery, even in terms of the NHS long term plan, when the chief dental officer said about putting the mouth back in the body. But it should start at that young age and hence the campaign dental check by one. It's educating those parents right from the start isn't it to know what's right. And I think that definitely dental*

nurses can have an impact there". This highlights both the policy gap and the opportunity for dental nurses to contribute meaningfully to early infant and toddler intervention efforts. Pilot programmes commissioned by ICBs would allow for a structured approach, providing data on the value added by dental nurse-led oral health education in SCPHN mandated contacts.

6.3.3.ii The role of dental nurses in training SCPHNs and community nursery nurses on oral health promotion, ensuring that the wider workforce is equipped to reinforce key oral health messages.

Several participants viewed dental nurses as uniquely positioned to support the wider health and early years workforce through oral health promotion training. Given their foundational knowledge and clinical experience, dental nurses' express confidence in their ability to reinforce key oral health messages across professional boundaries. **DN3**, articulated this view clearly, stating, "*And obviously we have additional skills we obviously learn about oral health as part of our primary qualification. So, I see it as an obvious route of progression, really working with other healthcare professionals, particularly now where collaboration seems to be the key in terms of the way forward, it seems a natural thing to do*". This reflects a recognition of the growing emphasis on interdisciplinary working and the potential for dental nurses to contribute meaningfully to shared public health goals. By equipping professionals such as SCPHNs and community nursery nurses with oral health knowledge, dental nurses could play a strategic role in embedding consistent oral health messaging across multiple early contact points, particularly in community and family settings. This suggests a shift from traditional, clinic-based roles toward more proactive and collaborative models of practice, with dental nurses acting as both educators and advocates within a broader health promotion framework.

6.3.3.iii How integrating dental nurses aligns with ICB commissioning priorities, in addressing oral health inequalities in underserved communities.

Participants also pointed to the value of collaborative approaches in tackling oral health inequalities, particularly in underserved communities where access to dental services is often limited. **SP1**, emphasised the importance of working alongside oral health specialists, stating, "*I think it would be extremely valuable, we can't be specialists in all areas and that's where collaborating with other*

specialists can be really valuable for families. If we could bring dental health into that when we know that there's a significant amount of concern around dental health for young children in the county and work collaboratively". This insight supports the rationale for aligning dental nurse-led interventions with the NHS Core20PLUS5 framework for children and young people. Core 20PLUS5 priorities oral health for under 10s among five key clinical areas to reduce inequalities through targeted community-based prevention and outreach. Integrating dental nurses into wider public health teams, strengthens early intervention strategies and ensures consistent delivery of oral health messages to families, particularly those most at risk.

6.3.4 Local Authority Involvement in Public Health Initiatives

Local authorities should establish dedicated funding streams to:

6.3.4.i Support training SCPHNs and dental nurses in community-based oral health education.

Greater local authority involvement in oral health promotion was underpinned by the recognition that workforce capacity and service accessibility are key barriers to early intervention. **SP6**, observed, *"I think there's a possibility of if we've not got enough NHS dentists could we have an NHS Dental Nurse clinic for children". So, if we could, if we could have a community clinic, which is about prevention that would be wonderful"*. This highlights a vision for more flexible, community-based models of care, where dental nurses take a more proactive role in supporting children's oral health. Realising such models would require targeted investment from local authorities not only to fund dental nurse-led prevention clinics, but also to ensure both dental nurses and SCPHNs receive appropriate training in community-based oral health education. Dedicated funding streams could support the creation of a locally responsive service that prioritise prevention and helps reduce the burden on overstretched NHS dental services, especially in underserved areas.

6.3.4.ii Launch public awareness campaigns on infant and toddler oral health to reinforce messages beyond healthcare settings.

Parents or caregivers highlighted the potential benefit of reinforcing oral health messages beyond healthcare settings, particularly given the competing demands

placed on SCPHNs. **PC3**, noted, *"I mean, nothing bad about health visitors at all. They're absolutely incredible but I think there's just so much that they have to go through that maybe having that additional support would be a good reminder of that. The fact that it needs to be mentioned perhaps maybe that they're not too sure"*. This underscores the need for wider public-facing initiatives to support and complement the oral health education provided by healthcare professionals. Launching targeted public awareness campaigns through social media, early years settings, or local community events could help normalise key oral health behaviours and ensure consistent messages reaches parents or caregivers. Such campaigns would not only ease the pressure on SCPHNs but make oral health promotion a visible and accessible part of the public health landscape.

6.3.4.iii Work alongside ICBs (as they restructure and consolidate) and the Department of Health & Social Care (formally NHS England) to develop co-funding models, ensuring the sustainable employment of dental nurses within SCPHN community health teams.

Parents' or caregivers' experiences of navigating the NHS dental system further underscores the need for sustainable, community-based oral health provision. **PC6-7**, described the challenge of securing a dental appointment for their child saying, *"I must admit I was quite shocked because I thought that all children were eligible for NHS places, but the amount of them I had to ring to find an NHS place"*. This reflects the mismatch between perceived entitlement and actual access, a growing concern in areas facing workforce shortages and an underfunded dental service.

Embedding dental nurses within SCPHN led community teams could provide a safety net for families struggling to access dental care. To support this long-term model, collaboration between ICBs and the Department of Health and Social Care is needed to develop co-funding strategies that ensure the sustained employment and integration of dental nurses into early years oral health promotion teams. Such an approach would help mitigate access issues while strengthening oral health prevention and early intervention at the local level.

6.3.4.iv Upskill dental nurses to become Dental Nurse - Public Health Oral Health Educators within the SCPHN framework, strengthening their role in early oral health intervention and oral health promotion.

There was strong support among participants for enhancing the role of dental nurses through targeted upskilling, enabling them to contribute more directly to early oral health intervention and prevention strategies, particularly for infants and toddlers during mandated SCPHN contacts. **DN3**, captured this sentiment, stating *"I mean, dental nurses, they are keen, a lot of them are keen to progress and one of the things that they do progress in is oral health. And I think for a dental nurse, it will be really good seeing the wider public health model rather than just what happens chairside as well to understand about interprofessional working as well"*.

This highlights both the willingness and readiness of the dental nursing workforce to take on roles aligned with broader public health goals. By formally training dental nurses as Dental Nurse - Public Health Oral Educators within the SCPHN framework, local systems could strengthen interprofessional collaboration and ensure dental nurses actively support early oral health interventions for young children. Embedding such roles into local authority-led public health strategies would further advance national priorities around prevention, early intervention, and reducing health disparities, particularly in high-need populations.

6.3.5 Collaborative working between SCPHNs and Dental Nurses

Collaborative working between SCPHNs, and dental nurses is crucial for early detection of oral health issues and prevention of ECC. By working together, they can bridge the gap between general health and dental health, ensuring that children particularly those from families facing socioeconomic challenges or other recognised risk factors receive timely and appropriate care. Joint efforts allow for tailored interventions during mandated SCPHN contacts, such as promoting toothbrushing with fluoride toothpaste, supporting reduced sugar intake, and encouraging early dental visits for infants and toddlers.

For early childhood oral healthcare to be effective, SCPHNs and dental nurses must engage in structured, interdisciplinary approaches, while actively involving parents or caregivers in implementing guidance and interventions. This ensures that families receive consistent, evidence-based support, maximising the impact

of mandated health visits. Furthermore, SCPHNs and dental nurses can develop integrated care plans that address general and oral health needs, with these plans specifically tailored to the needs of the child and family (PHE, 2021). Such collaborative, structured approaches can significantly improve oral health outcomes for infants and toddlers while supporting broader public health goals and NHS prevention strategies.

6.4 The Study's Strengths and Limitations

6.4.1 The Study's Strengths

One of the notable strengths of this study was the high level of participant retention, none withdrew after providing consent, and more individuals volunteered than originally anticipated. This unexpectedly strong interest may indicate a growing awareness and engagement in infant and toddler oral health among the target population, and it contributed significantly to the richness and depth of the qualitative data collected.

The study also benefited from the inclusion of diverse voices from across England. By engaging participants from a variety of regions and professional backgrounds, the research captured a wide range of perspectives on early oral health interventions within the context of mandated contacts by SCPHNs.

Despite the challenges posed by COVID-19 and the limitations of remote data collection, the use of online interviews allowed flexibility in scheduling dates and times for interviews, enabling participation from SCPHNs, parents or caregivers, and dental nurses who may otherwise have been unable to take part. The digital format potentially reduced barriers to involvement, broadening the geographical scope of the study, and allowing for a more inclusive exploration of participants views on early oral health interventions.

6.4.2 The Study's Limitations

The study is not without its limitations, the focus on England may limit the transferability of findings across the wider UK. Health policies and service delivery models differ across the four nations, and the experiences and opportunities for early oral health intervention may not reflect the contexts in Scotland, Wales, or Northern Ireland.

The study relied solely on self-reported data, which reflects the participants' perceptions rather than observed behaviours. While self-reporting data provides valuable insights into attitudes, beliefs, and behaviours, it does not offer a direct view of how these are enacted in practice. Future studies that incorporate observational methods may be better positioned to capture real-world clinical behaviours and interactions.

The exclusive use of online interviews, while necessary due to COVID-19 restrictions, may have affected the depth of interpersonal connection and non-verbal communication afforded by face-to-face interaction. Although participants shared openly, it is possible that the remote format influenced the dynamics of the interviews, and the richness of data gathered in subtle ways.

An interesting factor was introduced through the inclusion of two parent couples. Their joint participation highlighted shared responsibilities and collaborative approaches to managing their child's oral health. While this perspective added depth to the analysis, it may also differ from the experiences of individual parents or caregivers, introducing a dynamic that could influence how roles and routines were articulated.

Furthermore, the study was conducted exclusively in English, which may have inadvertently excluded non-English speaking participants. As a result, the findings may not fully reflect the experiences of families for whom English is not a first language, raising questions about cultural and linguistic inclusivity in early oral health messages and support.

Finally, reflexivity was a critical component of the research process. My professional background in dental nursing and oral health was both a strength, providing valuable contextual understanding, and a potential source of bias. Throughout the study, I made a conscious effort to remain critically self-aware, using a reflexive journal to monitor and question my assumptions, interpretive decisions, and interactions with participants' accounts of early oral health interventions. This approach ensured that the participants' perspectives, whether from SCPHNs, parents or caregivers, and dental nurses were interpreted thoughtfully and accurately, enhancing the credibility and trustworthiness of the findings.

6.5 Implications of the Research Findings for Policy, Practice and Further Research

6.5.1. Implications of the Research Findings for Policy

This study presents a compelling case for strategic collaboration between SCPHNs and dental nurses to improve the oral health outcomes for infants and toddlers. The integration of a dental nurse – public health oral health educator working in a defined public health capacity offers opportunities to strengthen interprofessional collaboration, enhance service delivery during mandated SCPHN contacts, and contribute to the reduction of ECC. Such a model also optimises the skill mix within early years' public health services.

By formally upskilling and enabling dental nurse – public oral health educators to take a lead role in oral health during mandated SCPHN contacts, oral healthcare could become a core component of early years oral health promotion rather than an incidental one. This shift in responsibility may also support workforce retention in dental nursing by providing clearer career progression, role diversification, and the formal recognition of a dental nurse public health oral health educator contribution. Relieving SCPHNs of sole responsibility for oral health may allow them to focus on a broader range of child and family needs during time-limited contacts. For this role redistribution to be effective, targeted training and interprofessional development for both dental nurses and SCPHNs would be essential.

Policy frameworks would need to reflect these changes, with specific guidance on commissioning, workforce planning, and competency frameworks for dental nurse – public health oral health educator roles. Implementing these changes could support a more preventative, equitable approach to oral healthcare from the earliest stages of a child's life.

The GDC's Scope of Practice (2013) already acknowledges that dental nurses who are oral health educators may provide oral health advice, support preventive care, and participate in public health initiatives. However, this study highlights the need to extend and clarify this scope to explicitly support the engagement of dental nurse – public health oral health educators in infant and toddler public health. Importantly, this represents a role descriptor rather than a new statutory title,

ensuring that any role expansion remains within regulatory and professional boundaries.

6.5.2 Implications of the Research Findings for Practice

The findings of this study underline the importance of early oral health intervention and highlight a practical opportunity to redefine the role of dental nurses as public health oral health educators within early years public health pathways. In clinical practice, introducing a dental nurse in a defined public health capacity would require clear role delineation, collaborative working models, and structured referral and communication pathways between SCPHNs and dental nurses.

This integrated approach would ensure that oral healthcare is embedded as a routine element of child development surveillance. Dental nurse – public health oral health educators could deliver targeted oral health interventions during SCPHN mandated contacts. To operationalise this shift, educational training and continual professional development in early years oral health, family communication, safeguarding, and interdisciplinary collaboration would be essential. Upskilling existing dental nurses would also support career satisfaction and contribute to workforce stability, which has historically been affected by high attrition.

Furthermore, embedding dental nurse – public health oral health educators into SCPHN teams, children’s centres, and family hubs would help to ensure consistent, culturally sensitive, and accessible oral health messaging for families.

6.5.3 Implications of the Research Findings for Further Research

This study has provided foundational insight into the potential role of dental nurses, working as public health oral health educators, in supporting infants and toddlers’ oral healthcare during mandated SCPHN contacts. While the findings provide initial evidence of feasibility, further research is required to explore the theoretical and practical implementation of this role on a larger scale.

Future studies could investigate the effectiveness of dental nurses, in a public health capacity, in reducing ECC, particularly in high-risk and underserved populations. Longitudinal research may also assess whether early years dental nurse-led interventions influence long-term oral health behaviours and patterns of access to dental services.

Qualitative research involving parents or caregivers, and SCPHNs would help to evaluate the acceptability, perceived value, and barriers to this model of collaborative practice. Pilot programmes and action research studies testing integrated models of SCPHN and dental nurse collaboration could also provide robust evidence on integrated models of SCPHN and dental nurse collaboration, informing commissioning, workforce planning, and training requirements.

Economic evaluations are equally important. Demonstrating cost-effectiveness and return on investment would strengthen the embedding preventative oral health roles more widely. Such evidence could also support the formal recognition of dental nurse – public health oral health educators within community and public health services.

6.5.4 Proposals for Propagation of Findings

This chapter has examined the implications of the study's findings for policy, practice, and research, highlighting the pivotal role dental nurses can play in early oral health interventions. Positioning dental nurses within a defined public health capacity offers opportunities to improve oral health outcomes for children, enhance interprofessional collaboration, and optimise service delivery during mandated SCPHN contacts.

Drawing upon my professional roles across national organisations and local systems, I propose a pathway to ensure these findings move beyond academic discussion into practical, policy, and workforce impact. Table 6.5.4 sets out specific strategies and platforms for advancing this agenda.

Domain	Proposal	Platform/Organisation
Academic and Professional	Publish in peer-reviewed journals, present at conferences and CPD webinars	Dental Nursing Journal, British Dental Journal, Journal of Health Visiting, IDO-UK
Policy Engagement	Engage with the Department of Health and Social Care (formerly NHS England), NHS England – Workforce, Training & Education Directorate (formerly Health Education England), General Dental Council, Integrated Care Boards	Department of Health and Social Care, NHS England – Workforce, Training & Education Directorate, General Dental Council, Integrated Care Boards
Educational Integration	Embed findings into educational curricula, develop CPD modules	Society of British Dental Nurses, IDO-UK, Academic Institutions, NHS England

		– Workforce, Training & Education Directorate
Community Engagement	Partner with family hubs and local services	Northamptonshire Health Foundation Trust, Local authorities
Research and Collaboration	Establish a working group, conduct a pilot study	Academic Institutions, Society of British Dental Nurses, IDO-UK

Table 6.5.4 Proposals for Propagation of Findings

Together, these proposals provide a mutually reinforcing strategy, with academic outputs building credibility, policy engagement securing recognition, education embedding knowledge, community partnerships ensuring practical relevance, and research sustaining momentum.

6.6 Original Contribution and Significance of Study

To the best of my knowledge, this is the first study to explore specifically how dental nurses might supporting SCPHNs during mandated contacts with infants and toddlers, focusing on oral health advice and early interventions. This represents a novel contribution, bridging oral health and public health nursing in the early years.

The findings demonstrate that effective oral health promotion in early childhood depends not only on professional knowledge but also on the confidence of those delivering the messages and the strength of interdisciplinary collaboration. The study emphasises the importance of dental nurses and SCPHNs working cohesively to provide consistent, family-centred oral health advice.

By identifying the roles, competencies, and barriers experienced by both dental nurses and SCPHNs, this research offers actionable insights for workforce training, collaborative practice models, and public health policy. Crucially, it contributes to the growing recognition of oral health as a fundamental element of early childhood oral healthcare and prevention strategies, with implications for reducing early childhood caries and improving lifelong oral health outcomes.

6.7 Final Reflections

6.7.1 Reflections of the Research Contribution

This thesis has explored the evolving role of dental nurses in early oral health interventions for infants and toddlers, particularly during SCPHN mandated

contacts. It has illuminated the untapped potential of dental nurse working as public health oral health educators, to address gaps in early years oral healthcare.

With their clinical expertise and practical experience, dental nurses are well-positioned to make a meaningful contribution to early oral health promotion at this critical stage of child's development. The study has also revealed genuine enthusiasm within the dental nursing community to engage more actively in public health initiatives and collaborative care.

By advocating a culture of education, interdisciplinary collaboration, and supportive policy change, this research calls for a more inclusive and effective healthcare system one that recognises and elevates the role of dental nurses. These findings represent not only an academic contribution but a call to action for dental professionals, policymakers, and public health leaders to ensure every child has the best possible start in oral health.

6.7.2 Personal Reflection on the Doctorate Journey

The Professional Doctorate has profoundly shaped my thinking, challenging and inspiring me in unexpected way. One of the most rewarding aspects was gathering data directly from participants, which grounded the research in real-life practice and gave voice to SCPHNs, dental nurses, and parents or caregivers each of whom are central to shaping early oral healthcare.

Alongside the many rewarding aspects, this journey also brought periods of personal challenge. Periods of illness and family loss made completion uncertain at times. However, with the steadfast support of my supervisors, I reached milestones that once felt impossible. A particular highlight was collaborating with the local authority to implement the distribution of toothbrushes and toothpaste through local foodbanks an initiative that brought the aims of this research to life in the community.

Having dedicated my career to dental nursing, I feel honoured to contribute to shaping the future of the profession and to improving the oral health of infants and toddlers. This Professional Doctorate has reinforced my conviction that dental nurses can play a vital role in addressing inequalities in early childhood oral health. By recognising and embedding their potential within public health pathways, oral healthcare can move from the margins to the centre of every child's start in life.

Ultimately, I hope this research makes a meaningful contribution and inspires a lasting legacy for early childhood oral health.

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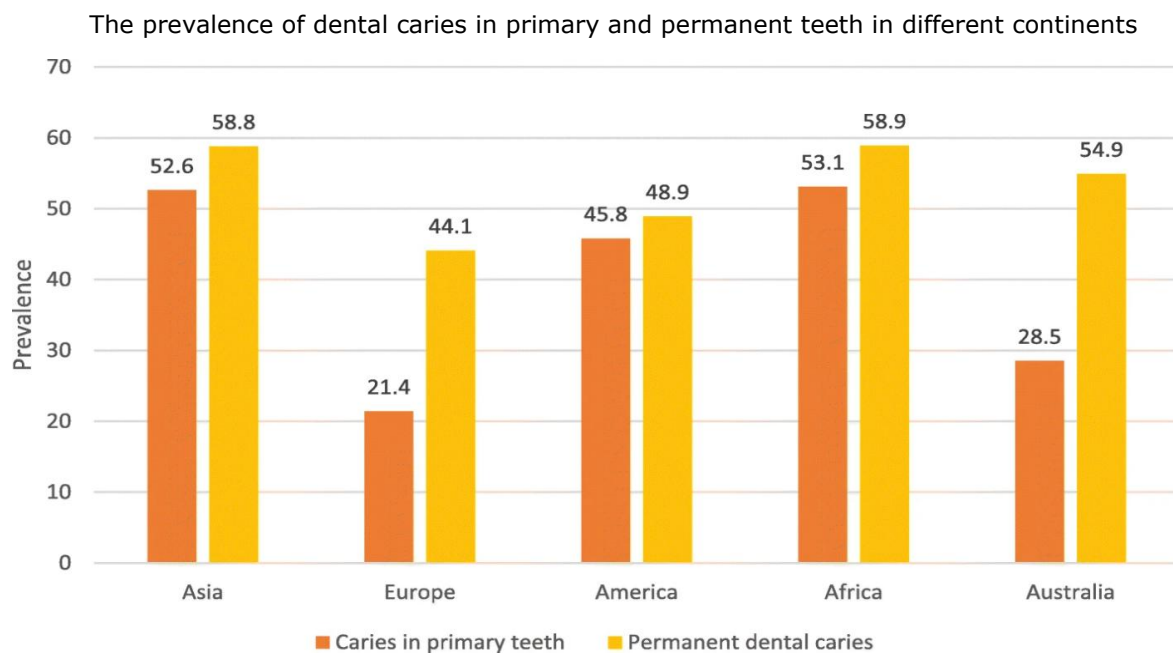
Appendices

Appendix 1: Prevalence of Dental Caries in Primary and Permanent Teeth by Continent (2022).

The data indicate that Africa has the highest prevalence of primary dental caries followed by Asia, with Europe having the lowest prevalence (Arua *et al.*, 2022)

Permission to Use Table

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Appendix 2: Inclusion and Exclusion Criteria

Inclusion Criteria - Specialist Community Public health Nurses (SCPHNs)

Inclusion	Justification
Registered SCPHN with the Nursing Midwifery Council (NMC)	Ensures professional qualifications to practice as SCPHNs, essential to having relevant knowledge and experience.
Gender: Female or male SCPHN	Inclusivity in gender allows for a diverse range of perspectives and experiences across genders.
Any ethnicity	Inclusivity ensures the research project captures a wide range of cultural perspectives and practices which may influence the delivery of early oral healthcare.
Provides mandated contacts to parents or caregivers of infant and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old	Focuses on SCPHNs who have direct contact with parents or caregivers of infants and toddlers which is relevant to the research question.
Language proficiency ability to speak and understand the English language	Ensures effective communication during the interviews and data collection which is crucial for the reliability of the data.

Inclusion Criteria - Parents or Carergivers

Inclusion	Justification
Parents or caregivers of infant or toddlers aged either 6-8 weeks old, 9-12 months or 2-2½ years old	Targets parents or caregivers of infants or toddlers. The research project can gather information associated with early oral healthcare at stages of the child's development.
Female or male parents or female or male carers	Including both genders ensuring inclusivity to the research project. Recognises both mothers and fathers as well as female and male caregivers and the significant roles they play in the child's oral health development
Received mandated contacts with SCPHNs	Ensures the participants have received support and guidance from SCPHNs during mandated contacts.
Any ethnicity	A diverse participant group provides a more comprehensive understanding across different cultures.
Ability of the parents or caregivers to be able to speak and understand the English language	Ensures the participants can communicate their experiences effectively during interviews which is essential for collecting accurate and detailed data

Inclusion Criteria – Dental Nurses

Inclusion	Justification
A registered dental nurse with the General Dental Council	Ensures the participants are formally qualified and meet the regulatory standards required to practice as dental nurses.
Practicing dental nurse either in primary or secondary care dental services	Including both primary and secondary dental care services captures a broad range of experiences and perspectives.
Female or male dental nurse	Including both female and male dental nurses helps to understand any potential differences in clinical practice and interactions with the patients.
Any ethnicity	A diverse participant pool enhances the generalisability of the findings. Ethnic diversity can highlight different cultural influences on dental practices and patient interactions.
Ability to speak and understand the English language	Ensures that the participants can clearly articulate their experiences, thoughts and insights during the interviews. This is essential for accurate data collection and analysis of qualitative data.

Exclusion Criteria – Specialist Community Public health Nurses (SCPHNs)

Exclusion	Justification
Not a registered SCRHN with the Nursing Midwifery Council	Including only registered SCPHNs ensures that all the participants have a consistent level of professional knowledge and experience, making the data more comparable and reliable.
Does not provide mandated contacts to parents or caregivers of infant and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old	The research project focuses on SCPHNs providing early childhood oral healthcare during specific mandated contacts. Participants who do not provide these services would not have the relevant experience or insights necessary to address the research question.
Does not have the ability to speak and understand the English language	Ensuring the participants can speak and understand English maintains the quality and consistency of the data collection process, as the interviews will be conducted in English. This will facilitate a more accurate and efficient data analysis.

Exclusion Criteria – Parents or Caregivers

Exclusion	Justification
Not a parent or caregiver of a child aged either 6-8 weeks old, 9-12 months or 2-2½ years old	The research focus is on oral healthcare practices and experiences for infants and toddlers within these specific age ranges. Participants outside of these criteria would not have the relevant experiences to contribute meaningfully to the research question.
Parents or caregiver of children aged over 2½ years old	Including parents or caregivers of older children would introduce data that was not relevant to the targeted age range which potentially could dilute the project's findings.
Parents or caregivers not being able to speak and understand the English language	The ability to speak and understand English is essential for the participants to clearly articulate their experiences, thoughts, and insights during the interviews. Language barriers could lead to miscommunication and incomplete data.

Exclusion Criteria – Dental Nurses

Exclusion	Justification
Not a registered dental nurse with the General Dental Council	Including only registered dental nurses ensures a consistent level of expertise and professionalism, which is crucial for the reliability of the data collection.
Not a practising dental nurse	The project seeks to understand current practices and experiences which relate to oral healthcare. Non-practising dental nurses may not have up-to-date experiences that reflect current practice.
Not speaking or understanding the English language	Ensuring the participants are proficient in English maintains the quality and consistency of the data as the interviews will be conducted in English.

Appendix 3: Participants' Information Guidance

Participant Information Guidance

Specialist Community Public Health Nurses

Study title - Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by Specialist Community Public Health Nurses?

Why have I been invited?

You are invited to take part in this research study as in England Specialist Community Public Health Nurses (SCPHN) provide oral healthcare advice to families of new-born infants and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old. As oral healthcare is a branch of dentistry is it the role of SCPHNs to offer oral health education and prevention as early support of dental health? Could this role be supported by dental nurses developing a new identity for the dental profession by trail blazing a more advanced public health dental nurse? Thereby upskilling the workforce to meet the wider needs of public health within society.

Before you decide whether you wish to participate, it is important for you to understand why the study is being conducted and what it will involve. Please take some time to read the information provided and discuss it with others if you wish. Please ask if there is anything that is not clear, or if you would like more information.

What is the purpose of the study?

The aim of this study is to explore whether dental nurses in England have a role in the early intervention of oral healthcare to parents or carers of infants and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old as part of the SCPHNs mandated contacts.

Why have I been chosen?

You have been asked to take part in the study because you are a qualified Specialist Community Public Health Nurse and provide mandated contacts with infants and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old. The study will involve interviewing six participants separately. The time allocated for the interview will be 40 minutes and the information gained will provide insight into your experience of providing oral health advice to parents or carers of infant and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old as part of the mandated contacts. The findings of the study may be used to identify whether dental nurses have a role in the early intervention of oral healthcare as part of the SCPHNs mandated contacts with infants and toddlers.

Should you be interested in taking part in an interview, I will contact you to arrange a suitable time, date, and place.

Do I have to take part?

Taking part is entirely voluntary if you decide to take part you will be asked to sign a consent form to confirm that you understand the project and are happy to participate. If you decide to take part and then change your mind, you are free to withdraw from the study or withdraw any data you have given within 30 days of participating.

What will my participation involve?

Once you have agreed to take part in the study a date and time will be arranged to conduct a face-face interview where you are asked about your experiences when introducing oral health advice to parents and carers of infants and toddlers as part of the mandated contacts. It will involve asking questions about how this experience is for you, your feelings, and your thoughts as well as anyone connected with your experience.

What are the possible benefits of taking part?

The information obtained from this study will offer an insight as to whether dental nurses in England have a role in the delivery of oral health promotion to infants and toddlers as part of the SCPHNs mandated contacts.

What are the possible risks or disadvantages of taking part?

It is not envisaged that this study will pose a risk or disadvantage to you for taking part. The questions asked during the interview are not intended to be distressing and if at any time recalling your experiences causes you distress you will be given the opportunity for the interview to pause and restart when you feel comfortable to do so.

However, if during the interview you do not wish to proceed the interview will be stopped immediately and the data collected will be destroyed and your name will be removed from the contact list.

What if something goes wrong?

If you have any concerns about any aspect of the way you have been approached or treated during the course of this study, then please contact jane.murray@northampton.ac.uk or jacquie.ridge@northampton.ac.uk who are the Director of Studies and Supervisor at the University of Northampton.

Will my information be kept confidential?

All the information collected for this study will be kept confidential, anonymised and will be stored securely on a password-protected computer. All interview data collected is subject to meeting National Guidelines of the Data Protection Act and GDPR (2018), the Faculty of Health, Education and Society Committee Guidelines (2018) and the Freedom of Information Act (2000). Data collected will be kept on file for the maximum of 5 years, following this it will be destroyed through the University of Northampton confidential

waste process. However, confidentiality may be broken if during the interview you disclose something which may pose a risk to safety, criminality or harm to others which will need to be passed on to the relevant authorities.

What will happen to the results of the study?

The results from this study will be used in the following ways in academic forums such as conferences and journals and as part of the researcher's Professional Doctorate thesis. If you would like to receive a summary of the findings, then please indicate this on the consent form or contact the lead researcher by email at Brigette.gouda@northampton.ac.uk

Who has reviewed the study?

This study has been reviewed and approved by the University of Northampton, Faculty of Health, Education and Society Research Ethics Committee.

Contact for further information

If you have any questions about this study or your possible involvement, then please contact me using the contact details below.

Brigette Gouda Brigette.gouda@northampton.ac.uk mobile number: 07974082301

Thank you for considering taking part in this study.

Participant Information Guidance

Parents or Caregivers

Study title - Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by Specialist Community Public Health Nurses?

Why have I been invited?

You are invited to take part in this research study as in England Specialist Community Public Health Nurses (SCPHN) provide oral healthcare advice to families of newborn infants and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old. As oral healthcare is a branch of dentistry is it the role of SCPHNs to offer oral health education and prevention as early support of dental health? Could this role be supported by dental nurses developing a new identity for the profession by trail blazing a more advanced public health dental nurse? Thereby upskilling the workforce to meet the wider needs of public health within society.

Before you decide whether you wish to participate, it is important for you to understand why the study is being conducted and what it will involve. Please take some time to read the information provided and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The aim of this study is to explore whether dental nurses in England have a role in the early intervention of oral healthcare to parents or carers of infants and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old as part of the SCPHNs mandated contacts.

Why have I been chosen?

You have been asked to take part in the study because you are a parent or carer of an infant or toddler aged 6-8 weeks old, 9-12 months or 2-2½ years old. The study will involve interviewing six participants separately. The time allocated for the interview will be 40 minutes and the information gained will provide insight into your experience of receiving oral health advice as part of the Specialist Community Public Health Nurses (SCPHN) mandated contacts. The findings of the study may be used to identify whether dental nurses have a role in the early intervention of oral healthcare as part of the SCPHNs mandated contacts with infants and toddlers.

Should you be interested in taking part in an interview, I will contact you to arrange a suitable time, date, and place.

Do I have to take part?

Taking part is entirely voluntary if you decide to take part you will be asked to sign a consent form to confirm that you understand the project and are happy to participate. If you decide to take part and then change your mind, you are free to withdraw from the study or withdraw any data you have given within 30 days of participating.

What will my participation involve?

Once you have agreed to take part in the study a date and time will be arranged to conduct a face-face interview where you are asked about your experiences when receiving advice as part of the Specialist Community Public Health Nurses mandated contacts. It will involve asking questions about how this experience is for you, your feelings, and your thoughts as well as anyone connected with your experience.

What are the possible benefits of taking part?

The information obtained from this study will offer an insight as to whether dental nurses have a role in the delivery of oral health promotion to infants and toddlers as part of the Specialist Community Public Health Nurses mandated contacts.

What are the possible risks or disadvantages of taking part?

It is not envisaged that this study will pose a risk or disadvantage to you for taking part. The questions asked during the interview are not intended to be distressing and if at any time recalling your experiences causes you distress you will be given the opportunity for the interview to pause and restart when you feel comfortable to do so.

However, if during the interview you do not wish to proceed the interview will be stopped immediately the data collected will be destroyed and your name will be removed from the contact list.

What if something goes wrong?

If you have any concerns about any aspect of the way you have been approached or treated during the course of this study, then please contact jane.murray@northampton.ac.uk or jacquie.ridge@northampton.ac.uk who are the Researcher's Director of Studies and Supervisor at the University of Northampton.

Will my information be kept confidential?

All the information collected for this study will be kept confidential, anonymised and will be stored securely on a password-protected computer. All interview data collected is subject to meeting the National Guidelines of the Data Protection Act and GDPR (2018), the Faculty of Health, Education and Society Committee Guidelines (2018) and the Freedom of Information Act (2000). Data collected will be kept on file for the maximum of 5 years, following this it will be destroyed through University of Northampton confidential waste process. However, confidentiality may be broken if during the

interview you disclose something which may pose a risk to safety, criminality or harm to others which will need to be passed on to the relevant authorities.

What will happen to the results of the study?

The results from this study will be used in the following ways in academic forums such as conferences and journals and as part of the researcher's Professional Doctorate thesis. If you would like to receive a summary of the findings, then please indicate this on the consent form or contact the lead researcher by email at Brigette.gouda@northampton.ac.uk

Who has reviewed the study?

This study has been reviewed and approved by the University of Northampton, Faculty of Health, Education and Society Research Ethics Committee.

Contact for further information

If you have any questions about this study or your possible involvement, then please contact me using the contact details below.

Brigette Gouda Brigette.gouda@northampton.ac.uk mobile number: 0752803453

Thank you for considering taking part in this study.

Participant Information Guidance

Dental Nurses

Study title - Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by Specialist Community Public Health Nurses?

Why have I been invited?

You are invited to take part in this research study as in England Specialist Community Public Health Nurses (SCPHN) provide oral healthcare advice to families of new-born infants and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old. As oral healthcare is a branch of dentistry is it the role of SCPHNs to offer oral health education and prevention as early support of dental health? Could this role be supported by dental nurses developing a new identity for the profession by trail blazing a more advanced public health dental nurse? Thereby upskilling the workforce to meet the wider needs of public health within society.

Before you decide whether you wish to participate it is important for you to understand why the study is being conducted and what it will involve. Please take some time to read the information provided and discuss it with others if you wish. Please ask if there is anything that is not clear, or if you would like more information.

What is the purpose of the study?

The aim of this study is to explore whether dental nurses in England have a role in the early intervention of oral healthcare to parents or carers of infants and toddlers aged 6-8 weeks old, 9-12 months and 2-2½ years old as part of the SCPHNs mandated contacts.

Why have I been chosen?

You have been asked to take part in the study because you are a dental nurse and whether you would be interested in providing oral health advice and prevention to infants or toddler aged 6-8 weeks old, 9-12 months or 2-2½ years old as part of the SCPHNs mandated contacts. The study will involve interviewing six participants separately. The time allocated for the interview will be 40 minutes and the information gained will provide insight into the interest of providing oral health advice and prevention as part of the Specialist Community Public Health Nurses mandated contacts. The findings of the study may be used to identify whether dental nurses have a role in the early intervention of oral healthcare as part of the SCPHNs mandated contacts with infants and toddlers.

Should you be interested in taking part in an interview, I will contact you to arrange a suitable time, date, and place.

Do I have to take part?

Taking part is entirely voluntary. If you decide to take part, you will be asked to sign a consent form to confirm that you understand the project and are happy to participate. If you decide to take part and then change your mind, you are free to withdraw from the study or withdraw any data you have given within 30 days of participating.

What will my participation involve?

Once you have agreed to take part in the study a date and time will be arranged to conduct a face-face interview on whether you would like to collaborate with Specialist Community Public Health Nurses offering oral health advice to parents and carers during mandated contacts with infants or toddler aged 6-8 weeks old, 9-12 months or 2-2½ years old.

What are the possible benefits of taking part?

The information obtained from this study will offer an insight as to whether dental nurses have a role in the delivery of oral health promotion to infants and toddlers as part of the Specialist Community Public Health Nurses mandated contacts.

What are the possible risks or disadvantages of taking part?

It is not envisaged that this study will pose a risk or disadvantage to you for taking part. The questions asked during the interview are not intended to be distressing and if at any time recalling your experiences causes you distress you will be given the opportunity for the interview to pause and restart when you feel comfortable to do so.

However, if during the interview you do not wish to proceed the interview will be stopped immediately the data collected will be destroyed and your name will be removed from the contact list.

What if something goes wrong?

If you have any concerns about any aspect of the way you have been approached or treated during the course of this study, then please contact Jane.murray@northampton.ac.uk or Jacquie.ridge@northampton.ac.uk who are the Researcher's Director of Studies and Supervisor at the University of Northampton.

Will my information be kept confidential?

All the information collected for this study will be kept confidential, anonymised and will be stored securely on a password-protected computer. All interview data collected is subject to meeting National Guidelines of the Data Protection Act and GDPR (2018); the Faculty of Health, Education and Society Committee Guidelines (2018) and the Freedom of Information Act (2000). Data collected will be kept on file for the maximum of 5 years, following this it will be destroyed through University of Northampton confidential waste

process. However, confidentiality may be broken if during the interview you disclose something which may pose a risk to safety, criminality or harm to others which will need to be passed on to the relevant authorities.

What will happen to the results of the study?

The results from this study will be used in the following ways in academic forums such as conferences and journals and as part of the researcher's Professional Doctorate thesis. If you would like to receive a summary of the findings, then please indicate this on the consent form or contact the lead researcher by email at Brigette.gouda@northampton.ac.uk

Who has reviewed the study?

This study has been reviewed and approved by the University of Northampton, Faculty of Health, Education and Society Research Ethics Committee.

Contact for further information

If you have any questions about this study or your possible involvement, then please contact me using the contact details below.

Brigette Gouda Brigette.gouda@northampton.ac.uk mobile number: 0752803453

Thank you for considering taking part in this study.

Appendix 4: Consent Form

CONSENT FORM

Project title: *Do dental nurses in England have a role in the early intervention of oral healthcare for infants and toddlers during mandated contacts by Specialist Community Public Health Nurses?*

Researchers Name: Brigitte Gouda Brigitte.gouda@northampton.ac.uk

This form should be read in conjunction with the information guidance sheet provided.

Please read the following statements and **sign your initials in the box** to show that you have read and understood them and that you agree with them.

		Please initial one box	
		Yes	No
1.	I confirm that I have read and understand the information sheet for the above study.		
2.	I understand that my involvement is voluntary and that I am free to withdraw at any time, without giving any reason.		
3.	I agree to the interview being audio recorded.		
4.	I understand that the information I disclose will remain confidential.		
5.	I understand that I can withdraw my answers in part or full, anytime up until 30 days after the interview has taken place.		
6.	My data will not be identifiable by anyone other than the research team and all reasonable steps will be taken to ensure that my personal information is kept confidential.		
7.	I agree to anonymised quotations being used in any academic presentations or publications of this work.		

Please tick the box if you would like to receive results of the study

☐

Participant statement

I agree to take part in the study

Your name

Date

Your signature

Researcher's statement

I confirm that I have explained the nature, purposes, and possible effects of the research study to the person whose name is printed above. They agreed to take part by signing and dating above.

Brigitte Gouda

Name of Person taking consent

Date

Signature

Appendix 5: Parents or Caregivers – Sub-codes Photographs

