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**An interpretative research study
focusing on the nature and
impact of conversations between
health visitors and parents
relating to infant weight, in the
delivery of the Healthy Child
Programme (DH, DSCF 2009).**

PhD

MAGGIE COATES

2022

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focusing on the nature and impact of
conversations between health visitors
and parents relating to infant weight, in
the delivery of the Healthy Child
Programme (DH,DSCF 2009).**

Maggie Coates

**A thesis submitted in partial fulfilment
of the requirements of the University of
Northumbria, Newcastle for the award
of Doctor of Philosophy**

**Research undertaken in the Faculty of
Health and Life Sciences and
Department of Nursing, Midwifery and
Health**

February 2022

Declaration I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others.

The work was done in collaboration with Northumbria University, Newcastle. Any ethical clearance for the research presented in this commentary has been approved. Approval has been sought and granted through the Researcher's submission to Northumbria University's Ethics Online System on 24.11.16 and external committee Health Research Authority on 18.05.17.

I declare that the Word Count of this Thesis is 87,426 words

Name: Maggie Coates

Date:01.02.22

"We are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the foundation of life. Many of the things we need can wait. The child cannot. Right now, is the time his bones are being made, his blood is being made and his senses are being developed. To him we cannot answer "Tomorrow". His name is "Today""

Lucila Godoy Alcayaga, Pseudonym Gabriela Mistral 1948 (1889-1957) Nobel Prize in Literature 1945

"We define grit as perseverance and passion for long term goals. Grit entails working strenuously toward challenges, maintaining effort and interest over the years despite failure, adversity, and plateaus in progress. The gritty individual approaches achievement as a marathon; his or her advantage is stamina. Whereas disappointment or boredom signals to others that it is time to change trajectory and cut losses; the gritty individual stays the course"

Duckworth, A. D. Peterson, C. Matthews, M. D. & Kelly A. R. cited in Ravitch and Riggan (2017) (Page 42).

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ABSTRACT

The purpose of the research is to describe and interpret the phenomenon of infant weight through the lens of parents and health visitors by revealing and understanding the interaction occurring between them. An infant is considered 0-2 years, and research context is the NHS and delivery of the Healthy Child Programme (HCP) (Department of Health, (DH), Department for Children, Schools and Families (DCSF), 2009). Research took place in a local Trust in the Northeast of England. Childhood obesity is a worldwide issue impacting on 41 million preschool children and is considered one of the most challenging areas to address (Redsell 2021). Categorising children as either overweight or obese is a complex activity because of gender, rate of growth and child development (NHS Digital 2021). This inspires the research and makes it an area worthy of focus. Less Interpretative research is available about infant weight and, sequentially with parents and health visitors (HV) specifically, to explore the interaction in time and place.

The research paradigm is social construction, a superstructure conceptually framing the research. The research is Interpretative phenomenology relating directly to the interpretation of experiences of self and everyday situational encounters, or the lived experience of participants. Theoretical perspectives are hermeneutic phenomenology and symbolic interactionism, enabling the interaction between health visitors and parents to be illuminated. Recruitment is purposive sampling (4 focus groups and 8 semi-structured interviews) with 14 parents and 20 HVs participating. Data corpus is analysed using thematic analysis.

Findings report that interactions between HVs and parents around infant weight are complex. Health visitors and parents make several assumptions leaving interaction open to misinterpretation. Furthermore, assumptions are never addressed in earnest. This impacts the integrity of the interaction. Managing infant weight is superseded by other public health needs of parents. There is no obvious or comprehensive approach to assessment, level of risk or approach that addresses excess weight of infants proactively or strategies for proactive whole family approaches. Both parents and health visitors demonstrate a defined emotional response to infant weight, and this impacts on how infant weight is addressed. The research identifies implications for health visiting, making several recommendations for future management of infant weight within the HCP (DH, DCSF 2009).

Exploring the interaction between health visitors and parents around infant weight illuminates the interaction in detail, described and interprets it for meaning. The research is useful for HV practice with the potential of transfer to other areas of public health.

CHAPTER 1: INTRODUCTION

CHAPTER INTRODUCTION AND OVERVIEW

The purpose of the research is to describe and interpret the phenomenon of infant weight through the lens of parents and health visitors by revealing and understanding the interaction occurring between them. It is an Interpretative enquiry of the interaction between Health Visitors (HVs) and parents around infant weight. The context is the NHS, and delivery of the Healthy Child Programme (HCP) (Department of Health, (DH), Department for Children, Schools and Families (DCSF), 2009). Overall, the research paradigm is social construction. Theoretical perspectives are hermeneutic phenomenology (HP) and symbolic interactionism (SI), and the methodology is phenomenological. As the research is Interpretative by design, reflexivity is a crucial activity evident throughout the research and whilst writing the thesis. Reflexivity highlights researcher thoughts and rationalises subsequent actions. A research overview provides the research purpose and rationale. Key areas of the research are presented as a precursor for later and more in-depth discussion within the thesis. The research is driven by several personal and professional intrinsic and extrinsic motivators, and these are also explored. This chapter provides an overview of relevant and contemporary empirical literature, including key definitions, measuring classifications for infant and childhood weight and relevant terms of reference. A summary of health visiting (HV) provides an outline of roles and responsibilities, alongside those of parents of infants. The relationship between the research aims and research questions is maintained.

The research questions and aims are initially introduced here and reintroduced within Chapter 4: Methodology and Chapter 7: Discussion firstly as an aide-memoire and secondly to ensure that they remain central to the research process. Potential gaps in knowledge may be uncovered by the research and are the basis for why it matters. The chapter now presents the research purpose and research rationale.

1.1.2. Research rationale

Childhood obesity is a worldwide issue that impacts on 41 million preschool children (Redsell 2021). Categorising children as either overweight or obese is a complex activity, because of gender, rate of growth and child development issues (NHS Digital 2021). Additionally, infant growth is not measured in the same way as that for older children. For the purpose of this research, infancy is considered those between 0-2. While infancy is known as a critical time of child development, the global term 0-5 is often used to refer to infants and preschool children in the literature. It does not differentiate between 0-5 and the important period of infancy. Previous research focuses more definitively on overweight and obesity in adulthood,

and secondary school-age or primary school-age children. Infant weight is not as extensively researched with fewer studies having examined obesity prevalence in infancy (Perry et.al. 2015, Redsell et al. 2011). Despite infancy being a critical period for establishing healthy behaviour, the majority of literature for intervention of overweight and obesity focuses on children older than 2 years (Ciampa 2010, Redsell 2021). Although previous research literature identifies levels of existing knowledge about childhood overweight and obesity from a health professional perspective, there are surprisingly few studies available focusing on the phenomenon of infant weight, particularly exploring a specific interaction in time and place. Similarly, there is little research that focuses on the interaction around infant weight with HVs and parents as participants, particularly that which discusses the lived experience using an Interpretative research paradigm. Therefore, the purpose of the research is to describe and interpret the research phenomenon of infant weight from the perspective of parents and HVs by revealing and understanding interaction occurring between them. The purpose is also to utilise an appropriate research design so that any new knowledge or information discovered is an addition to that already available within the empirical literature.

1.1.3. Why it matters

"The foundations for virtually every aspect of human development including physical, intellectual and emotional, are established in early childhood". (Public Health England 2021a, p1)

Infancy is a period in which to avoid early dietary habits that are unhealthy or lead to subsequent obesity related lifestyles (Ciampa 2010, Redsell 2021). Once these habits are embedded, they can continue into childhood, adolescence and adulthood (Public Health England 2015, WHO; 2016, Mastroeni et al. 2017). The current scenario in the patterns and trends of childhood overweight and obesity is considered one of the most challenging areas to address particularly in the Northeast of England because of deprivation levels (Public Health England 2021a). The scope of index of inequality (SSI) (Regidor 2004) that measures social gradient and deprivation decile, demonstrates that the Northeast, where the research takes place, has a high SSI figure. This indicates higher levels of inequality exist in the Northeast in comparison to other localities of England (Public Health England 2021a), therefore increasing the potential to have a greater proportion of childhood overweight and obesity. Demographics focus on the preschool child as a whole and empirical literature highlights infants and children within the poorest populations are at greater risk for childhood obesity and associated problems (Public Health England 2021b). Despite this, there is no general recommendation for labelling of overweight infants, the use of common terminology (McCormick et al. 2010) and no common approach (Redsell 2011). Further research is

required for early childhood prevention of overweight and obesity that considers early life factors (Ardic 2019; Feldman-Winter et.al. 2017). Additionally, HV are one of the few public health professionals with a remit for infants, and their role is considered crucial for infant health and wellbeing (Public Health England 2021c). These factors suggest potential knowledge gaps in the empirical research and relate to why it matters.

1.1.4. Potential knowledge gaps

Identifying new knowledge of this phenomenon is part of the rationale for why the research begins in the belief that this research focus has not been explored in this way before. Equally, having a research design that selects different groups of participants provides capacity for a broad set of data derived from the lived experience (Korstjens and Moser 2018). HVs have a well-defined public health role for leading and managing infant weight and nutrition (DH; DCSF 2009), and childhood overweight and obesity is a public health priority (Redsell et al. 2021; Mastroeni 2017; Bentley 2017; Perry et al. 2015; Redsell et.al. 2013; Redsell et al. 2011). There is an assumption grounded in public health policy and practice that public health opportunities are maximised when HVs and parents come together, and that clear understanding and lines of communication between parents and HVs are effective. It is also often felt that, as part of this exchange, both parents and HVs have tangible outcomes as a result. However, it is not evident within the empirical literature what and how interaction actually takes place when HVs and parents come together in clinic, what is understood as a result of the interaction and what, if any, complexities exist, purely because these have never been explored before.

The knowledge gap for this research is integral to the research question and research aims and explores key public health messaging around infant weight, using HP and SI as theoretical perspectives. These theories identify both macro and micro impact factors, and SI illuminates language, symbols, objects, internal and external interactions, developing responses, meaning modification and meaning attribution. HP provides opportunity for understanding how previous knowledge, experience and socio-cultural influences are influential on participants, including any short and/or long-term impact and outcomes of these. The research sets out to find the reality and truth of the interaction as it occurs. Including parents and HVs in the research process was a fundamental decision made very early in the research design, the perception being it would provide greater value of available data for collection and analysis and, therefore, embed trustworthiness and confidence in the research from its conception (Korstjens and Moser 2018).

This research creates opportunity for new perspectives to inform decisions and explore priorities within HV practice within a high-impact area for practice. This could have a positive

impact on parents' and HV knowledge, meaning, behaviour and subsequent actions around infant weight. The research also has capacity for positive impact on the long-term health of children in the local area and associated public health issues. Knowledge generated as part of this research could foster proactive strategies to address infant overweight and obesity within the UK, and create a potential shift from reactive public health practice, that appears to exist, to a more proactive approach. At the very least, for the organisations that took part in the research it serves to enlighten HV practice when findings and discussion are shared, and these can then inform the thinking of other public health practitioners because of potential for transference of knowledge generated.

1.1.5. Intrinsic motivators

The PhD research is important because it matters to the researcher intrinsically. Having left secondary school education aged 15 with minimal qualifications and, as the first family member to study within higher education, securing a PhD is an attractive and long-term intellectual goal for personal growth and academic development. Successfully attaining a broad range of previous academic qualifications are steppingstones to this moment. Prior to the research commencing, childhood overweight and obesity was viewed through several different researcher lenses. Knowledge, skill and behaviour of public health practice is predominantly from previous clinical roles of nursing and health visiting, therefore originating from a professional background. As a previous HV, managing infant weight and infant feeding was part of the remit in the delivery of the HCP (DH, DCSF 2009). Previous academic roles of leading specialist community public health programmes and the current role of supporting student HVs as a personal tutor and academic assessor were also key drivers for the project. Academically, childhood overweight and obesity is a public health focus with students, often driving classroom discussion of professional dilemmas, government rhetoric, cultural and socio economic influences and public health theory and practice links. The lens of being a parent also brings personal knowledge of managing children's weight, growth, and dietary requirements.

Research focus mirrors a passion for public health, particularly public health of children, and is a genuine interest and way of developing greater knowledge of the phenomenon. Professional and academic curiosity provide the internal motivation to understand and apply research methodology effectively and articulate it confidently to others. Articulation across a variety of internal and external environments, with confidence, is a primary goal. Professional curiosity about existing research assumptions and understanding how assumptions (axiology, positionality, ontology, and epistemology) impact on the research from its conception is also a factor. Recognising how assumptions shape and influence the research design leads to research understanding (Maxwell 2013). Successful completion of a PhD provides the

researcher with specific expertise of a public health phenomenon and potential for transferable knowledge to share with peers, students and colleagues, both nationally and internationally. It also demystifies the research process and enables mastery of a greater research skill set. It requires a research-rich approach that also enhances learning and teaching delivery in a current academic role. Acquiring research knowledge, skills and behaviours during the PhD is utilised to support other PhD students undertaking this journey through informal and formal supervision and sharing experiences. This will assist others to recognise any potential challenges and measures of success while doing similar research.

1.1.6. Extrinsic motivators

Earlier in the chapter, and in great detail in Chapter 2, empirical evidence demonstrates that childhood obesity is a local, national, and global issue, with a plethora of evidence available. Childhood overweight and obesity continues to be a public health priority and HVs are key public health professionals with a remit for child health (DH, DCSF 2009). Therefore, extrinsic motivators are driven by both empirical literature and a policy context that surrounds infant weight and childhood overweight and obesity, for example giving infants and children the best start in life being seen as fundamental to improving child health outcomes and reducing inequalities (Public Health England 2016). Furthermore, all infants and children within the 0-19 service deserve the best start in life to mitigate poor socio-economic health outcomes in England (Public Health England 2021b). As a universal service, the HCP (DH, DCSF 2009) provides support under Tier 1 for parents and infants, and HVs are identified as providing early, sensitive communication approaches to parents about infant weight (HM Government 2016). HVs and parents have interacted for many years in the delivery of the HCP (DH, DCSF 2009), either at home or in a healthy child clinic. The healthy child clinic is where infants were weighed, and weight is recorded and monitored using an evidence-based centile chart. HVs have opportunity to make every public health contact count with parents and their infants (Public Health England, NHS England and Health Education England 2016). Thus, in a sense, childhood overweight and obesity is not a new topic with little empirical evidence. However, by taking a different perspective and focusing on interpreting the interaction around infant weight this creates potential for new knowledge development. This is also an extrinsic motivator. However, this will only be realised if research participants are asked the correct questions, in the correct environment, at the correct time and in the correct way.

1.1.7. Introducing relevant empirical literature

While the prevention of infant overweight and obesity is increasingly prevalent, a lack of application and knowledge of effective interventions to address this within the UK remains

(Redsell et al. 2013). Despite a plethora of research papers focusing on childhood overweight and obesity, falling into several different categories, there is paucity of data relating to infant feeding (Scientific Advisory Committee Nutrition SACN 2018) and yet both phenomena have close association. Literature demonstrates a variety of reasons why infant feeding is a crucial stage of development and important to parents (World Health Organisation WHO 2016). Some of the socio-cultural challenges include a preference for "chubby" babies because this is a sign of higher economic status in some cultures and positive parenting associations with infant weight gain (Wu, et al. 2021). There is a strong cultural influence on infant feeding, especially from grandparents (Wu, et al. 2021). Available empirical studies focus on the need for further expansion of relevant health professional knowledge relating to infant and childhood healthy weight and healthy nutrition appropriate communication, and sensitivity of communication if health professionals address childhood overweight or obesity with parents (Willis et al. 2012). HVs do feel inhibited when raising issues of obesity risk with parents, and they are not always confident about addressing this sensitive issue (Redsell et al. 2013). Parents can undermine HVs if they are not accepting public health messages (Redsell et al. 2013). A collaborative relationship is thought to be key to addressing weight in preschool children (Willis et al. 2012), and the empirical literature highlights a need for additional guidance, resources and training for HV teams as a combative strategy. Raising issues such as poor infant feeding practice with parents leaves HVs with a perception that trust is lost (Redsell et al. 2013), and this is a fear requiring a solution so infant weight and childhood overweight and obesity are effectively addressed as part of the HCP (DH, DCSF 2009).

Health professional knowledge (general practitioners, practice nurses, and HVs) to address overweight and obesity varies in recognition and management (Redsell et al. 2011). To assist this, specific training and intervention programmes such as HENRY (Health and Nutrition for the Really Young) (Rudolf, 2009) are successful and a resourceful method for use in HV teams across the UK. They demonstrate success by improving health professional knowledge in managing and promoting healthy eating for infants and children (Willis 2012). Additionally, HENRY increases parents' health behaviours on completion of the programme (Howlett et al. 2021). Although the HENRY programme is an example of activity that potentially addresses overweight and obesity in childhood if made widely available and successfully implemented, its evidence base is not robust. It has preliminary evidence of improving a child's outcome, without confidence that the programme alone caused the improvement predominantly because evidence is not from a rigorously conducted RCT or QED evaluation (Early Intervention Foundation, 2019).

Alternatively, digital technology such as ProAsk is available to identify overweight and obesity risk in infancy (Redsell et al. 2017). In assessing the feasibility and acceptability of ProAsk as a digital tool for proactive assessment of obesity risk with UK HVs and parents Redsell et al. (2017) identified that ProAsk could be used to for obesity prevention in socially deprived areas. However, its fidelity as a tool was questioned because HVs misinterpreted the eligibility of participants taking part which impacted negatively on suitable participant recruitment in this study, and therefore results. However, both HENRY and ProAsk are additional resources outside the universal HCP (DH, DSCF 2009). Commissioning these has financial implications. The delivery of public health services for infants and children is already subject to a reduction in service provision (Institute of Health Equity, 2020, iHV 2018). Arguably, extra resourcing is not a feasible activity for consideration in the current climate to consider widespread use within HV.

1.1.8. Initial reflections of the research

Initial reflections of the research focus on considering the topic, what it is, how it leads to discovery and how to complete it. Gaining clarity is not easy as a novice. Underneath existing doubt, a specific feature of the research is identifying "all essentials". For example, it is essential to have HV in the title, it is essential to have HVs as participants, it is essential to have an Interpretative approach and finally it is essential to have a public health focus, rather than an educational one. Rationalising the essentials includes a wish for partnership approaches, as working alongside service providers may foster beneficial change to HV practice. The research initially focuses on leadership skills of the HV and development of a therapeutic relationship with parents through communication processes. However, in the course of writing the research protocol, and examining empirical and research literature, countless hours of self-deliberation and debate shifts the research focus and purpose to one of childhood overweight and obesity. This is because an overall focus and purpose of research is to determine a knowledge gap, or to add to existing bodies of empirical knowledge available. Once this driver is apparent it is a PhD research goal. Inviting only HVs as participants is insufficient to realise this goal. Therefore, also inviting parents to participate is vital. Furthermore, a focus on infant weight in the context of childhood overweight and obesity is a lightbulb moment.

As a novice researcher, understanding the necessary elements of the research process as interrelating parts of a whole was a lengthy undertaking. However, each element of the research gains clarity at the proposal stage, and research focus of infant weight was increasingly robust as it developed definition and understanding. This was a milestone for the researcher in terms of achievement. The central purpose of this research is not to determine

the worth of HVs as a profession or HV service provision within the UK. It did not set out with a purpose of searching for and illuminating good HV practice or otherwise. However, illuminating relevant issues and good HV practice as a genuine outcome is always of value. Additionally, it did not set out to shame parents for parenting styles, feeding patterns, parent and infant behaviours, or infant weight, because it demonstrates ethical probity by considering the best interest of research participants. Achieving clarity of a research focus helps develop appropriate research questions and aims, specifically with discovery and interpretation in mind. Much reflection centres on selecting suitable theoretical perspectives and this is a recurring theme throughout the thesis.

1.1.9 Research aims and questions

Conceptualising research aims and questions is a functional activity because they indicate what the research requires to uncover. Measuring success and evaluating the research findings is also part of their remit. Developing research questions and aims uses PICO, similar to searching the literature as part of chapter 2.

Research aims:

- 1. To interpret the interaction between health visitors and parents during the act of infant weighing and around infant weight, illuminating meaning, outcome and or actions*
- 2. To uncover and understand influential and contextual public health factors regarding infant weight to generate knowledge and understanding of these from both macro and micro perspectives*
- 3. To identify potential implications and recommendations for public health workforce development and / or transferability to other contexts*

Research questions:

- 1. How and what public health interaction occurs around infant weight between HVs and parents in HV practice?*
- 2. What key factors, if any, need to be in place for public health interaction regarding infant weight to occur?*
- 3. How do key factors influence public health interaction between HVs and parents in relation to infant weight?*

1.2 RESEARCH OVERVIEW, RESEARCH DESIGN AND THEORETICAL FRAMEWORKS

Careful consideration is given to answering the research aims and questions as each element of the research design requires cohesion at every stage in the research process, leading to transparency and rigor. To contextualise the research for the reader it is pertinent to introduce all key concepts of the research, i.e. conceptual framing, methodology,

theoretical perspectives, methods, data collection and data analysis. Greater depth of discussion of these research elements reoccur as the thesis progresses.

1.2.1. Research design and theories

Social construction (Berger and Luckmann 1966) provides the conceptual framing of the research as a superstructure determining the way a research design process unfolds (Ravitch and Riggan 2017). Establishing conceptual framing reflects methodological approaches, theoretical perspectives, and research methods such as data collection and analysis. As the research paradigm is Interpretative, the ontological positionality is relativist, and the epistemological positionality is subjective. Research methods reveal understanding, and therefore semi-structured interviews and focus groups are used to collect data. Both methodology and methods reflect the research design for a cohesive and rigorous research process and outcome. Two methodological theories suitable for interpretivism are hermeneutic phenomenology (HP) (Heidegger 1889-1976) and symbolic interactionism (SI) (Blumer 1969). Each offers the ability to explore the research focus from two different theoretical perspectives. Heidegger's (1962) HP provides a macro perspective and Blumer's symbolic interactionism (1969) a micro perspective of the research. Data analysis uses a thematic approach (TA) and thematic networking analysis (TNA) (Castleberry and Nolen, Braun and Clarke 2006). This involves several stages of analysis for reporting the findings in Chapter 6.

1.2.2. Overview: contemporary health visiting and the Healthy Child Programme

*"The word **infant** originated from Latin – "**infantem**". As a noun when translated this means "**babe in arms**" as an adjective translated this means "**unable to speak**". HVs speak up for infants and their families" (iHV 2021).*

HVs lead the HCP (DH, DCSF, 2009) and are participants in this research. This brief introduction explores their role, and identifies them as supporting children and families between the antenatal period and the time they reach school age (Nicholson 2021). The government fund HV services and government grants are spent via Local Authorities (LA) who commission public health for 0-5 population. In England, and in monetary terms, this equated to £3.279 billion in 2020-2021 and increased by 1 percent in 2021-2022 to take this to £3.324 billion (UK Government and Parliament 2021). Recently the HCP (DH, DCSF 2009) is moving away from the 4-5-6 model in evidence for the past 5 years, and service levels are changing through modernisation. Universal, Universal Plus and Universal Partnership Plus are now community, universal, targeted and specialist services (Public Health England 2021c).

The HV remains responsible for leading the delivery of the HCP (DH, DCSF 2009) within these 4 levels.

The government mandates visits as part of the HCP, and currently 5 visits and 6 high impact areas are in place which focus on public health with a strong theme of collaborative working between HVs and School Nurses (SN) for provision of a 0-19 service (HV 0-5, SN 5-19) (Public Health England 2021c). The UK's HCP (DH, DCSF 2009) delivery is different to programmes in other countries such as Australia, Canada, US and Sweden, where growth monitoring appears to be at every contact and, although the UK HCP has supporting evidence, no complete data exists about its impact (Blair and Macaulay 2013). The current HCP specification includes mandated and non-mandated visits (DH, DCSF, 2009, Public Health England 2021c) and infant weight and nutrition do feature. There is also a range of health-promoting and protecting factors that co-exist alongside the HCP, for example emotional support and assessment of families, particularly vulnerable families, health development and review prior to school entry, transition between services, healthy weight, breastfeeding and weaning advice, safeguarding support and targeting specific child health needs (Public Health England 2021c).

High impact areas of the HCP (DH, DSCF 2009) support the early years population of children, young people and families for greatest public health impact (Public Health England 2016). In focusing on support and improvement, they include areas of maternal and family mental health, transition to parenthood, breast feeding, health literacy, reducing accidents and minor illnesses, and supporting health, wellbeing and development. This also includes being ready to learn, narrowing the word gap and supporting healthy weight and nutrition. The latter complements the research focus and clearly associates to the role of the HV within government policy and commissioning requirements of HV. However, HVs are illusive to some other health professionals, such as GPs who claim they are "out there somewhere" since a removal of many HVs from attachment to a GP practice (Bryar et al. 2017). Changes are a result of working practice, such as agile working, and the profession appears more nomadic and transient to both GPs and parents. This is more evident lately due to the Covid-19 pandemic and a reduction in home visiting. An overview of the role of the HV in the mandated visits of the HCP in England (DH, DSCF 2009) is evident in Table 1 (Page 24) below:

Table 1: Mandated visits and content within the HCP (DH, DSCF 2009)

Contact	Status & Schedule	Content
Antenatal visit	Mandated from 28/52 gestation	In-depth assessment of family's needs including mental health and wellbeing, moving to parenthood, breastfeeding , the HCP and central service provision, sleep, safety and support.
New baby review	Mandated between 10-14/7	Promotion of immunisations, screening and examination checks, infant and maternal mental

		and physical health, infant jaundice, safe sleeping, breastfeeding and contraception advice
Birth visit	Mandated between 6-8/52	Screening checks and immunisation in place, health promotion, breastfeeding , weaning, oral health, healthy diet and weight, sleep, minor ailments, accident prevention and family mental health
Development review	Non mandated, suggested at 3-4/12	Infant feeding , child development, oral care, environment, and maternal mental health
Development review	Non mandated, suggested 6/12	Minor illness, safety, infant feeding , child development, environment, speech and language, mental health and returning to work
Development review	Mandated 1 yr.	Ongoing health and development, health promotion, diet and weight , Vit D, oral health, sleep, immunisations, minor ailments and safety (ASQ3, ASQ. Social and emotional health - SE2)
Development review	Mandated - 2 to 2½ yr.	Review child health, growth and development , behaviour management (ASQ3, ASQ. SE 2)

1.2.3. Key definitions and terms of reference

Infants receive nutrition in various ways and there are various definitions for the introduction of solid food into an infant's diet. Additionally, a variety of terms are used for infant feeding and many different related products are available on the market, making it worthy of further discussion in the light of the findings. Infants can be exclusively breastfed, exclusively formula fed or a mixture of both. Recommendation is that infants are exclusively breastfed for the first 6 months (WHO 2021). Infants can be responsively fed, the term that replaces demand feeding, no matter if breast or formula fed. Responsive feeding infant formula is also known as pacing feeding (General Practitioner Infant Feeding Network (GPIFN UK) 2019).

Complementary feeding is a preference for introducing solid food (GPIFN UK 2019, WHO 2021) alongside weaning, weaning by spoon or baby-led weaning. A substantial amount of literature refers to these terms, often interchangeably. The term introducing solids, or starting solids, is thought to be favoured to weaning (General Practitioner Infant Feeding Network UK 2019). There is a number of products for infant feeding with formula milk available on the UK market, for example artificial baby milk, infant formula, follow-on formula, infant milks (commercially available milk-based drinks), specialised milks (specifically for infants with medical needs) and ready-to-feed formulas (General Practitioner Infant Feeding Network UK 2019). Using weaning, rather than complementary feeding, is a term of reference in the research as it is the term that parents refer to and recognise. Breastfeeding and formula feeding are used as terms of reference and parent is used as a generic term for all parents or carers. Relating to health visitor, health visitors and health visiting, the abbreviations "HV" or "HVs" are used throughout the thesis and the reader determines which one is most relevant in context.

1.2.4. Key definitions of infants, pre-schoolers, children and adolescents

Childhood overweight and obesity literature often merges infants and pre-schoolers together as one homogenous group, rather than identifying infants as 0-2s and pre-schoolers as 3-5s. Infants and pre-schoolers are often referred to as children, and adolescents as young people. Much of the literature available uses the terms childhood overweight and obesity rather than infant overweight and obesity, although some literature is specific to infants and includes this term. Where literature refers to infants this is understood to be the 0-2s. Preschool children is understood as 0-5, reception 4-5 and year 6, 10-11 years. For the purposes of this research and the subsequent thesis infants are those in the 0-2 age range.

1.2.5. Defining overweight and obesity in infants, children and adolescents

Although the fundamental cause of overweight and obesity in childhood is an imbalance between the number of calories taken against the number of calories spent (Public Health England 2018), no consensus or single definition of overweight and obesity in childhood exists (Perry et al. 2015). No UK clinical definition of overweight infants exists (Fildes et al. 2015). Similarly, no definition of severe obesity in children under two exists (Porter and Tindall et al. 2018). Defining overweight or obesity within populations is age specific and several definitions are available. Table 2 (Page 26) summarises available definitions including age, metric and source of reference (Di Cesare 2019).

Table 2: A summary of definitions of overweight and obesity (Di Cesare et al. 2019)

Metric	Age	Reference	Definition	Year
Overweight	Under 5 yrs.	UNICEF, WHO, World Bank	WHO Growth Standard	1990-2018
Obesity	2-4 yrs.	Institute for Health Metrics (IHME)	International Obesity Task Force	1980-2015
Obesity	5-19 yrs.	Non-Communicable Disease Risk Factor Collaboration (NCD-RisC)	WHO Growth Reference	1975-2016

1.2.6. Measuring classifications for infant and childhood weight

Body mass index (BMI) is an indicator of weight and classifies weight for monitoring childhood overweight and obesity patterns and trends across the population of England (Public Health England 2021). However, BMI is not routinely recorded for infants because weight for length (WFL) uses the UK 90 growth charts (Dinsdale and Ells, National Obesity Observatory NOO 2011). The National Child Measurement Programme (NCMP) has measured school children's weight since its inception in 2006 by Public Health England (Public Health England 2021). Measurement occurs at school entry (reception) and again in year 11. Infancy is a time of rapid advancing growth and development, and is a crucial time period for the prevention of

obesity (WHO 2016). However, according to NCMP data, a significant number of children are already overweight or obese by the time they enter reception year. In the UK, this equates to 1:10 by age 5, and 1:11 on entry to secondary education (Baker 2021).

This supports the earlier point made about the importance of early healthy habits in infancy in limiting later weight gain. Furthermore, due to the global pandemic Public Health England is withholding 2019-20 data from the NCMP in 4:12 LAs in the Northeast because it is less than 25 percent, making it unreliable (PHE 2021). In some Northeast areas data available are at 75 percent. However, this still requires a level of caution on interpretation in comparison to previous years. Without accurate data there is potential to lose track of the number of children entering and leaving school who are either overweight or obese. This may lead to a lack of recognition overall within the 0-5 age range, and reduce opportunity to address any issues in a timely way.

1.2.7. Measuring weight in infants and children

In the UK, body mass index (BMI) measures obesity as above the 98th centile.

Recommendation is that measuring infants uses weight only up until age 1-2 rather than weight for length (WFL) (Rudolf 2009). Using WFL may underestimate the degree of obesity due to rapid weight gain infants have during the first 2 years of life (Rudolf 2009). However, infant BMI can be a superior indicator of obesity risk than WFL at 2 months of age for determining odds of obesity at 2 years (Roy et al. 2016). At 6 months and upwards either approach is suitable, although BMI allows for weight and length distribution (Roy et al. 2016). In the 0-5 population, weight for height greater than two standard deviations above the WHO child growth standards median signals overweight, and weight for height greater than three standard deviations above WHO child growth standards median signals obesity (WHO 2018).

Children and adolescents between the ages of 5 -19 are overweight if BMI for age is one standard deviation above the WHO child growth standards median, and obese if they are two standard deviations above the WHO child growth standards median (WHO 2018).

Measuring overweight and obesity in this age group is done via the National Child Measurement Programme with BMI classification according to the British 1990 growth reference (UK90) (Cole et al. 1995) to monitor children's weight status (PHE 2019a). Within the UK, the British UK 1990 (UK 90) growth reference was used for measuring BMI in children aged 4 and upwards (Dinsdale and Ells, NOO, 2011). Children between 5 -19 have growth comparison to the general population using the WHO child growth standards median (WHO 2018), and for those in the 0-5 age the group WHO child growth standards is used to identify ideal growth measurement (Dinsdale and Ells, NOO 2011).

1.3. THESIS STRUCTURE AND CHAPTER OVERVIEW

Chapters 1-9 structure the thesis logically and articulate the research process. Throughout the remainder of this thesis, relevant empirical literature support argument and debate, including reflective journal excerpts and appendices where appropriate. Figures, tables and diagrams are signposted and listed. The researcher transports the reader through the research journey from initial conceptualisation of research ideas, to compiling research questions and aims, methodology, research design and findings. The discussion chapter situates the research and concludes the thesis. It includes recommendations and implications for practice. A conclusion chapter follows.

Chapters 1-9 are sequential, and the below summary gives an overview of content.

Chapter 1: This chapter summarises the main considerations for the research to enable the reader to have a clear idea of the research context. It includes an introduction to the empirical literature, in less detail than in Chapter 2, the purpose of the research and why it matters. It considers how the research adds further knowledge to the empirical literature already available. It explores the intrinsic and extrinsic motivators of the researcher as well as initial reflections. It also provides an overview of the research process, design and theoretical frameworks, including an introduction to the research questions and aims.

Chapter 2: This chapter presents a critical review of the empirical literature. This further sets the scene and literary context for the research. Socio-political influences determine both internal and external drivers of the phenomenon in focus and support the research from a theoretical standpoint. Chapter 2 also demonstrates and organises relevant text as it explores key themes. Key themes make comparisons with the literature and findings as they emerge during data analysis (Chapter 5) and again in the discussion (Chapter 7). A comprehensive and contemporary account of the current picture of infant and childhood overweight and obesity within the UK and beyond reveals prevalence, trends, modifiable and non-modifiable risk factors, and socio-economic, cultural and political drivers of childhood overweight and obesity. It identifies the role of health professionals, including HVs, and potential challenges and / or barriers that exist with regard to infant and childhood obesity. Literature cited also relates to infant feeding (breast and formula) and weaning. Finally, chapter 2 reviews and highlights the perspectives of parents as essential participants in the research overall.

Chapter 3: This chapter presents social construction as the conceptual framework and the research superstructure (Ravitch and Riggan 2017). It builds the argument for the research. It highlights social construction from the perspectives of reality, knowledge and truth as key concepts of this Interpretative paradigm. Researcher positionality is important, and this

chapter explores the situatedness of the researcher as an insider/outsider. The insider/outsider perspective and research assumptions are important because, if not explicitly dealt with throughout the research, this impacts on research quality. This includes the relationship between the axiology, ontology and epistemology of the researcher and the participants. The ontological position of relativism and the epistemological position of subjectivism seek to reveal the realities of the participants, as their truth unfolds in a particular time and place.

Chapter 4: Leading on from the discussion of the conceptual framework for the research, Chapter 4 introduces the research methodology and what a phenomenological Interpretative approach offers. It provides a summary of the research question and aims. It includes discussion of what an Interpretative paradigm is, and contextualises and demonstrates how important it is to understand its key characteristics. The chapter justifies and explores both theoretical approaches selected in HP and SI. It considers key concepts and usefulness of HP, for example the concept of Dasein or fore-structure, including temporality (time) and spatiality (space), and the development of hermeneutic commentary as well as the hermeneutic circle (Heidegger 1962). Discussion is similar for SI, alluding to Blumer's (1969) use of symbols, language, role taking, role making, meaning interpretation, developed response, meaning attribution and meaning action. Understanding these theories enables demonstration of their application throughout the thesis. It also presents evidence to justify the research approach and ensure that the research paradigm, assumptions, research methodology and research methods have appropriate alignment. A reflexive stance explores the application of underpinning theories. This includes how HP and SI as methodological approaches enable discovery, i.e. what can be known about the research phenomenon. It explores semi-structured interviews and focus groups as suitable to an Interpretative research design. Finally, it offers justification for having two theoretical approaches with an argument of demonstrating a dual macro/ micro perspective of the research overall.

Chapter 5: Chapter 5 focuses on the research design process, and this includes the introduction of ethical probity within procedural and practice ethics. This demonstrates adherence to the ethical principles of avoiding harm to participants and seeking voluntary informed consent. Purposive sampling and the process of recruitment is made explicit. Development of relevant inclusion and exclusion criteria and exploring the stages of recruitment processes make this transparent. Participant profiles provide an overview of those taking part. The process of data collection and data analysis are clear, demonstrating how these emerge and effectively introduce and maintain rigor of the research from a quality perspective. A total of 11 stages for analysis are available in Castleberry and Nolen's (2018) and Braun and Clarke's (2006) framework of thematic analysis and thematic network

analysis. A combination of these TA frameworks provides 6 stages, all 5 stages, from Castleberry and Nolen (2018) and the final stage from Braun and Clarke (2006). The data analysis process presents each stage in depth, including examples of data coding, categories and theme development. The chapter finally explores the process of disseminating the research on completion.

Chapter 6: Chapter 6 critiques and reports the research findings from both parent and HV participants from the thematic analysis process in Chapter 5. Direct participant quotes provide to support the discussion and substantiate the content of the findings overall. Selection of key themes as three themes, four subthemes and six subheadings overall enable discussion as they emerge from the data analysis. Table 24 includes a summary of the most significant findings for clarity.

Chapter 7: Chapter 7 is the discussion and draws on both parent and HV findings from data analysis. It considers potential implications from the research. It includes further application of the theoretical frameworks of HP and SI. Discussion focuses on the findings and links to the research aims and questions. There are several overall discussion foci that encapsulate new knowledge emerging from the research, involving emotions, knowledge and reasoning, supposition and presupposition, diminution of HV services and meaning outcomes and actions. The key points in the discussion are a comparison to existing literature, relevant theory or policy. The chapter also makes research implications transparent. Thereafter, it makes useful, relevant and achievable recommendations from the research findings, which are useful for future public health practice.

Chapter 8: Chapter 8 reflexively discusses the research journey. Chapter 8 is written in the first person because of the theoretical reflexive requirements of the research and because it is personal to the experiences of the researcher. The key areas for discussion include the use of a reflective model (Corlett and Mavin 2018). The model is a way of sharing understanding of reality, and the personal and professional relationships of the researcher to the research, data collection and data analysis. This is the first step to understanding the research journey. Finally, similarly to Chapter 7, Chapter 8 demonstrates adherence to HP and SI as theoretical approaches. Exploring the hermeneutic cycle and Dasein (Heidegger 1962) through a different lens than that in Chapter 4, and similarly SI (Blumer 1969), reveals meaningful symbols, language, meaning modification and meaning attribution from a personal and professional perspective of the researcher. Both HP and SI govern thought processes, behaviours and actions and it is pertinent to expose this process for research rigor.

Chapter 9: Chapter 9 is the conclusion of the thesis. It provides a research summary and draws relevant and detailed conclusions from the research for the reader. The conclusion

aims to demonstrate that the research is complete and rigorous, and each research element and stage in the research process is interdependent and mirrored phenomenological interpretivism. The findings and discussion are summarised. As the thesis draws to a close it includes an account of several implications for HV practice. It also considers transferability for use in other public health areas and by other health professionals.

1.4. CHAPTER CONCLUSION

This introduction comprehensively sets the context, purpose and rationale for the research and provides an overview of research design and methodology. It identifies how the research process began with initial researcher reflections that provide a first glimpse of the proposal of the research. Both the knowledge gap and the reasons why the research matters are transparent. These are part of the rationale for completing the research study and selection of a focus on infant weight in the context of global overweight and obesity. The research questions and aims are seen as fundamental to how the research evaluates rigor. The research questions and aims indicate what the research set out to achieve, and are both a starting point for further exploration and a later measure of research success. Relevant key definitions and terms of reference used throughout the thesis, including measuring classifications of infant and childhood weight such as body mass index (BMI) and weight for length (WFL), provide clarity for the reader. An overview of contemporary health visiting further sets the research context and outlines the public health responsibilities of the HV in leadership and delivery of the HCP. It also explores the relevance of the empirical literature in brief as part of, although not in isolation of, the intrinsic and extrinsic drivers for commencing the research in the first instance.

Overall, there is a distinct reason why this research matters and why it utilises an Interpretative approach, that being to ensure that the voices of the participants can be heard. Also, the research is attributable to existing research because it has a well-defined and understood rationale and process. Hearing participants' voices, understanding these and making them transparent is why the research is envisioned in the first instance. Finally, the introduction highlights the content of each chapter, detailing an overview for the comprehensive approach that the remaining chapters follow as the thesis progresses.

Chapter 2 explores the empirical literature to provide additional depth in comparison to that in already in Chapter 1. Critiquing the empirical literature adopts a systematic approach and demonstrates development of key search terms explored as themes for discussion.

CHAPTER 2: INFANT AND CHILDHOOD OVERWEIGHT AND OBESITY: THE PLACE OF HEALTH VISITORS AND PARENTS

2.1. INTRODUCTION

“Obesity is preventable” (WHO 2021) p.1

Chapter 1 provides a comprehensive introduction to the research and content of the thesis. It is a glimpse at the empirical literature and research context. It contains an overview of the factors that influence infant weight, childhood overweight and obesity from a UK and global perspective. The purpose of Chapter 2 is to elaborate on the existing literature contained within the introduction as this supports both the research findings and the critical discussion in the thesis. Empirical literature is drawn from several contexts, including the UK, Europe, United States and Australia, because obesity is a global public health issue (WHO 2021). Each setting discussed is comparable to the UK, thus making it useful as part of the literature critique. Although not all countries have the benefit of universal HV services, these countries recognise the crucial way that public health intervention and prevention can address issues early in infancy and childhood. Some have similar roles to HVs in place. The USA, for example, has home visitors rather than health visitors as part of the maternal, infant, and early childhood home visiting (MIECHV) programme (2021). This is not a universal service, although families can opt in. However, it does support pregnant women and families with young children and / or complex requirements, particularly when they are at greater risk of poor child health outcomes because of their situation.

The literature available for childhood overweight and obesity is vast. Therefore, collection, critique and review of appropriate literature happens several times, and at different stages of the research process. Literature initially enables the rationale, proposal and subsequent research questions and aims to emerge (Stage 1). As the research gains momentum, focus for collection and critique of literature informs thesis writing and the desire to update to contemporary content (Stage 2). Literature critique supports the findings and discussion that follows, and also the completion of data collection and analysis process (Stage 3).

Presenting the literature uses key themes drawn from search and retrieval, and these include key and relevant topics of infant weight, infant feeding, risk factors, prevalence, socioeconomics and policy. It is conceptualised through the lens of both parents and HV in parallel to the research. HV, unique in their professional role, are crucial for making every contact count with parents (Public Health England, NHS England and Health Education England 2016). Conversely, the parents' role explores the expectation that they may have a different understanding and perspective of infant weight, childhood overweight and obesity to the HV. Literature is not specific to infants alone. It provides a broader perspective and

includes material relating to child and adolescent overweight and obesity, because many interlinking and interdependent factors relevant to the discussion exist within the literature and are relevant to the research. Therefore, the overall picture of overweight and obesity from a local, national and global perspective is necessary. The chapter also presents several key definitions, adding clarity about weight measuring in infants and children.

2.1.1. Literature search terms and selection process

Literature pertaining to infants generally appears to refer to infant feeding, maternal characteristics and risk factors for overweight and obesity. PICO was used to develop the search terms because the research is Interpretative by design.

Table 3: Developing the research question and search strategy using PICO

Population	Infants, 0-2, children, child, parents, parenting, pre-school child* Health visitor, health visiting
Intervention	Public health, health visitor, healthy child programme
Exposure	Overweight, obese, obesity, infant BMI, infant weight
Outcome Measures or Themes	Parents' experiences, parents' attitudes, health visitors' experiences, intervention, influences, conversations, management, prevention, infant feeding practice, perceptions

Table 4: Search Strategy

Data base	Search Terms	Number of article hits	After sifting	Total
ProQuest Central; ProQuest Hospital; SCOPUS Elsevier; MEDLINE/PubMed	"Health visiting" AND "childhood obesity"	70	12	12
ProQuest Central; ProQuest Hospital; SCOPUS Elsevier; MEDLINE/PubMed	"Infant obesity" AND "parents" AND "health visiting"	12 – 3 double hits	9	21

ProQuest Central; ProQuest Hospital; SCOPUS Elsevier; MEDLINE/PubMed One File GALE	"Health visiting OR health visitor" Infant feeding AND childhood obesity	61-10 double hits	14	35
CINAHL with Full Text	health visiting or health visitor AND infant feeding AND childhood obesity	2- 1 double hit	1	36
Cochrane Library	health visiting AND infant obesity	9	0	36
ProQuest Central; ProQuest Hospital; SCOPUS Elsevier; MEDLINE/PubMed One File GALE (Last 5 years 2012- 2017)	"Infant weight" OR Overweight AND "parent attitudes AND "infant feeding practice" AND "health visi*	893	102	138

Selected peer reviewed articles: dates selected 2010-2017; full text only; find all search terms

Below is a PRISMA diagram (Figure 1) which outlines further the process of gathering and processing the literature used within this chapter of the thesis. Following initial search and retrieval of literature, an electronic file was developed to organise both preliminary and consecutive articles sourced around obesity. Articles were also printed and filed as per topic area. A record of research articles for the literature review was developed during the initial stages of reading and appraisal. The recreated template can be found in Appendix ?? However, the original electronic copy was lost in the cyber incident alongside the original PRISMA diagram. This has also now been recreated (Figure 1). As the thesis developed, a series of electronic files was created to organise all research articles by subject area and the process of electronic filing and hard copy articles was completed for all chapters in this way.

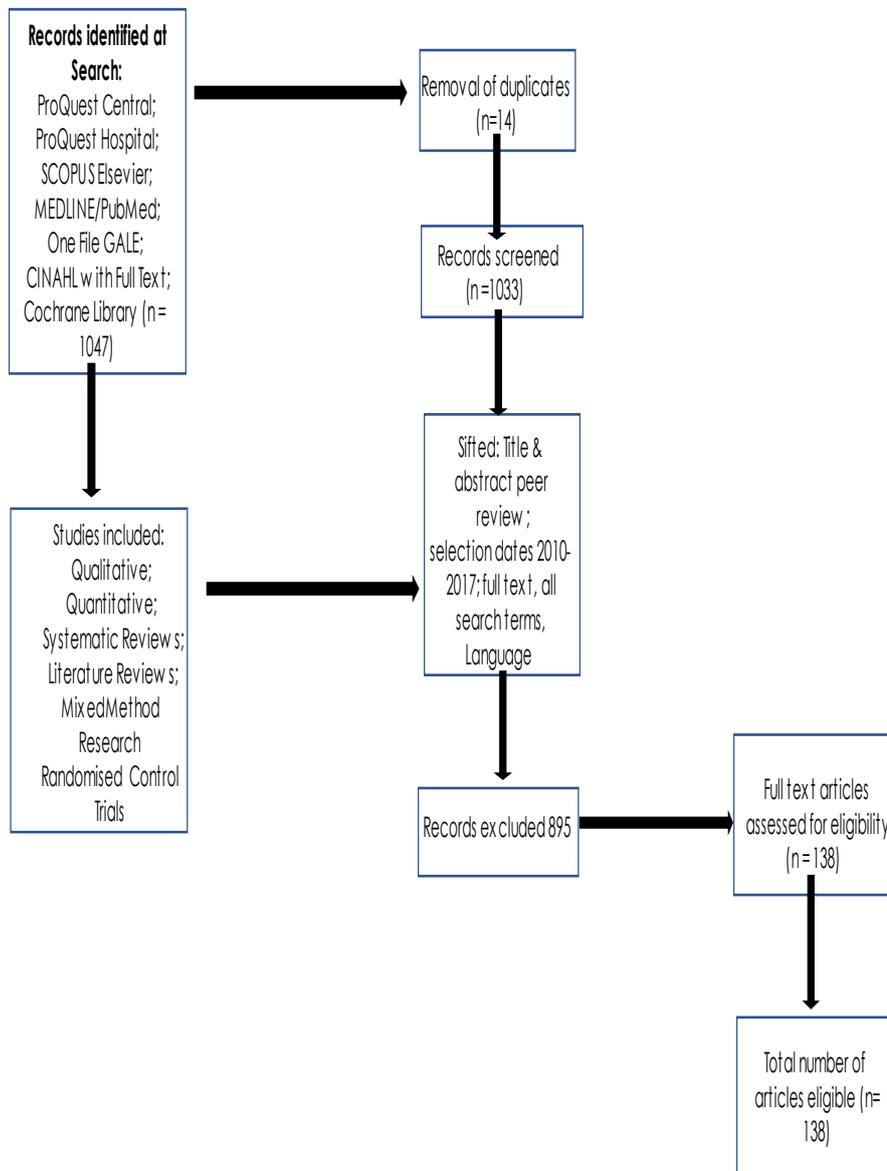


Figure 1: PRISMA flow diagram

2.1.2. Key literary themes

Several broad themes are key to the discussion and determine specific subheadings within this chapter. A summary of key themes provides an overview (Table 5) and, although numbered 1-6, are not discussed in this particular order.

Table 5: Key themes

Theme 1: Current picture of obesity	Global and UK data trends, incidence and prevalence of overweight and obesity in infants, children and adults
Theme 2: Policy	Policy perspectives, government rhetoric, recommendations, legislation, relationship to HVs and parents, healthy nutrition and marketing
Theme 3: Influencing factors on obesity	Socio-political influences and inequalities and modifiable and non-modifiable risk factors for overweight and obesity in infants, children and adults
Theme 4: Childhood nutrition	Infant feeding, breast and formula feeding and weaning
Theme 5: The place of parents in overweight and obesity in infants and children	Parents as gatekeepers of infant nutrition and weight as defining good parenting, responsive feeding, breastfeeding, formula feeding
Theme 6: The place of health visitors in overweight and obesity in infants and children	Policy context, roles and responsibilities of HVs, knowledge and expertise, risk assessment

2.2. PREVALENCE AND TRENDS OF CHILDHOOD OVERWEIGHT AND OBESITY

2.2.1. Global prevalence

Global prevalence of overweight and obesity is severe enough to be one of the most serious public health challenges for the 21st Century (Redsell 2021). It is an increasing trend among preschool children, which makes it a global public health issue where early intervention is desperately needed (Bentley et al. 2017). Looking at 19 countries measuring obesity, the UK ranked 10th in 2016 with 26 percent obesity levels in comparison to the USA at 40 percent (top) and Japan at 4 percent (bottom) (Baker 2021). Estimates of incidence of children 0-5 worldwide overweight in 1990 was 4.8 percent (Di Cesare et al. 2019). Figures estimated 41 million children worldwide under five as obese in 2016 (WHO 2016) continuing upwards at almost 6 percent (5.9%) of children under 5 overweight or obese by 2019 (UNICEF; WHO; World Bank 2018, Di Cesare et al. 2019). By 2019 global estimates of obese children under 5 were 42 million (Ardic 2019, WHO, UNICEF and the World Bank 2019). Despite moving at a slower pace (Organisation for Economic Co-operation and Development (OECD) 2017) the prevalence of childhood obesity continues to rise (Di Cesare et al. 2019). Global prevalence shows an increase of nine million overweight and obese infants and children between 1990

and 2016 (WHO 2016), and in the last 46 years global prevalence has almost tripled (WHO 2021).

Despite a global correlation between the prevalence of childhood overweight and obesity and higher economic levels in countries, childhood overweight and obesity is stabilising in the UK, US, Australia, and Netherlands (van Jaarsveld and Gulliford 2015). However, it is increasing in middle and lower-income countries, shifting it away from a “rich nation problem” (WHO 2016, 2021). Continents such as Asia and Africa have seen a higher prevalence of overweight and obesity in recent years. In Asia, 50 percent of 0-5s were overweight or obese in 2016 (WHO 2021). In Africa, overall numbers of children under five overweight show a 50 percent increase (WHO 2018). Overweight and obesity prevalence results in a greater number of deaths globally in comparison to groups or populations underweight, excluding some regions of Africa and Asia (Sub-Saharan) (WHO 2018, 2021). As a non-communicable disease, overweight and obesity in children presents a double burden in low and middle-income countries when coupled with the risk of communicable disease, such as infection (WHO 2018). In countries such as the USA and Australia, where comparisons are made with the UK, childhood overweight and obesity is also a major public health issue. Within the USA obesity prevalence is over 14.4 million for children and adolescents (2-19), 13.4 percent of 2-5s were obese (Centres for Disease Control (CDC) (2021) and 1:4 (25%) 2–17-year-olds were either overweight or obese in 2018 in Australia (Australian Government 2020).

Depending on the data source, estimations of the numbers of 0-5s either overweight or obese varies. It is difficult to establish the actual percentage of 0-5s overweight or obese as data is not always available in that format. Some countries express the children and adolescent age groups differently to the UK. Similarly, available data does not always single out the 0-5 age group, and never 0-2s specifically, within the UK, despite the importance of this critical stage in preventing overweight and obesity in later life (Redsell et al. 2021). Global estimates of the number of children and adolescents between 5-19 set to be obese is 245 million by 2030 (Obesity Evidence Hub (OEH) 2021, The Kingsfund 2021). If this is an accurate prediction, then the assumption is made that this establishes a similar pattern in the 0-5s. In fact, if worldwide trends and the rapid rise among infants and children continues, 70 million under-fives will be overweight or obese by 2025 (WHO 2014, 2017a). In an attempt to address this nearly a decade ago, the WHO specified a target of “no increase in childhood overweight by 2025” (WHO 2014)(in Di Cesare Page 1). However, it is clear from data in Table 6 below, that this specific target may be unattainable.

Table 6: Global prevalence and trend of overweight and obesity in children 0-5 (Obesity Evidence Hub 2021)

Year	Estimated number under 5's
1990 (4%)	32 million (Di Cesare et.al. 2019)

2016 (6%)	41 million (WHO 2016)
2019-2020	42 million (Di Cesare et al.) 38.2 million (WHO 2021)
2025	70 million (WHO 2014)
2030	245 million (children and adolescents 5-19) (OEH 2021)

2.2.2. Prevalence of childhood overweight and obesity in England

In England, no specific data is available for overweight or obesity in infants. Prevalence of overweight and obesity in children aged 2-11, although stabilising, continues to rise in 11–15-year-olds (van Jaarsveld and Gulliford 2015). Prevalence for obesity and excess weight in Year 6 children demonstrates a rise in boys between 2014 and 2017, while girls remained static (PHE 2019a). This is demonstrated in Table 7.

Table 7: Numbers of reception and year 6 children overweight or obese per thousand population in England 2019-2020 (Baker 2021).

Numbers of reception and year 6 children overweight or obese per thousand population in England 2019-2020 (Baker 2021)		
Age	Obese per thousand	Overweight per thousand
4-5	99	131
10-11	210	141

Data from the NCMP (England) (2019-20), measuring height and weight of children at state school entry to reception (age 4-5), indicates that 9.9 percent are obese and 13.1 percent overweight (Baker 2021). In Year 6, (2019-20) (age 10-11) 21.0 percent of children are obese and 14.1 percent overweight (Baker 2021). Prevalence of obesity overall is lower for girls than it is for boys (NHS Digital 2018, Baker 2021). Obesity trends for reception age children between 2001 and 2017 are static, whereas 2:5 Year 6 children overweight equates to 40 percent of boys and 35 percent of girls. 1:5 are obese, meaning 25 percent of boys and 20 percent of girls (PHE 2019a). For Year 6 children prevalence is higher by 6 percent (PHE 2019 a). When comparing prevalence across England with regional data for reception and Year 6 children there are notable differences.

2.2.3. Regional prevalence of childhood overweight and obesity

No data is available in England or per region for overweight or obesity levels found specifically in infants. Regionally, the participation rate in the NCMP is between 95-96 percent, providing accurate data for a majority within the year groups selected (PHE 2019

a). Regional prevalence for 2017-2018 indicated that 1:4 children entering reception were overweight (26 percent of boys and 24 percent of girls) and 1:9 obese (11.6 percent of boys and 10 percent of girls) (PHE 2019a). Analysing prevalence of obesity for reception-aged children in the Northeast region found it is higher than that for reception-aged children in the Southeast region by 2.7 percent. When both reception and Year 6 children living in the least and most deprived areas in the Northeast region are compared for obesity prevalence (2015-2016 and 2017-2018) figures almost double (reception least deprived 6.6 percent and reception most deprived 13.5 percent; Year 6 least deprived 14.3 percent, Year 6 most deprived 27.3 percent) (PHE 2019 a). Trends between girls and boys in both reception and Year 6 between 2007- 2017 show little difference, although the incidence of excess weight increased slightly for Northeast boys in the years 2014-2017 (PHE 2019 a). In 2017-2018, the three Northeast locations where this research took place have similar obesity rates for reception-age children to the regional average of 10.9 percent. Area 1:11.4 percent, Area 2: 9.7 percent and Area 3: 10.4 percent (PHE 2019a). Obesity prevalence in Year 6 children, compared to regional average, indicates that Area 1 is higher than the national average of 22.8 percent with 25 percent, whereas Areas 2 and 3 are similar with 22.9 percent and 24.2 percent (PHE 2019a).

Covid 19 impacted the quality of the NCMP data (2019-20) as less children took part. Data is not available from some Local Authorities or is thought to be unreliable. Some data is publishable, however requires caution to interpret it (Baker 2021). In an attempt to increase levels of accurate data and address the "obesity crisis" the UK, government wanted to increase the occurrence of weight measuring in schools by doubling this from September 2021 (Badesha et al. 2021). Although this provides a more accurate picture of trends, it may also increase stigma and bullying and therefore impact mental health of young children if they are overweight or obese (Reilly and Kelly 2011, Rankin et al. 2016). Furthermore, as Covid 19 continues to impact on school attendance, data collected may also be less accurate.

2.2.4. UK policy – a historical perspective

Policy and practice around infant feeding changed considerably over the last five decades because of concerns around disproportionate infant weight in the 1970s. This involved a shift in advice for breastfeeding, weaning introduction and first foods as early as 1974 (SACN 2018). A gradual introduction of change to recommendations followed, with several landmarks, for example Department of Health policy recommending exclusive breastfeeding to 6 months (from 4-6 months) in the early 2000s, alongside change in advice for weaning introduction from 4 months to 6 months (1980 and 2005) (SACN, 2018). The WHO (2002, 2003

and 2013) identified principles for weaning formula-fed infants, endorsed by SACN (2001), which recommend weaning should not be commenced before 17 weeks. However, the evidence for commencement of weaning is lacking for infants that are formula-fed, limiting consideration of long-term health implications (SACN 2018).

Although concern expressed in the 1970s resulted in a shift in advice and recommendations for infant feeding, the UK has been slow to act. It was not until 2006 that the UK Government replaced the Healthy Start the Welfare Food scheme (in existence since the 1940s) with vouchers that supersede the schemes “means tested milk tokens” (SACN 2018), illustrating a period lasting approximately 66 years without substantial change up until that point. Earlier data around the incidence, prevalence and predictions of childhood obesity in 2025-2030 indicate change is insufficient to address the slower *albeit* upward trend in the rise of infant and childhood weight currently experienced by many in childhood. Identifiable reasons are cited as inappropriate and early weaning, and inaccurate methods for administering formula milk feeds (SACN, 2018). These seem tangible areas to address from a practical perspective, particularly with policy that supports the HCP (DH, DSCF 2009), a universal service with a specific HV workforce for the 0-5s and part of the UK NHS.

2.2.5. UK policy - a contemporary perspective

Public Health England, the Department of Health, the National Institute for Health and Care Excellence (NICE) and the Scientific Advisory Committee on Nutrition (SACN) are responsible for infant feeding policy and subsequent practice in England. Addressing childhood obesity through technology to determine food content is an attempt to enable healthier food and drink to enter shopping trolleys across England (HM Government 2016). Change4life campaigns aim to support reduction in overweight and obesity with less advertising of unhealthy foods before 9pm, i.e. times children are more likely to be watching TV (HM 2020). Approximately 50 percent of food adverts are shown at peak viewing times. When unhealthy eating habits are established, it is less likely that change occurs in later in life (WHO 2009). Several childhood obesity action plans for England are available (HM Government 2016, 2018, 2020) in light of recognising generations of children and young people suffering from obesity earlier in their lifespan and facing long-term impact. Action plans aim to significantly reduce childhood obesity rates in England over a ten-year period (2016 and 2026) (HM Government 2016) and to half childhood obesity by 2030 (Bucks 2018; HM Government 2018).

Government policy promotes a call to action for both children and adults to attain weight loss for healthier weight (HM Government 2020). Overall, these reports have joint aims and objectives for legislative change, including a soft drinks levy, reduction of 20% of sugar in

products, support to business innovation to encourage healthier produce, adjusting content profiles on food and drink, clearer calorie labelling, and encouraging the availability of healthier options across the public sector (Bucks 2018 HM Government 2018, 2020). Further strategies include a drive for the removal of “Buy one get one free” promotions in supermarkets and product placement at supermarket tills (Bucks 2018 HM Government 2018, 2020). Although welcome in terms of legalisation because of a move to address childhood obesity in a more integrated manner, challenges still remain. Whilst the NHS and LA are looking to reform, the pandemic places integration of services for children and young people at risk (The Kingsfund 2021) and therefore poses a greater risk for infant and childhood obesity.

2.2.6. UK infant feeding policy

Infant foods currently available on the market are not experiencing the same levels of scrutiny (Euromonitor International 2018) and there is no specific focus on healthy infant diets or the promotion of breastfeeding in obesity plans (HM 2016,2018). The first two years of life (1000 days between pregnancy and an infant's second birthday) is a critical period of influence for the development of childhood obesity and an opportunity to focus on providing healthy nutrition (Branco 2015; All Party Parliamentary Group (APPG) 2013; Woo Baidal et al. 2016, WHO 2017b; Health and Social Care Select Committee 2018, Heller et al. 2021, Sibson and Crawley 2021). It is an opportunity for lowering later morbidity, mortality and disease risk, and improving overall development of children (WHO 2021).

Practical guides for nutrition for infants and children 6 months to 5 years support early years settings in England, and aim to give children the best start in life. They form part of national food and drink guidelines for infants and children (Action for Children 2017). This provides specific guidance for infant nutrition, thus regulating all childcare and nursery providers. Despite the rhetoric of government policy, the aforementioned childhood obesity action plan (HM Government 2016) falls short of addressing childhood obesity with rigor, although some activity centred on the soft drinks levy for example is welcome (Bucks 2018). However, obesity plan 2 (HM Government 2018) made greater progress in areas such as marketing and advertising and contributed to reducing childhood obesity (Buck 2018). As well as increases to the frequency of the NCMP, the government expectation is that once NCMP results are reported to parents this motivates them to act in the best interests of their children by encouraging and making positive change to both diet and exercise (Badesha et al. 2021). However, the complexity of influencing factors, such as socio economics, intrinsic motivation, or environment, is not apparent, meaning this is not as straightforward as the government thinks. Translating relevant and robust policy to tackle childhood obesity into communities struggling with obesity and low incomes requires an integrated approach (Editorial 2018). This

is possibly why trying to combat this complex issue with public health messages alone is unsuccessful.

2.2.7. UK policy specific to health visiting

Policies specific to HV acknowledge provision of invaluable services to all children and families across the UK (Public Policy Exchange 2017) and that they are a “Child Public Health Force Field” (Bennett 2017). Universalism serves to deliver a specific service to every family, going beyond the realms of simply being available to all (Cowley et al. 2018). Core mandated visits by HVs offer UK parents individual needs provision, and these act as a spine of the HCP (iHV 2018). The evidence for HV focuses on the importance of support and public health prevention, at individual, community, and population level for preschool children and families (Cowley et al. 2013, 2015), and the role of the HV for 0-5s was set out clearly in the Healthy Child Programme (HCP) (DH, DCFS 2009). As a universal service, LA commission HV and a revision to England's HCP (DH, DSCF 2009) recommends extending coverage, home visiting and continuity of care for growth and development of children. This includes targeting and supporting those in need during the critical period of infancy (Health and Social Care Select Committee 2018). However, variation still exists in mandatory contacts in the new HCP (Public Health England 2021c). Scotland performs best, with 11 mandated contacts and England performs least well with 5 (Coates and Gilroy 2017 Unpublished report). This leaves UK infants, children and families in receipt of the minimum number of mandated contacts and, as such, highlights less opportunity for prioritising the best start in life, as advocated in England's recent 5-year strategy (Public Health England 2021c).

PHE's allocation from the 149 billion NHS England budget per year is only 0.2 percent (302 million), despite the fact they have key responsibility for protecting and improving child health, particularly reducing overweight and obesity in primary school leavers (Centre for Social Justice (CSJ) (2017)). Despite describing HVs as vital to enable infants to have the best start in life and crucial if the UK wants to improve health outcomes for infants and children, this lack of ring-fencing of funding in favour of adult services and NHS pressures occurs (House of Commons Health Select Committee 2015; NHS Digital 2016; iHV 2018). This results in less HVs with greater numbers of children and families on their caseloads (Baylis 2017; iHV 2018). A call to action indicated that between 2011 and 2015 there was an increase the numbers of full time HV by 4,200, reaching 12, 292 in England and Wales (Department of Health 2011; NHS England No Date; Indicative HV collection (IHVC) (No Date)). However, recent data suggests that numbers are falling significantly, with a steady downward trend due to factors such as an aging workforce, a reduction of HV training, workforce retention and lack of public health funding (Local Government Association, House of Commons 2019).

The HV workforce reduced by 18 percent between 2015-2019. This is detrimental as it impacts the capacity of HVs to feel able to fully address the needs of local populations, with almost half of all HVs feeling significantly stretched and fearful of the negative impact this has on service delivery (Institute of Health Visiting 2020). Although a one percent increase in funding allocation is apparent, it is insufficient to have the necessary impact to improve HV service provision as cuts have previously been made (Local Government Association 2019, House of Commons 2019).

2.2.8. Social and economic burden of obesity

Globally, obesity is in the top three social burdens in terms of cost, second only to smoking, and armed violence and terrorism (McKinsey Global Institute 2014). England's NHS cost for treatment of obesity across all age groups (coupled with the incidence of diabetes) exceeds government spending per year than that of a combination of services such as the judiciary and emergency services (HM Government 2016). The greater the incidence and prevalence of obesity, the greater the subsequent cost to the NHS (The Kingsfund 2021). Overall costs hit between 5.1-6.1 billion per year on illness relating to obesity in 2017 (CSJ 2017) and expectations are this will rise to £9.7 billion by 2050 (NHS Digital 2021). The NHS in England could make savings of £37 billion and UK population £202 billion if the incidence and prevalence of obesity reduces by 50% by 2030 (Hochlaf and Thomas 2020). Government spending on obesity prevention per year is £638 million (CSJ 2017). Additionally, some local authority child health services in England available to address childhood obesity, for example children and young people's weight management services, receive only 0.9 percent of total local authority budgets (CSJ 2017). Therefore, it is argued that LAs are not investing in the next generation of children.

If the Heckman principle applies, continuous investment in child health at the earliest possible moment in time provides the highest rate of return on investment (Garcia and Heckman et al. 2017). Investing in early childhood programmes for children in disadvantage results in long-term health, social and economic benefits, with a 13 percent rate of return on investment per year, per child (Garcia and Heckman et al. 2017). However, rather than seeing investment, services and funding for infants and children are reducing in relation to public health. The launch of Sure Start children's centres (1998) to improve outcomes for young children is gradually declining and, between 2010 and 2018 estimates dropped from 3632 to 2632. Furthermore, universal services with targeted support by greatest need, such as

healthy start¹ working across early years, primary and secondary schools, thought to improve provision and address childhood obesity whilst involving parents, are also declining (HM Government 2016). Additionally, services aiming to help those most disadvantaged are proving difficult to access for those most in need (Health and Social Care Select Committee 2018), making them economically questionable in terms of viability.

2.2.9. Recording breastfeeding in the UK, England and regionally

Breastfeeding infants reduces risk of becoming overweight (Victoria 2016). The WHO (2008) recommend exclusive breastfeeding until the age of 6 months, however the UK has some of the lowest breastfeeding rates in the world and only one percent of infants are breastfed exclusively up to age 6 months (CSJ 2017). UK rates are low in comparison to other European countries, with only 34 percent of infants receiving breastmilk at 6 months in comparison to Norway (71 percent) and US (49 percent) (RCPCH 2018). There is less breastfeeding data to explore since the government withdrew the Infant Feeding Survey² (England) and funds for infant feeding co-ordinators, who held a specific role in supporting and championing breastfeeding, but this also negatively affected breastfeeding rates in England (CSJ 2017). Furthermore, available breastfeeding rates by PHE rely on aggregate data to publish from LAs in England. The requirement is to pass all three stages of validation for accuracy of data production. In England, stage 1 validation only requires LAs submission integers of infants either totally or partially breastfeeding at 6-8 weeks. The number of LAs achieving this varies enormously between each quarter and therefore data should be treated with caution (PHE 2019). Scotland as a comparison in their equivalent Maternal and Infant Survey (2017) demonstrate improvements in breast feeding at six months from 32 percent (2010) to 43 percent (2017), although the exclusivity of breastfeeding is not fully apparent (Scottish Government 2017) again requiring some caution when interpreting the data. If the numbers of infants totally breastfed is not explicit there is no sure way of knowing if the increase from 32 percent to 43 percent over the 7-year period is accurate or not.

Stage 2 validation considers the value of submissions of infants in the 6-week review, which should reach 20 percent of the resident population of infants in the LA (PHE 2019a). As the stages of validation progress, less LAs successfully pass. Stage 3 is the sum of those infants totally, partially or not breastfed, up to an aggregated value of 85 percent for England (PHE 2019a). In 2019 only 68 LAs from a starting figure of 140 successfully passed all 3 stages of validation. This reduces the quality of the data of breastfeeding statistics and, therefore, the

¹Healthy start scheme provides a significant number of vouchers to low income families estimated to cost 60 million pounds for fresh/frozen fruit, vegetables or milk plus vitamins for pregnant mothers and infants and children in the early years (HM Government 2016).

² The last Infant Feeding Survey took place in 2010

reliability and / or propensity to separate out those infants totally or partially breastfeeding. As such, it remains difficult to accurately monitor the increase or decrease of the incidence, trends and prevalence of this over a particular timeframe. However, data did provide breastfeeding prevalence and indicated infant breastfeeding in specific localities. It is somewhat useful to see the variation across England and the UK (PHE 2019).

Breastfeeding statistics for infants in England show that in 2016-2017 whilst 73 percent of infants are initially breastfed, this reduced to 43 percent by the age of 6-8 weeks (RCPCH 2018). Prevalence at 6-8 weeks further declined to 32.1 percent in 2017-2018 (Public Health England³ 2018). Data for England was similar for breastfeeding prevalence at 6-8 weeks from quarter 2 (January) as demonstrated below (PHE 2019a). Regional breastfeeding data identified low breastfeeding prevalence rates that England (PHE 2019a) as demonstrated below.

Breastfeeding prevalence England, Quarter 2 July-September 2018, released January (PHE 2019a).

Totally breastfed	Partially breastfed	Not breastfed	Unknown status
32%	14.4%	40.4%	13.2%

Breastfeeding prevalence at 6-8 weeks Northeast England Quarter 2 July-September 2018 released January (PHE 2019a).

Totally breastfed	Partially breastfed	Not breastfed	Known status
24.5%	9.2%	62.8%	96.5%

2.3. INFLUENTIAL FACTORS ON INFANT WEIGHT, CHILDHOOD OVERWEIGHT AND OBESITY

As well as breastfeeding, several strong influential factors determine the existence of obesity, even whilst acknowledging that obesity is a complex phenomenon (HM Government 2018, Badesha et al. 2021, WHO 2021). The complexity of contributing factors to childhood overweight and obesity are interconnecting characteristics of demography, economics, health and childhood activity, environment, genetics, individual behaviour and nutritional intake (Kranjac and Wagmiller 2016; Wang et al. 2017). Many of these influential factors, such as genetics and environment, are ones infants and children have little control over. Additionally, overweight or obese children in the UK consume an additional 500 calories per

³ Public Health England annual data covers between 1st April 2017-31st March 2018.

day than other children, and 60-100 percent of weight increase is a result of the consumption of more calories than the body requires, rather than not enough exercise (Loring and Robertson 2014, HM Government 2018, 2020). More recently environmental factors, i.e. measures to limit the spread of Covid-19, have impacted on the physical activity of infants and children. School closures and restricted access to children's play areas, soft play and playgroups, as a common occurrence, negatively impact on children's weight on a global level (Badesha et al. 2021).

2.3.1. Non-modifiable risk factors and childhood obesity

Risk factors can either be modifiable, non-modifiable or both, and lead to an increase in risk of infant and childhood overweight and obesity depending on occurrence. Conceptual models can identify common risk factors for childhood obesity in under 12s (Chi and Luu et al. 2017), separating modifiable (behavioural, psychosocial and medical) and non-modifiable risk factors (biology, development, socio demographics, household, culture and community). In terms of gender, girls have a greater risk of being obese than boys (Wang and Beydoun 2007), and age remains the most notable single predictor for childhood obesity (Long et al. 2012). There is a strong association between obesity in childhood, adolescence and adulthood. Children growing up obese are 5 times more likely to be obese as adults (Simmonds, Llewellyn, and Owen 2016). Statistically, 65 percent of obese or overweight adults are the same at a young age, and 37 percent obese during childhood (Simmonds, Llewellyn, and Owen 2016). However, taking preventative action against overweight and obesity for all children and adolescents is required because a significant percentage of obese adults are not known to be overweight or obese as children (Simmonds, Llewellyn and Owen 2016). However, this research is limited, because of a lack of traceable data and no meta-analysis taking place. No data is available from adolescence to adulthood (age 30+), therefore results can be questioned.

2.3.2. Ethnicity and childhood obesity

Race and ethnicity are non-modifiable risk factors for childhood obesity (Chi et al. 2017). Some ethnic minority groups have higher levels of child poverty, with figures up to 45 percent in comparison to white British counterparts at 20 percent (The Institute of Health Equity 2020). Particularly, children from black African, Caribbean and Asian ethnicity have 50 percent higher incidence of obesity than white children (Chi et al. 2017). Moreover, data from the NCMP (2016-17) in England demonstrates differences in obesity levels in ethnic groups using multivariable logistic regression models. This allows for variables such as age and national

deprivation scores, and identifies that children from ethnic backgrounds with similar levels of deprivation have higher obesity in comparison to white children. This is higher in terms of disparity in year 6 children than in reception-aged children (UK Government 2019). Where data adjusts for height difference, obesity prevalence between children from black and white ethnic backgrounds reduces, although less so for British Asian children. This suggests that when height as a physical characteristic is controlled, results are less likely to demonstrate that children from black ethnic groups are more likely to be obese (UK Government 2019).

Understanding the exact development of risk factors involved requires further research (CSJ 2017). For example, where families migrate to the UK from a number of other countries across the world, cultural acculturation occurs, and UK culture gradually replaces original culture. This increases risk of childhood obesity (Chi et al. 2017). Additionally, children from ethnic minorities face several other impact factors because of their race, including discrimination, exclusion and poverty (The Institute of Health Equity 2020). Therefore, they are more likely to experience poorer life chances and poorer health (The Institute of Health Equity 2020), and subsequently face an increase of childhood obesity risk.

2.3.3. Social inequality, deprivation and childhood obesity

The analysis of prevalence of obesity is by population across Europe and the UK rather than social class, therefore potentially it underestimates obesity in those with social disadvantage (Loring and Robertson 2014). The greatest incidence and ill health burden of obesity falls on children in communities with high deprivation (HM Government 2016), thus causing long-term health adversity (Bann and Johnson et al. 2018). Considering the UK as a high income country, incidence of obesity in children remains disproportionate. There are disproportionately more obese children living in social deprivation, almost double in comparison to those living without social deprivation (Baker 2021). 6.4 percent of reception children are living with obesity in the least deprived environments, and 12.4 percent in the most deprived environments. 13.3 percent of Year 6 children are obese in the least deprived environments, rising to 26.7 percent in the most deprived environments (CSJ 2017; Denney-Wilson 2015, Baker 2021). Data also shows that the numbers of children severely obese in the poorest areas are triple that in the least poor areas (Baker 2021), meaning a strong social gradient relating to income. As the top quintile is less at risk than the bottom quintile for moving up and down weight trajectories (CSJ 2017; Goisis, Sacker and Kelly 2015), this suggests that disadvantaged children have less protection against exposure to behaviour resulting in obesity and face greater barriers for healthy weight (Denney-Wilson 2015; CSJ 2017). Furthermore, gender inequalities exist. Exercise is easier to access for boys and girls

from families in lower socioeconomic groups, and girls exercise less, particularly in secondary school, in comparison to boys (Loring and Robertson 2014).

Socioeconomic inequalities in childhood BMI exist, although how BMI changes over the years is less understood and therefore less transparent (Bann and Johnson et al. 2018). Overall, there is a shift in the height and weight of children and adolescents (Bann and Johnson et al. 2018). A longitudinal study into childhood BMI and social inequalities in the UK (England, Scotland and Wales) found that low weight is an indicator of social deprivation in cohorts in studies between 1946 and the 1970s. By 2001, weight becomes an indicator of inequalities in children from lower socioeconomic classes (Bann and Johnson et al. 2018). Data adjusts for gender and socioeconomic position by father's occupation and maternal education. However, data is limited and may not account for differences in race or ethnic origin, and missing data from cohorts or attrition (Bann and Johnson et al. 2018). Children in lower social classes are also shorter in height in earlier cohorts in comparison to later cohorts (Bann and Johnson et al. 2018). This indicates that health risk to children with height inequalities is reducing over the years, whereas health risk to children with excess weight in lower social classes is increasing (Bann and Johnson et al. 2018).

Societal changes, such as an obesogenic environment, legislation, food and drink industry influence and social marketing, play a part (Bann and Johnson et al. 2018) because childhood obesity correlates with fast food density (Cetateanu and Jones, 2014). When the price of food rises in the UK, so does disadvantage, thus impacting more lower income families when purchasing unhealthy, higher calorific foods rather than alternative low calorie fruits and vegetables (Loring and Robertson 2014). The correlation between fast food density, environmental deprivation and obesity rates in childhood is called "a fat swamp" in some literature because there are so many local unhealthy outlets and food choices available (Saunders 2015). This further emphasises a need for new and robust policies to address overweight and obesity in children, particularly because of a lack of empirical evidence on how inequality and obesity is reduced (Bann and Johnson 2018). Failing to consider complexity and challenges children and families face living in an environment with social inequalities requires a whole system approach, rather than fragmentation and isolation approaches to policy that currently exists. A whole systems approach will address inequalities, thus reducing the likelihood of childhood overweight and obesity (CSJ 2017; Health and Social Care Committee 2018). Additionally, intervention to combat childhood obesity should acknowledge that living in deprivation presents greater health challenges and therefore intervention must be proportionate to need (CSJ 2017).

As well as having a greater chance of being obese, children continuously living in social disadvantage have a greater chance of developing further social issues because of the

“five pathways to poverty”, including family breakdown, educational failure, worklessness, dependency, addiction and serious personal debt (CSJ 2014; 2017). A double burden of social disadvantage and obesity is manifesting itself as a multitude of challenges with inadequate housing, poor mental health and or stress, and subsequent difficulty making healthy choices (CSJ 2017). Educational performance is an indicator of socioeconomic status, therefore poor educational performance can further compound lower socioeconomic status and is a key determinant of health (Australian Institute of Health and Wellbeing, AIHW 2018). Furthermore, the greater the disadvantage, the greater the impact on health (Australian Institute of Health and Wellbeing, AIHW 2018). However, reducing the numbers of families on low incomes, reducing maternal smoking, increasing breastfeeding rates, improving nutrition, and greater physical exercise result in a downward trend in obesity because of improving socio-economic status (Kranjac and Wagmiller 2016). The impact of improving family characteristics explains why some older children are less likely to be obese now than when they were younger, thus contributing to an overall reduction in obesity. However, this contrasts with evidence of obesity stabilising in England for those aged 11-15 (van Jaarsveld and Gilliford 2015).

2.4. MODIFIABLE RISK FACTORS

What happens in the home exposes infants and children to obesity risk. Childcare providers and nursery settings also impact on weight (Redsell et al. 2021) through, for example, recognition of an infant's hunger cues, a perception of having a fussy infant, early weaning, infant temperament, rapid growth and being a larger infant can all be related to risk of overweight and obesity (Kalinowski et al. 2012, Wasser et al. 2011, Hurley, Cross and Hughes 2011, Redsell et al. 2013). Offspring with overweight or obese parents have a higher risk of following in their parents' footsteps (Haire-Joshu and Tabak 2016) in WHO 2020), suggesting a correlation between mother's obesity and infant and child overweight or obesity (Ardic et al. 2019). Although results are not thought to be statistically significant, a strength of this research is the consistency of the observation and contact between the family doctors, the infant and the mother pre- and post-pregnancy. However, this may support the notion that, after birth, maternal and family characteristics, infant feeding methods, mother's nutritional intake, lifestyle pattern and energy consumption of infants and children, all lead to increasing risk of overweight and obesity in infants and children (Crespo et al. 2001; Gibson and Allen et al. 2016, Kranjac and Wagmiller 2016).

Maternal lifestyle choices and health risks during pregnancy are influential for obesity risk. Despite primary prevention of obesity during pregnancy, and infancy and early childhood

being established as a critical period, infancy has little public health consideration for influencing the risk of later and lasting disease (Foster and Farragher et al. 2015; Loring and Robertson 2014, Golen and Ventura 2015). Maternal smoking during the first months of pregnancy, for example, can double the risk of obesity at age 3 (Oken et al. 2005) and high pre-pregnancy BMI, velocity of weight gain during pregnancy and maternal obesity are predictors of infant obesity (Levine, Dahly and Rudolf 2012). Mothers of overweight or obese children have higher BMIs, are less well educated, are more likely to be single parents and earn less than mothers of children not overweight or obese (Gibson 2016). Furthermore, mothers with low educational attainment have greater difficulty recognising 0-5s as overweight in comparison to other mothers (Gibson and Allen et al. 2016). The combination of mother's high BMI and single parenthood results in a greater occurrence of higher BMI recorded in boys. When maternal obesity and single parenthood coexist, obesity prediction increases in boys BMIs in comparison to either single parenthood or maternal obesity alone. The reason for this is boys' vulnerability in two factors, the impact of less physical activity on their weight and an unhealthy diet (Gibson and Allen et al. 2016, Kranjac and Wagmiller 2016). BMI in girls, on the other hand, increases when low educational attainment of the mother and single parenthood co-exist.

Additionally, a high maternal BMI does not create a healthy role model, likely to encourage or increase exercise and / or healthy eating (Gibson and Allen et al. 2016). This research has its strengths as a longitudinal study, although a number of mothers and children with high BMIs left the study before completion. This reduces the representativeness of the sample overall. Research also identifies that children in families who have access to insufficient food are also at greater risk of obesity. Several factors compound this risk which centres around feeding methods, timing and introduction of weaning, a high carbohydrate diet rather than fruit and vegetable consumption, level of physical activity, and hours of screen time (Denney-Wilson et al. 2015). Protective factors such as breastfeeding or later weaning on lower body fat at 6 years of age are explained by sociodemographic, maternal lifestyle and childhood factors, rather than infant feeding and age of introduction of weaning (Dummas et al. 2014). The most significant protective factor to improve obesity outcomes is maternal education (Dummas et al. 2014). Other activity, such as poor sleep patterns, can also increase risk of childhood obesity by as much as 45 percent (Li et al. 2017). Longer term sleep issues in infants and pre-schoolers can impact later life, however the exact mechanism for this increase in risk is not as clearly understood and is probably a combination of factors such as greater time to consume food when awake for longer periods and/or changes in hormone levels, thus altering and increasing the drive for food consumption (Li et.al. 2017).

Recent research also indicates that adverse childhood experiences (ACEs) (abuse in all forms, neglect, substance abuse by a care giver, mental illness, crime and violence against

women, and parents' divorce, separation or death) also create risk factors for childhood obesity (Schroader et al. 2021). However, the research around obesity risk in childhood is more widely available than the specific effects of ACEs on children's weight (Schroader et al. 2021). Furthermore, like the risk of physical disease as a result of overweight and obesity in childhood, physical disease can also manifest as a result of ACEs, for example cardiovascular disease, cancer or general poor health outcomes into adulthood (Schroader et al. 2021). Acknowledging that research into the links between children who experience ACEs and the development of obesity in childhood is not adequately understood, further research into this area is welcome, especially as nearly half of children experience one or more ACEs, and 17 percent of these children are obese (Schroeder et al. 2021).

2.4.1. Feeding practice, behaviour and patterns

Early feeding patterns in infants and children can influence later feeding practice and behaviour (Porter and Tindal 2018), therefore it's worth considering in greater depth for greater insight of impact. However, confusion continues amongst parents with regard to feeding practice. This occurs through mixed messaging from different organisations on suitable feeding methods and results in educational gaps for parents with regard to feeding processes (Heller et al. 2021). There is also a knowledge deficit for parents about what is healthy and what is unhealthy with regard to the diet of infants and children (Heller et al. 2021). In the UK, early feeding practice demonstrates detrimental impact on later growth and childhood obesity, although feeding behaviour is a complex phenomenon and a number of factors, along with economic cost, are influential (Moschonis et al. 2017). Infant feeding practice varies and includes breastfeeding, exclusive or partial, i.e. breast and formula combination, and exclusive formula feeding alongside the stages of weaning. Children learn through watching and mimicking the behaviour of others, including their parents and care givers, therefore if feeding practice is unhealthy, this is the model of behaviour that repeats (WHO 2020). Additionally, feeding practice is influential on health through its impact on nutritional behaviour, although less research exists about addressing this in communities from an educational perspective (Ciampa et al. 2010).

In terms of eating patterns, a rise in energy value of foods since across the 70s and 80s has tripled per capita per day, and energy-dense foods are more accessible, well marketed and cost less than those that are healthy. In fact, it is children and adolescents who are the most susceptible to marketing of unhealthy foods, which reinforces unhealthy predilections, taste preferences and wish for unhealthy foods to be found in the nation's shopping trolleys (WHO 2020). The greater the exposure to unhealthy food advertising, the greater the association with unhealthy food choices being made in this age group, and there are now many apps

and media platforms such as YouTube that expose children and adolescents to unhealthy food marketing using personalised algorithms (WHO 2020). This marketing approach requires greater examination, particularly as it is often self-regulated and portion sizes are different with marketing and availability of upgrading to larger portion sizes in fast food outlets (WHO 2020).

2.4.2. The development of infant and childhood feeding

Feeding develops within the infant and child as a result of the relationship between food, the regulation and production of hormones and the way the brain responds to stimuli that are rewarding (Redsell et al. 2021). Infant characteristics, such as low or high appetites, influence feeding practice and a preference for food and drink high in sugar content in place of low sugar foods, such as fruit and vegetables, and are established by 12 months. This preference can carry forward into school age (Porter and Tindal 2018). Behaviour and infant weight gain are inextricably linked because of the association between the behaviour of caregivers and their responses to infants when interpreting feeding cues. Overfeeding infants and children larger than needed portion sizes is another issue related to feeding practice. This may be due to parental anxiety of underfeeding or lack of understanding of an appropriate portion size according to age, particularly in infants (Heller et.al. 2021). Night-time formula feeding in children up to 36 months contributes problematically to childhood obesity, particularly when infants feed themselves in bed with a bottle of formula or cow's milk (Ardic et al. 2019). This supports the idea of a relationship between feeding practice in infancy and the development of obesity until 3 years of age, according to BMI readings (Ardic et al. 2019). Infants that drank juice, coffee and tea before bed, or in between meals, are 3 times as likely to have severe obesity by nursery age, while there is also evidence of pre-schoolers consuming sugary drinks, with 61 percent of under 5s eating fast food at least once a week (Porter and Tindal 2018). Interestingly, these children also demonstrate poor school attainment at key stage 2 (CSJ 2017). Additionally, feeding behaviour leads to obesity in childhood because of a need for comfort food, coupled with poor impulse control to manage unhealthy food consumption, or binge eating (Schroeder et al. 2021).

2.4.3. Breastfeeding

Despite data evidence (aggregated integers) on infant feeding methods (breastfeeding total, partial or non), evidence to support exclusive breastfeeding as a protective measure against overweight and obesity is deficient (Feldman-Winter et.al. 2017). No association is found between the duration of exclusive breastfeeding and protective factors for later childhood obesity risk (Durmus et al. 2011; Jing et al. 2014). Conversely, other research that focuses on breastfeeding duration indicates that it is a protective factor for prevention of

childhood obesity (Bell 2018; Wang et al. 2017; Wijlaars et al. 2011; McCrory et al. 2012 cited in Ardic et al. (2019) p.27). Infants that breastfeed for the first 12 months are 50 percent less likely to be overweight or obese in comparison to infants not breastfed at all or breastfed for less than 17 weeks (Bell et al. 2018). The longer the infant breastfeeds, the greater the reduction in risk (per week, risk reduces by 1 percent) (Bell et al. 2018; De Kroon et al. 2011; Modrek et al. 2016). The protective factors against obesity from breastfeeding occur in several biological associations (Wang 2017). The content of breastmilk is lower in calories than formula milk, with lower sugar and fat, and it contains hormones responsible for the infant's appetite control, such as leptin and ghrelin (Wang et al. 2017).

For exclusively breast-fed infants, a period of rapid weight gain is less likely, indicating that breastfeeding can lower the risk of the development of later childhood obesity, particularly if it continues for a period of four months or more (Moschonis et al. 2017). With breastfeeding even infants, those days old can self-regulate milk intake because infants randomly offered breastmilk from each breast always took less from the second breast, indicating they are satiated (SACN 2018). They learn to respond to internal feeding cues for hunger, and breastmilk provides sufficient nutrition for the first six months of an infant's life, negating the need for early introduction of weaning foods (Wang et al. 2017). However, there are social and cultural barriers to breastfeeding (Guell et al. 2018), demonstrated by the prevalence of breastfeeding within the UK, as one of the lowest in the world (UNICEF 2017). European research explores the relationship between exclusive breastfeeding of any duration for infants against prevalence of overweight and obesity at age four and five years (Mochronis et al. 2017). Results indicate exclusive breastfeeding and complementary feeding are not associated with later preschool overweight and obesity. However, several cultural, social, economic and lifestyle influencing factors are not considered or adjusted for within the research. Additionally, the self-reporting mechanisms for pre-pregnancy weight and breastfeeding duration may negatively influence the findings. Not addressing confounding factors in research between breastfeeding duration and childhood obesity presents difficulty in establishing links (Mastroeni et al. 2017). Furthermore, no indication is made between exclusive and partial breastfeeding, impacting findings. Nevertheless, for health professionals, such as midwives and HVs, articulating the evidence base that longer breastfeeding equates to less risk of developing excess body weight is definitely of value.

2.4.4. Formula feeding

Formula milk has higher levels of sugar and fat, and therefore a greater association with the development of higher levels of adipose tissue (Jing 2014). Formula milk can affect the natural course of the development of adipose tissue until the infant is 12 months old (Gale et

al. 2012 cited in Wang et al. 2017). Where there are higher levels of insulin production in infants due to higher levels of protein and fat content in formula milk, storage of fat occurs (Wang 2017 et al.) and, therefore, formula feeding can contribute to infant and childhood obesity. Scheduled formula feeding causes infants to have issues self-regulating, unlike breastfeeding where the infant has control over the amount of milk within each feed. Thus, formula milk feeding does not allow for self-regulation (Mihirshahi 2011, Wang et al. 2017). However, Formon et al. (1969, 1975 cited in SACN 2018, Page 30) suggest that formula-fed infants are able to self-regulate because, on feeding them more energy dense formula, they consume less, however they still gained weight until age 6 weeks. Formula feeding can be offered more or less frequently, in greater or lesser quantities, and infants can be coaxed to complete a formula feed by parents or carers (Fildes et al. 2015). Therefore, formula-fed infants rely on parents and carers to recognise and respond to infant feeding cues appropriately to negate risk. This means greater parental, rather than infant, control leading to either an increase or decrease in infant weight based on parents' feeding patterns and responsiveness.

2.4.5. Infant weaning

Weaning consists of weaning by spoon and baby-led weaning. Overall, there are several reasons why infant weaning occurs early, i.e. before the recommended age of 6 months (WHO 2016), and there are several barriers to following the recommendations for weaning, which therefore become barriers to preventing childhood obesity (Heller et al. 2021). Modifiable feeding behaviours are adding weaning foods to formula in bottles, weaning early, and giving infants more than they require to sate them, calm them or settle them to sleep, all of which lead to overfeeding infants (Baur 2005; Denney-Wilson 2015). A wish to establish family mealtimes before appropriate, or a desire to ignore current recommendations, also adds to the prevalence of early weaning (Heller et al. 2021). Additionally, outdated generational familial practices, such as adding food to formula milk in feeding bottles and widespread use of convenience foods rather than those prepared at home to save time, are a popular choice of weaning practice (Heller et al. 2021). However, preprepared and time-saving convenience foods may contain ingredients that are not suitable for infants.

The environment where infants wean is critical in establishing good dietary habits (2017; Chaput et al. 2011; Musher-Einzenman and Kiefner 2013 cited in Heller et al.). Several international studies consider if the age of an infant's introduction to solid food is associated with childhood obesity, and find no clear evidence (Hawkins et al. 2006; Moorcroft et al. 2011; Pearce et al. 2013, Woo Baidal et al. 2016; Bell et al. 2018). However, early weaning

increases opportunity for higher calorific foods in place of breastfeeding and breastmilk, up to 12 months of age (Seach et al. 2010; Shack-Neilson et al. 2010 cited in Bell 2018, Papoutsou et al. 2018), and therefore adds to the prevalence of overweight or obese infants and children. Understanding infant diet in the period between commencing weaning until weaning is fully established requires understanding of feeding behaviour in infants, as well as understanding of infant development.

2.4.6. Rapid weight gain in infants

The period of rapid weight gain in infants presents a greater predisposed risk for infant and childhood obesity (Moschonis et al. 2017), with increased evidence that infant weight correlates with later life metabolic risk factors (Settler et al. 2002, Hui, Schooling and Leung 2008, Redsell 2011). Anthropometric studies involving infants found links between early measurements of adiposity and later obesity risk (Roy et al. 2016; Wen et al. 2012; Slining et al. 2013; Taveras et al. 2009; Moss and Yeaton 2011). Weight gain in the first six months of life is particularly associated with obesity in childhood and adolescence (Ong and Loos 2006; Ekelund and Ong et al. 2006; Hui et al. 2008; Druet et al. 2012; Denney-Wilson 2015; Simmons 2008, in Fildes et al. 2015). However, evidence is inconsistent and varies anywhere from 6 months to 2 years in terms of the timing of the rapid weight gain and later negative health impact (Li et al. 2020). Nevertheless, its importance as a risk factor is recognised as a trigger for targeted health promotion and prevention by HVs following patterns of growth monitoring from birth (Redsell et al. 2013, Li et al. 2020). Infants with rapid weight gain before age 2 are at higher risk of developing obesity at ages 3, 5 and 8 years (Li et al. 2020). Therefore, it represents a positive association that requires action in infancy to counteract or elicit change to the risk of developing obesity in childhood, which is subsequently effective in preventing obesity into adulthood.

2.5. IMPACT OF OVERWEIGHT AND OBESITY ON INFANTS, CHILDREN AND ADOLESCENTS

As more children and adolescents become overweight and obese earlier, they live with the problems of obesity for much longer and face increasing risk of premature death in adulthood. They become adults with poorer health outcomes and higher mortality and morbidity rates (WHO 2020). This demonstrates the impact of overweight and obesity on children as far reaching and spanning both physical, psychological, and social health (Rose et al. 2019, WHO 2020), potentially over a whole lifespan.

2.5.1 Physical impact

Genetic, epigenetic and medical syndromes can lead to infant and childhood overweight and obesity because of a generational predisposition (WHO 2020). Obesity in childhood can result in several short-and long-term physical health, issues such as poor sleep, joint problems, cancer and asthma (Knapton 2015), therefore it has economic consequences for the NHS (WHO 2020). Short-term physical issues result in a rise in fat circulating within the bloodstream (dyslipidaemia), high blood pressure (hypertension,) fatty liver disease not associated with alcohol consumption, polycystic ovary syndrome, sleep apnoea and type 2 diabetes WHO 2020). In fact, non-alcoholic fatty liver disease has become the most common cause of chronic liver disease in children (Kounity et al. 2019) and almost 7,000 children and adolescents have type 2 diabetes in England and Wales, which is clearly associated with childhood obesity (Diabetes UK 2018). There is also a greater prevalence of prediabetes recorded in children, possibly leading to 4 times as many type 2 diabetics by 2030, particularly in countries such as the US (Kounity et al. 2019).

Generally, children are less physically active in this decade than the one previous, mainly because of a perceived lack of safe play areas, physical recreation activities on offer and available transport (Whiting et al. 2021). This may be leading to the rise in type 2 diabetes in childhood if it accompanies poor feeding patterns and behaviours discussed earlier. In addition, there is a correlation between accessibility and availability of green space, and higher recorded BMIs in children where green space is lacking or of poor quality (Mears et.al. 2020). Public and private greenspace (gardens, green cover, and trees) where children and adolescents play and exercise is required to be accessible, especially in towns and cities. Adding to this is a rise in the use of technology amongst children and adolescents that increases sedentary lifestyles, reducing physical activity when green space is available. A link is demonstrated between lack of physical movement, weight increase and screen time (Niven et al. 2014). This link is associated with snacking on fast energy dense food and high energy drink during screen time (Whiting et al. 2021). Additionally, when children are more sedentary, this lifestyle pattern can continue into later in life (Dietz and Robinson 2005, Kristensen et al. 2008). This is particularly the case in low income families, where weight gain is intensified by higher calorific intake as well as lower levels of physical activity (Loring and Robertson 2014).

The WHO issued guidance on the amount of daily exercise children and adolescents need. This equates to 1 hour for the maintenance of health and well-being (Whiting et al. 2021). In younger children, adequate physical activity not only prevents overweight and obesity, it also allows for child development of cognitive, motor and social skills (Whiting et al. 2021). Children and adolescents living with disabilities are more likely to be overweight or obese

because of an inability to exercise due to physical impairment, a lack of access to outside spaces or indoor facilities, limited invitation and availability of organised recreational activities or feeding issues (WHO 2020). Whether disabled or not, once children are obese, the potential for continued exercise is limited, inevitably leading to additional weight gain (Loring and Robertson 2014) and detrimental psychosocial impact.

2.5.2. Psychosocial impact

Children overweight or obese experience psychosocial detriment and this manifests as bullying, teasing and social rejection by others in society. This results in distress, leading to a worsening of children's mental health and wellbeing (Rojo et al. 2021). This impacts on their quality of life (Bass and Eneli 2015, Pont et al. 2017) and schoolwork, with poorer educational attainment in comparison to children and adolescents not overweight or obese (Organisation for Economic Co-operation and Development, OECD, 2019). As highlighted in section 2.3.3, this can lead to greater social inequality as educational outcomes are a key determinant of the social position of children and families. Additionally, psychosocial stress events (PSE), particularly if amassed early in life or occurring multiple times, have greater detrimental psychosocial impact into adulthood (Rojo et al. 2021). It is clear that PSE in children leads to later mental and emotional health issues, such as anxiety and depression or low self-esteem, however less research is available about the links between PSE and childhood obesity (Rojo et al. 2021). What is available indicates that children who have greater propensity for psychological problems have the same for being overweight or obese. They are also more likely to increase their risk of weight gain through a lack of self-regulation, poor coping strategies or disruption to hormone levels (Rojo et al. 2021).

The greater the number of PSEs experienced, the higher the child's BMI, therefore PSEs and ACEs show similarities in that the higher the number of ACEs, the greater the impact and the occurrence of clinical obesity over the 95th percentile (Rojo 2021). This in turn is associated with children having less ability to adopt successful coping mechanisms, particularly when coupled with social deprivation, and thus the risk and occurrence of overweight or obesity is even greater (Marmot 2010). There is also a link between experiencing ACEs as children, development of later depression (Schroeder et al. 2021) and subsequent overweight or obesity (Dreber et al. 2017). Again, this further illuminates the complexity of the relationships between childhood overweight and obesity, psychosocial factors, PSEs, ACEs and negative mental health disorders. However, few studies focus on childhood obesity and exposure to childhood stress and trauma (Rojo et al. 2021), meaning further research is suggested. This will assist in greater understanding of the way that behaviour and psychosocial impact factors are interrelated (Thaker et al. 2020).

2.6. LOOKING THROUGH THE LENS OF PARENTS AND HEALTH VISITORS

Empirical literature that explored HV- parent interaction identified that HV practice is orientated towards specific activities; Salutogenesis, person-centredness and viewing the person in situation, alongside activity that HVs carry out within clinics and groups (Cowley et al. 2018). This is in addition to the notion of the HV process which in practice is home visiting, needs assessment and parent-HV relationships, discussed further in Chapter 7. HV are required to demonstrate skilled communication, respect for parents choices and address dilemmas that arise between parents' wishes, health choices and Government recommendations or guidelines (Cowley et al. 2018). An observational study of HV - parent interaction identified several clinically significant difficulties between HV and parents that impacted on the relationship. For example, the parents lack of interest in what the HV had to say and the HV lack of engagement with the infant either by play or examination (Bidmead et al. 2017). Furthermore, some parents felt undermined and unsupported by HVs, not listened to or were not able to meet their own HV within the clinic setting (Bidmead et al. 2017). Observed relationship barriers for HVs with parents were centred around a "cause for concern" post-natal depression or child health problems (Bidmead et al. 2017). HVs also experienced potential organisational barriers to their relationships with parents such as workload, record-keeping and continuity, although these were not always statistically significant enough to impact on the relationship (Bidmead et al. 2017). In contrast, findings in this thesis expose organisational issues as impactful on relationships between HVs and parents.

As highlighted within the introduction to this chapter, it is important to include both parents and HVs in the research because engaging these roles is crucial to the research design. Moreover, investigating both parents and HV perspectives is a strength of the research data, leading to analysis of two data sets (Rose et al. 2019). Empirical literature relating to parents and HV perspectives of infant weight is also compared to reported findings within the subsequent discussion chapter (Chapter 7).

2.6.1. Looking through the lens of parents to inform the research

Improving understanding in parents' views of overweight and obesity in infancy assists the engagement of parents in prevention and behaviour change to address infant and childhood obesity (Bentley et.al 2017). There is an increased public health focus on the development of healthy nutrition from birth (De Kroon et al. 2011). However, infants remain reliant on their parents and carers as gatekeepers for their nutritional needs, as they are

responsible for making decisions on their behalf where feeding is concerned (Gubbels et al. 2009, Mastroeni et al. 2017, CSJ 2017). Parents need to support healthy nutrition for both themselves and their infants and children, and when empowered they are able to do so with ease (CSJ 2017). Unfortunately, a plethora of infant feeding information, formula and advice that parents are expected to navigate with their new-borns and onwards into childhood can hinder this, and feeding information often lacks evidence base (Heller et al. 20121).

Including families in treatment programmes to address overweight and obesity in children reflects the empirical literature, although how parents' roles are identified, established and sustained is not explored as much (Gibson et al. 2016). The suggestion that parents fail to recognise unhealthy weight in children potentially causes a lack of parental engagement in its prevention and management (Thompkins et al. 2015 cited in Bentley 2017 p2).

Furthermore, if infants are identified as overweight, some parents cannot associate this with future obesity risk, or potential consequences of infant weight status and parental attributions of causation, responsibility, and level of control (Bentley 2017). Perhaps the potential lack of engagement reflects the fact that parents are more concerned with infants being underweight than overweight (Bentley 2017). Even when parents acknowledge that childhood obesity exists, they do not always acknowledge parental responsibility for this, or recognise it (Mareno 2014). In contrast, parents maintain the belief that they will be able to recognise infant overweight or rapid growth (Bentley et al. (2017), although their perceptions of overweight and obesity of infants is incorrect, particularly when infants are around 12 months of age (Thompkins et al. 2015; Reitmeijer-Mentink et al. 2013; Lundahl et al. 2014 Brown et al. 2016). Furthermore, infant weight isn't perceived as an issue or problem until the infant is walking (Bentley et al. 2017).

Infant feeding guidelines are perceived by parents as not having capacity to satisfy infants enough to keep them content for long periods, and this results in infant contentment and happiness being superseded by the parent's concern of overweight or obesity (Bentley et al. 2017). Parents do say that they will restrict infant feeds if they feel weight is an issue, indicating that some do recognise rapid weight gain and act accordingly (Fildes et al. 2015). However, the level of control exerted around infant weight is often accompanied by a notion of a failure to act, due to a lack of parental self-efficacy, therefore impacting on capacity for health behaviour change relating to healthy infant weight and nutrition (Bentley et al. 2017). Parents require reassurance around infant weight rather than criticism or reproach from health professionals, for example introducing parents of infants to the WHO BMI growth charts provides an opportunity for discussion of early intervention and prevention of later obesity risk (Roy et al. 2016).

2.6.2. Parents and responsive feeding

Responsive feeding appropriate for the age and stage of infant's development is required (Birch et al. 1999, DiSantis et al. 2011, cited in Redsell et al. 2021, p.2) and it is successful in combating weight gain (Matvienko-Sikar et al. 2018). Responsive feeding by parents is an area that can make a difference to the amount infants consume during feeding (Hetherington 2017), although guidance for parents is lacking on how to do it (Redsell et al. 2021). Redsell et al. (2021) systematic appraisal around responsive feeding identified several barriers and enablers to inform childhood obesity prevention, including perception of child cues, environmental factors, social opportunity and social and cultural norms and expectations. It synthesised both qualitative and quantitative data approaches. Additionally, assessment for methodological quality used checklists with nominal criteria (yes/no/can't tell). Although considered a strength, application had limitations because it was not possible to provide an overall quality rating of the articles included in the systematic review due to this nominal criteria.

Parents are required to be able to respond reciprocally to infant cues for feeding, for example hand movements, lip smacking, open mouth or restlessness, regardless of whether infants are formula or breastfeeding. Knowing when infants are hungry and recognising when infants are full is equally important for appropriate feeding. However, feeding responsively is not as straightforward as it seems for parents. If cues are interpreted incorrectly, under or overfeeding can occur (Lumeng 2016). Interpreting feeding cues depends on inheritable feeding behaviour and infant temperament (Llewellyn and Wardle 2015; Hetherington 2017), and infant feeding cues that are thought to indicate hunger are deemed more easily recognisable than those of fullness (McNally 2016). However, both are easier to recognise when infants became children (McNally 2016). When infant cues are misinterpreted by parents and carers, i.e. infants are offered food when not hungry and are trying to source other types of caring or emotional need, this is associated with increasing weight gain by age 6 months (Worobey et al. 2009 cited in Redsell 2021, p.2).

Environmental factors influence non-responsive feeding. These include offering on a reward basis, exerting pressure to eat even healthy food, restricting or controlling food available or offered, (especially unhealthy food) and feeding in response to emotions, i.e. to settle or soothe infants (Wardle and Carnell 2007, cited in Redsell et al. 2021, Page 2). Mothers in high income families are less likely to apply pressure or restrict feeding practices in comparison to mothers from low-income families (Gross et al. 2014). They also have the belief that infants can recognise hunger or fullness, whereas mothers in low-income families are more likely to believe that only they, and not their infant, can recognise this (Gross et al. 2014). First-time parents demonstrate impact and foster positive changes to infant nutrition when they receive specific support for infant feeding (when, what and how to feed infants), thus

moving towards more responsive feeding patterns (Daniels et al. 2013). When parents are not confident, they require greater information, advice and support (Musher-Einzenman and Kiefner 2013).

2.6.3. Where parents seek information, advice and support

Digital media (internet and social media) provides a plethora of health-related information. This is most likely due to the fact that the number of digital media outlets specifically for parents of infants and children has increased (Baumann et al. 2020). Also, digital media is thought to empower and support parents as an important and accessible source of information, although patterns of how and why digital media is accessed by parents are less well known (Baumann et al. 2020). As digital media has always existed for some generations, it is assumed that use by young people continues once they became parents. In fact ninety-six pregnant women out of ninety seven surveyed had used the internet for health-related information (Snyder, Neufeld and Forbes 2020). As eHealth seekers, these are generally younger, rather than older, mothers and they view the internet as a useful resource for this purpose (Bert et al. 2013). Parents do find it difficult to source exactly what they want in terms of eHealth and select good quality information this way (Park, Kim and Steinhoff 2016). Digital media is useful as a cost-effective way of preventing childhood obesity during the infant weaning stage and when subsequent nutrition is required (Helle et al. 2017), although accessible resources need to be appropriate, contemporary and evidence based. The role of the HV is key here in signposting parents appropriately, given their role of searching for health needs and stimulating health enhancing activities (iHV no date). Healthy weight is also a high impact area (Department of Health and Social Care and Public Health England 2018, PHE 2021c) and so the place of HV warrants discussion in more depth.

2.7. LOOKING THROUGH THE LENS OF HEALTH VISITORS TO INFORM THE RESEARCH

A Health Visitor is:

“An employee who holds a qualification as a Registered Health Visitor under the Specialist Community Public Health Nursing part of the NMC Register and who occupies a post where such a qualification is a requirement. Not below Agenda for Change Band 6.” Source: (NHS IC, (2011) Occupation Code Manual Version 11). <https://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2015/01/Comparison-IHVC-and-MDS-.pdf> p.2.

As specialist public health nurses (SCPHN), HVs complete further post-registration training and education in child health, health promotion and public health to improve children and

family health outcomes (PHE 2021a). HVs are responsible for providing infant feeding advice within the first years of life according to the HCP, specifically “*reducing childhood obesity by promoting healthy eating and physical activity*” and “*identifying health and wellbeing issues early, so support and early interventions can be provided in a timely manner*” (PHE 2021a, Page 5). This makes HVs pivotal in addressing childhood overweight and obesity with a family approach to weight and nutrition using behaviour change methods. The capacity of HVs to address childhood overweight and obesity is paramount from a long-term public health perspective because of the established link between the prevalence of obesity at 6 months and later obesity (36 months) (Ardic 2019). Addressing this requires early intervention and sensitive communication approaches with parents about weight (HM Government 2016). Where HVs utilise more subjective measures in their discussions about infant weight with parents, greater parental engagement is fostered (Mareno 2014; Parkinson et al. 2017). However, the most effective way to address this, particularly for the most disadvantaged parents, is yet to be established (Denny-Wilson 2015).

2.7.1. Identifying obesity risk in infants and children

The issue of overweight and obesity requires all health professionals to have confidence and knowledge of risk factors and sensitivity of communication in their approach with parents (Redsell et al. 2013). Early empirical research studies by Redsell et al., (2010, 2011, 2013) were a starting point for this research and provided the impetus for further discovery. Unlike this research, they predominantly focused on application and knowledge of obesity risk factors in prevention of overweight and obesity. In 2010 Redsell et al. explored parental beliefs and understanding of infant size, growth and feeding behaviour, focusing on the implications for the prevention of childhood obesity, using focus groups. They found five main themes including parental perspectives of breast feeding, hunger, infant size, identifying and managing obesity risk in infants and healthy lifestyle behaviour. Redsell et al.'s (2010) research highlighted several barriers to early intervention with parents and highlighted the challenges of infant feeding associated with obesity risk. The desire was for inclusion of participants from areas of greatest deprivation, thought to be at greatest risk. However, a lack of available data from the NCMP that would have directed researchers to areas where children entered school overweight or obese, was not available. Therefore, limitations of the research were that participants were more affluent than first anticipated which could have impacted on overall results. Additionally, researchers were already immersed in this field and therefore had potential to influence the research through power imbalance.

Similarly, research by Redsell et al. (2011) focused on prevention of childhood obesity during infancy and explored Health Care Professionals (HCP's) knowledge, beliefs and practice.

Using surveys and semi structured interviews. Research results found that intervention was required to improve how childhood obesity was identified and managed within primary care. Limitations included a poor response to the survey and lack of control on behalf of the researchers who this was distributed too. This may have impacted on the results because only those who volunteered participated rather than participants that included a wider variety of HCP's. Infact, the majority of participants were GP's (52) and Community Nurses (29) with only 27 HVs and 8 in comparison (30.1%)

Redsell et al. (2013) explored health professional roles in identifying and intervening with infants at risk of developing obesity. Three themes emerge from her data and included perceived risk factors for obesity, current practice in relation to improved infant nutrition and obesity prevention, and challenges faced by health professionals related to communicating obesity risk to parents. Furthermore, HVs had difficulty expressing risk factors for infant obesity because they focused on family feeding practices (giving too much milk, early weaning, use of convenience foods, inappropriate food consumption, adult portion sizes and misinterpreting infant distress as hunger), rather than genetic predisposition and non-modifiable risk factors, such as high birthweight. Data was collected through semi structured interviews, conducted by a HV known to some of the participants. This may have impacted on how the participants responded, particularly if the HV concerned was an inexperienced researcher or in a position of power within the team. No indication or acknowledgement of this was provided in the research article (Redsell et al. 2013). Furthermore, only HV teams participated, no parents were included in the research. Including parents may have provided a different perspective further informing the research. However, these early studies were an introduction to the potential use of an obesity risk checklist that was under development and the research results supported this as feasible.

A lack of self-efficacy of health professionals presented barriers to initiating conversations with parents about overweight or obesity (Hessler 2015). They were not specifically focusing on risk factors for excess weight gain in infants (Denny-Wilson 2015), particularly when parents were also overweight, and focus was on the child (Edvardsson et al. 2009). Self-efficacy scores did improve when specific training occurred on how to manage this (Hessler 2015) and where motivational interviewing and communication strategies were taught through simulation techniques, rather than cajoling or challenging behaviour where parents are resisting moving to a healthy change (West et.al. 2018). Digital technology can assist HVs to assess risk of infant obesity, particularly when acting as communication aids such as ProAsk (Rose et al. 2019). Research carried out recently identified how algorithms like ProAsk operate as a handheld device to assist risk assessment of infant obesity using a digital medium to change behaviour. It focuses on supporting HVs during communication with parents regarding risk assessment of infants for obesity and encourages HV to offer strategies for

reducing risk (Rose et al. 2019). However, no devices or algorithms like ProAsk are utilised within the delivery of the HCP (DH, DCSF 2009) in the areas involved in this research. A general lack of funding for training programmes and technology prevents widespread use of these resources across the region.

2.7.2. The value of mandatory visits within the core offer of the HCP

Although there are a number of resources available which enable HVs to be confident, and recognise and address weight issues in infancy and childhood (HM Government 2016), the level of contact for those supporting infants within the first two years remains varied across the UK (Coates and Gilroy 2017). This is a result of a long-term reduction in investment in HV within England since the Call to Action in 2015 (iHV 2021). Historically, mandated universal visits offer a blanket approach to parents to establish early contact (Cowley, Whittaker et al. 2018). This commences in the antenatal period until the child enters school. Mandated visits are a mechanism for the development of fruitful relationships between HVs and parents. However, these require partnership working and common lines of understanding to be established (Bidmead et al. 2015). For a therapeutic relationship between the HV and the parent to prosper, time for developed and sustained contact is required (Bidmead et al. 2015). It is the knowledge and skills of the HV that help parents to feel trust and confidence in them (Cowley et al. 2013). Parents highlight a need to feel comfortable in their relationship with the HV to utilise them as a source of continued support. When measured, the HV-parent relationship is unlike any relationship established with other health professionals. The HV-parent relationship is more utilitarian, with a sense of purpose, rather than being exclusively therapeutic (Cowley 2013, Bidmead et al. 2015). Parents and HVs need to follow a process to begin to know one another at the beginning of their relationship, with each determining barriers, boundaries and ways of engagement. In this way, HVs can place parents at ease about their role (Bidmead 2015). Consistent contact between parents and HVs leads to greater and extended understanding of parents' needs (Cowley 2013). It is not how the HV behaves in the relationship, but how parents perceive the relationship and subsequent HV qualities that matters (Bidmead 2015 et al.). Therefore, the greater the number of mandated visits available, the greater opportunity for established long-term relationships between parents and HVs.

2.8. CHAPTER CONCLUSION

Overall, this chapter demonstrates the incidence and prevalence of overweight and obesity for children and adolescents within the UK. It highlights childhood obesity as a UK, European

and global issue that requires a global response. It also identifies the UK policy context that influences healthy infant feeding and childhood nutrition. UK policy and guidance are barriers to tackling overweight and obesity generally, and the challenges of healthy infant feeding and childhood nutrition are multifaceted. The complexity of obesity exists at several different levels, each dependent on both previous and future impact factors. These impact factors were discussed, and include both modifiable and non-modifiable risk factors, for example the environment, lifestyle, familial, feeding patterns and socioeconomic situation.

So what?

Socioeconomic inequalities in childhood BMI do exist for families of infants and children who live in areas of deprivation, as illustrated by the empirical evidence presented in this chapter. The research area and locality of the Northeast, where the research takes place, is also an area of deprivation with lower breastfeeding rates and greater propensity for having an obesogenic environment. Children experiencing poverty, with a disability or from ethnic backgrounds, are shown to have greater prevalence and risk of childhood obesity. Therefore, it is important that the HV service and individual HVs consider these factors because of a demonstrable physical, mental and educational impact of overweight and obesity on later life. Complexity is far greater when risk burden is compounded, i.e. when children are living in areas of deprivation and are also from ethnic backgrounds. Furthermore, children from ethnic backgrounds living in similar deprived environments are more likely to be obese than their peers and neighbours of white origin. Thus, the evidence base for practice is already available about the occurrence and risk factors for overweight and obesity in infants and children, as outlined. However it is not just ethnicity, socio-economic deprivation or environments that have an impact, and several other risk factors are outlined in this chapter.

Additional to socioeconomic deprivation and ethnicity, obesity in childhood is also associated with PSEs which can cause further detriment children's health. Detriment can occur at the time of the event or in later life with the development of physical ill-health. As well as PSEs, obesity is associated with ACEs, causing adverse psychological and emotional impact. The greater the level of PSEs and number of ACEs, the greater the level of risk for incidence and prevalence of childhood overweight or obesity.

What now?

HVs do not appear to be determining risk factors of infants, children and families in relation to weight, or have propensity for linking level of risk from PSEs and ACEs with later obesity. In

essence, wider determinants of health and impact factors require much further consideration for HVs as public health practitioners to enable them to think about this when supporting infants, children and families with weight. Again, this highlights the complexity of childhood obesity risk. The evidence base is available and should be considered by HVs as part of their clinical practice. Infant feeding patterns and practice also present risk for local levels of childhood obesity, as identified. As demonstrated, the levels of breastfeeding within the research location are below that of more affluent areas, and England has lower breastfeeding prevalence than many other countries. There is also a culture of formula feeding in areas of deprivation. What is clear from the literature critique is that it is the multifaceted nature of childhood obesity that leads to global public health issues. A multitude of factors increase the risk of infants being overweight or obese as children, adolescents and into adulthood. Globally, the social burden of obesity across the lifespan is high. Within England it exceeds government spending as a single economic burden by more than some other services combined, and this includes the cost of treatment for obesity across all age groups. The Heckman principle, which advocates the continued investment in child health and early childhood programmes such as the HCP (DH, DCSF 2009), demonstrates a 13 percent rate of return on investment bringing long-term health, social and economic benefits for children.

Overweight and obesity is well recognised as a global public health issue, and policies to address it do exist. However, rather than seeing investment in services and funding for infants and children, funding is reducing in relation to public health. Policy is welcome, however it does not go far enough to tackle childhood overweight and obesity head on. In contrast, disinvestment in HV services results in a reduction in the number of mandatory visits by HVs, and therefore contact with families at risk of obesity is reduced. This should be addressed because HVs remain responsible for weight management and healthy nutrition at the same time as services for children and families are being cut. Overall, Chapter 2 discusses the empirical literature, including representation of the complexities of infant and childhood obesity, sets the context for the research and highlights a strong rationale for early intervention and prevention of infant and childhood obesity. In addition, previous research demonstrates less emphasis on the differentiation between infants (0-2) and children (0-5) at the centre of its research design. Finally, the literature supports the idea of an Interpretative approach to the research, framed by a conceptual model that enables interpretation of the voice of the participants.

The conceptual framework of social construction as a superstructure for the research is explicit within the next chapter (Chapter 3).

CHAPTER 3: CONCEPTUAL FRAMING

3.1. INTRODUCTION

The chapter illustrates the connections made between what, why and how the research is complete, building on the initial discussion as to why it matters. The chapter explores the place of axiology, ontology and epistemology as positionality, which is important because of ethical morality, research assumptions, beliefs and knowledge which can determine research influences. The ontological position is relativism, and the epistemological position is subjectivism. Both of these are influential in research as positionality. As a superstructure, a conceptual framework is the paradigm that precedes methodology, influencing further development of the research (Ravitch and Riggan 2017). Discussing development of the conceptual framework is enabled using a framework proposed by Ravitch and Riggan (2017). This reduces the risk of undertaking and presenting the research in a “methodological haze” (Ravitch and Riggan 2017). The framework is used as a guide, firstly to deconstruct social construction as a paradigm and then secondly to reconstruct it as a superstructure around the research. This enables an argument for the research to be appropriately developed.

3.1.1. Building an argument for the research

An initial broad perspective of the literature is a good starting point for the research and helps formulate the research proposal. This determines that childhood overweight and obesity is a global issue, rapidly rising, and detrimental to child health (Knapton 2015; WHO 2014, 2017a, Redsell 2021). Systematically reviewing the empirical literature is an important part of the framework used for conceptually framing the research. Infant weight as a focus is not as extensively researched, in comparison to older children (Redsell et al. 2011), causing a lack of available research. It is clear from the literature presented in Chapter 2, and again in the research rationale (Chapter 4), that a paucity of research relates specifically to infant weight, either involving both HV and parents systematically or exploring interactions around infant weight. This is thought provoking for a researcher, and provides a genuine desire to delve more deeply and provide a well-informed and clear argument for the research focus. Previous Interpretative research is available with health professionals (GPs and health visitors) or parents relating to improving knowledge of childhood obesity, and evaluation of professional education and training. Literature also highlights that HVs have low confidence levels in addressing childhood obesity with parents, and this results in HVs feeling undermined when parents disregard public health messages (Redsell 2013). Moreover, a lack of guidance and training for HVs relating to overweight and obesity in children is apparent (Redsell 2013).

There is no obvious research that illuminates the content of the interaction between HVs and parents during infant weighing in this way. No link to public health outcomes, no account, no exploration or understanding of what the interaction means for parents and HVs, or what and how meaning and behaviour are actioned as a result. If focus is on the empirical literature alone during the process of conceptualisation, this is insufficient to build research that is robust and / or rigorous. Further methodological justification is required if reality, truth and knowledge are to be understood within the research and meaning made from them (Ravitch and Riggan 2017). Therefore, engaging more deeply in a critique of the empirical literature provides a more significant argument and research rationale as part of the conceptual framing of the research (Ravitch and Riggan 2017).

3.1.2. Conceptual frameworks

A conceptual framework is:

“An argument about why the topic one wishes to study matters, and why the means proposed to study it are appropriate and rigorous” (Ravitch and Riggan 2017, Page 5).

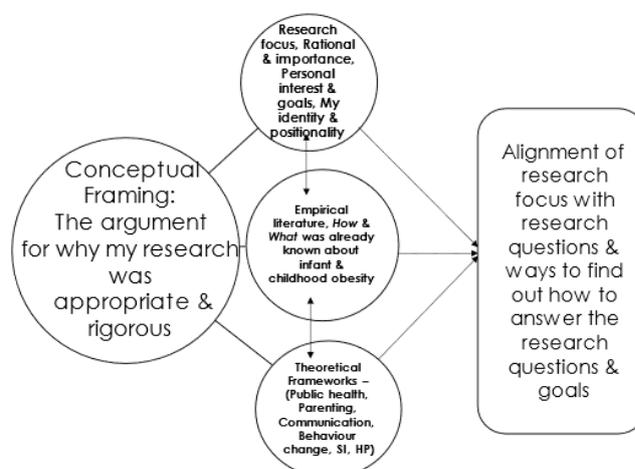
A variety of terminology describes and categorises paradigms. At times, categories and descriptions are controversial (Plack 2005). A framework presents an argument for the research (*reason*), and the delivery plan (*rigor*) (Ravitch and Riggan 2017). This research is conceptualised using Ravitch and Riggan's (2017) ideas. The framework demonstrates key elements of the research requiring consideration for rigor, whilst mapping the relationship between them. Doing so is a necessary part of the research process to establish research rigor, as is researcher positionality. Only then is the research process clear, and the view from above transparent. The conceptual framework determines the interrelatedness necessary for robust research. Perspective is shifting, understanding deepens, and the reason and rigor of the research process materialises. A perspective transformation (Mezirow 2000) of conceptualising the component parts in their entirety occurs in this way. A conceptual framework is not readily available in an off-the-shelf way, and requires self-building (Maxwell 2013). A lack of general and practical guidance about how it is developed results in a level of confusion for novice researchers (Maxwell 2013). Terms of reference for conceptual framing are interchangeable in the research literature, as theoretical framework, conceptual model, theory, or superstructure, adding to the confusion.

However, conceptually framing research is making it transparent from beginning to end, and a critical part of the process (Ravitch and Riggan 2017, Adom, Hussein and Agyem 2018). It requires a cycle of thinking, reading, supervision, discussion, reflection, reflexivity, writing and rethinking. Understanding, internalising, and analysing the conceptual framework assists the

evaluation and creation of research that is appropriate and rigorous. This requires “higher order level thinking skills” (Bloom 1956, 2001) to demonstrate research that is robust, contextual and relevant in research argument. This process establishes and assists understanding of the research ideas as logical (Ravitch and Riggan 2017). The essence of the conceptual framework is taking it and positioning it in the centre of the research activity and therefore the research process. Conceptual framing, concept mapping, scoping and understanding the empirical literature all position the conceptual framework as a superstructure. This superstructure directs research activities, subsequently moulding the overall research design and, additionally, ensuring research rigor.

As a collection of intellectual thought patterns, conceptual framing research requires mapping and plotting the relationship between each separate part (Ravitch and Riggan 2017). Furthermore, research that is relatable to the research questions and aims enables it to be appropriately designed, and research questions and research aims to be met. However, it relies on an ability to generate significant and appropriate data corpus and methods of analysis (Ravitch and Riggan 2017). It requires a level of fluidity and reflexivity (Maxwell 2013). Therefore, visualising both conceptual framing and research process is not a passive activity. It is the starting point for others to read about the research or “point of departure” (Ravitch and Riggan 2017). As understanding gathers, a conceptual framework guides it from conceptualisation to fruition. Basing the research on a conceptual framework provides the argument for why the research is appropriate and rigorous or why it matters. Considering researcher positionality is also crucially important as part of developing the conceptual framework. Figure 1 demonstrates key components of the conceptual framework for this research.

Figure 1: Conceptual Framing



Conceptual Framing: Research Reason & Research Rigor adapted from Ravitch & Riggan (2017)

3.2. ONTOLOGICAL AND EPISTEMOLOGICAL PERSPECTIVES AS INFLUENTIAL TO THE RESEARCH

Exploring positionality is fundamental to successfully understanding developing research methodology, underpinning theory and research assumptions. In other words, it is axiological, ontological and epistemological philosophical perspectives that drive it. As a researcher it is accepted that positionality is critical to framing and justifying the research, and making this transparent is essential to maintaining rigor.

3.2.1. Axiology

Axiology is the ethical theory of morality and aesthetics, thus representing the theoretical beliefs and values of researchers, and is a laudable consideration in researcher positionality (Deane 2018). It is part of the philosophical commitment to the research alongside ontological and epistemological perspectives (Deane 2018). Put simply, it is what is considered worthy about the research, and this includes researcher actions (Deane 2018). The role that values bring to research is not always that explicit (Biedenbach and Jacobsson 2016). However, understanding these enables clarity of what is important and yet somehow hidden from view about being the researcher. Axiology is about intrinsic conduct during the research, and how positively it is valued and embraced as part of the research experience. Intrinsic value includes individual personality and character (Biedenbach and Jacobsson 2016). In opposition, extrinsic value is how the research is managed during the process. Both intrinsic and extrinsic values are interlinked, although are unreliable in terms of research outcomes, for example believing that you are a person of good character and demonstrating empathic qualities does not make for a good researcher or a good piece of research and vice versa (Biedenbach and Jacobsson 2016). However, both intrinsic and extrinsic values and beliefs do underpin this research and are recognised as important enough not to be overlooked or undervalued. They contribute to the overall research outcome and are equally important for consideration alongside ontology and epistemology.

3.2.2. Ontological position – relativism

As *“the nature of knowledge and reality”* (Cohen and Manion et al. 2006 cited in Dieronitou 2014, Page 5; Guba and Lincoln 1994) relativist ontological assumptions and beliefs shape the research and are integral to appropriately conducting it (Ravitch and Riggan 2017). A relativist position of social construction is in play, along with the belief that multiple realities exist, alongside a joint understanding of society, created by those within it. As the researcher, this is the position that one assumes. This necessitates development of research that provides insight of participants' reality to understand what it is and what it means in the real world, i.e. *“How things really are”* and *“How things really work”* at any one time (Guba and Lincoln 1994

Page 108). Knowing that individual reality is changeable over time and participant reality is different, similar, or varied in social and cultural experiences, finding a way to expose individual understanding and perceptions of participants is crucial (Guba and Lincoln 1994). Participants' realities as parents and HVs, in time and place, reveal individual understanding and perceptions of communication around infant weight, as "*a truth*". From a relativist position, multiple perceptions exist, and therefore multiple participant truths for discovery (Guba and Lincoln 1994). A relative approach acknowledges multiple interpretations of the conversation in play until a recognisable pattern emerges, and each interpretation is no less true as a participant's reality. Bakhtin's (1930, 1981) analysis relates to discourse describing this action as a "dialogue of heteroglossia" or "synergy of the lived experience", bringing fragments of a whole together to present a unified picture. Researchers are "brokers of knowledge and truth" (Ravitch and Riggan 2017) (Page 99). Therefore, bringing synergy to the research participants dialogue is a key part of a research role, requiring understanding and recognising more than one socially-constructed participant truth and participant reality.

3.2.3. Epistemological position – subjectivism

Epistemology is a "*theory of knowledge*" and "*what it means to know*" (Scotland 2012 Page 9). The research requires interpreting the voices of participants, so they are heard.

Additionally, researcher voice and positionality also warrant exploration to reveal any epistemological assumptions (Day 2012). Viewing assumptions using an insider lens may impact or influence the research, i.e. through professional knowledge of nursing and HV, relevant empirical research, and previous education. This is where assumptions of HV and parenting is created, assimilated, and communicated during scholarship and as a previous practicing clinician. The epistemological position therefore is the nature of the relationship between what is already known (subjective knowledge) and what can be known as a result of the research (Guba and Lincoln 1994). Scotland (2012) suggests any preconceived and subjective epistemological ideas require deconstruction during the research as researchers and participants merge and contribute to the research findings. Subjective knowledge is internalised by previous experience and determines the relationship between "*The knower and the known*" (Dieronitou 2014, Page 5). As the knower, the epidemiological view of HV is subjective, including a belief that HV is a valuable and unique professional role that offers a national universal service for children and families. Previous researcher professional experience of HV is positive, and this situates researchers as insiders with insider knowledge.

Conceptual framing requires consideration of the impact of epistemological positionality on interactions with parents and HVs during data collection and analysis. The researcher is a broker of knowledge adopting a subject-subject posture to avoid both facts and values from binding together, thus acting as both "*the inquirer and the inquired-into*" (Smith 1983, cited in

Dieronitou 2014 Page 7). This interlocking process of interaction focuses on what is already known, which is seemingly inseparable from what is desirable to know, suggestive of an insider position. Most research is subject to a certain level of insider and outsider positionality, seemingly always present (Guba and Lincoln 1994; Flores 2018). Exploring this at the beginning of the research shows a deep immersion of the researcher in a university academic role of learning and teaching. This is the starting point for the research. The previous 18 years as an academic on the periphery of HV is not an insider position, it is an insider/outsider position. Considering this reflexively, it is a "new concept of self" (Bourke 2014). Positioning on the periphery of HV practice as an academic is far removed from being embedded within clinical practice. It is a comfortable position to be in, which is an important shift in researcher perspective to recognise. Table 8 (Page 70) considers harmonisation of axiology, ontology and epistemology as key components of positionality and is relevant to the research design overall.

Table 8: Harmonisation of Axiological, Ontological and Epistemological Commitments Adapted from Deane (2018)

Axiological commitments What makes me a good researcher?	Ontological commitments	Epistemological commitments
<i>Interpretative paradigm</i>	<i>Nature of reality</i>	<i>Hermeneutics</i>
What was good about the research? What was good about professional and personal stance, values and beliefs of the researcher? Value attached to the research questions, research outcomes, moral stance, conduct during the research, understanding of assumptions and potential influences, honesty and integrity, friendliness, openness, perseverance, reflection, reflexivity, communication, diligence, caring, curiosity, respect,	Both researcher and participants have actively constructed their own and ongoing identities. Have situated individual realities, truths and knowledge about infant weight based on their own experiences, knowledge and socially constructed realities.	Participants expressed understanding within a moment in time. A snapshot of participants realities. Focused on the research process and knowledge generation, however, knowledge is contextual and could shift and / or be revised within the research.

non-judgemental approaches, ethical probity.		
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3.2.4. The insider/outsider perspective

An insider/outsider perspective is embraced as a new concept of self (Bourke 2014). It is a position from which to explore the research and learn from the participants. As the research progresses, positioning enables a common bond to develop with research participants. A genuineness in the researcher role helps to develop a rapport, enabling interpretation of the interaction, and hence development of knowledge and understanding relating to infant weight. Positionality continues to be explored in more depth whilst actioning the research, remaining cognisant of existing professional knowledge or epistemological positionality. Understanding how positionality is influential means being mindful not to be framed as a superior academic. To respond, previous professional and clinical roles as a nurse and HV and current academic status is downplayed appropriately. This helps to establish a trusting relationship with participants, not as a purveyor, rather as a seeker, of knowledge. Making introductions to participants during data collection is as a research student, rather than an academic, public health professional or parent. A clear perspective of positionality is explicit and therefore social construction as the research paradigm is explored.

3.3. A SOCIALLY CONSTRUCTED RESEARCH PARADIGM

3.3.1. What is social construction?

Social construction is referred to as a theory or paradigm, however by definition it is a way of looking at and analysing a research focus to enable researchers to understand human experiences (Kuhn 1962). Theorists use a variety of terminology to describe and categorise paradigms. Although social construction of reality was first proffered by Berger and Luckmann (1966) as a paradigm, it is associated with postmodern qualitative research (Walker 2015). There are several different nomenclatures and literary associations available: constructivism, constructionism, social constructionism, social construction and social constructivism (Beaumie 2001, Knoblauch and Wilke 2016). Social construction is a term of preference, although it is important to acknowledge any variations in the term's constructionism and constructivism for clarity. In constructionism, no meaning of things or objects exists until constructed through social interpretation, and thus meaning is socially entrenched and different for each of us (Clark, Griffin and Turner 2007). Constructivism is a learning theory. Each learner has their own perspective, therefore learning is a social process (Beaumie 2001). An example of constructivism is pupils learning to problem solve together

using communication or teamwork as individual perspectives coming together to find workable solutions.

As a sociological theory, the purpose of social construction is to understand reality in a distinct way (Holstein and Gubrium 2008). The original concept postulated by Berger and Luckmann (1966) is difficult to understand, and ambivalence makes it less distinctive and questionable at times in its status as a paradigm (Knoblauch and Wilke 2016). Placed at the subjectivist end of the research continuum (Burr 2015, Taylor 2018) reality, knowledge and learning are its three research assumptions (Amineh and Asl 2015). Despite its limitations and dependence on interaction or discourse, without due consideration of individual needs, choices, desires, or fantasies (Burr 2015) it is a means of bringing commonality to the research, as a distinctive way of viewing and critiquing the world of the participants to discover lived experiences (Holstein and Gubrium 2008, Knoblauch and Wilke 2016). Social construction acknowledges the existence of objectivity and individual learning and development within the world (Taylor 2018). Arguably, we view the world through a series of concepts and categories steeped in culture and historical background (Burr 2015). However, the existing discourse of things socially constructed is constrained to individuals' freedom to choose an alternative. For example, the concept of beauty is socially constructed and promotes social control, and when internalising and complying with socially constructs of beauty there is social reward (Baker-Sperry and Grauerholz 2003). However, the social construct of beauty may not be of value or desirable for all individuals and it changes over decades and within generations. Social construction enables the investigation of participants' collective understanding of a world in situ and collective understanding uses a critical lens (Burr 2015). Additionally, it opposes positivist approaches (Burr 2015) and enables utilisation of suitable interpretative research methodology and methods (Hirshfield and Underman 2016).

3.3.2. Social construction: The concept of reality, knowledge and truth

“The world as reality is always there; at the most it might be ‘different’ to what I assumed [...] but in the sense of the general thesis, it remains a world that has its being out there” (Husserl 1965: 62)

Reality: Research participants develop and socially construct their own reality, knowledge and truth relating to infant weight, overweight and obesity, infant feeding and perceptions about their own and each other's roles as parents and HVs. The concept of social reality is very much deliberated, although it is viewed as socially agreed judgements held by a particular group of people or “*typifications*” (Knoblauch and Wilke 2016). Typifications relate to the way all of us view the world and our actions within it. They are collective general common-sense understandings of everyday life promoting social order through communication (Knoblauch and Wilke 2016). Meaning, typification, or consciousness are not

how social reality is constructed (Berger and Luckmann 1966). It is constructed through social interaction, action, and institutions (Knoblauch and Wilke 2016, Page 64). Reality is a concept relating to an assumption that it only exists in real time, never in advance. As reality is pluralistic, each participant has their own version of reality, constructed and relatable to the self. Therefore, social construction in this research is different for each participant (Beaumie 2001, Appleton and King 2002). However, the reality of the research is not discovered on an individual basis, it requires emphasis on the participants' narratives of reality as a collective response (Amineh and Asl 2015; Plack 2005, Appleton and King 2002). Participants' reality is constructed through the research process and activity of engaging in conversations together during data collection (focus groups and semi-structured interviews). Burr (2015) suggests this is acknowledgment and validation of research the participants' voice, rather than the voice of the researcher.

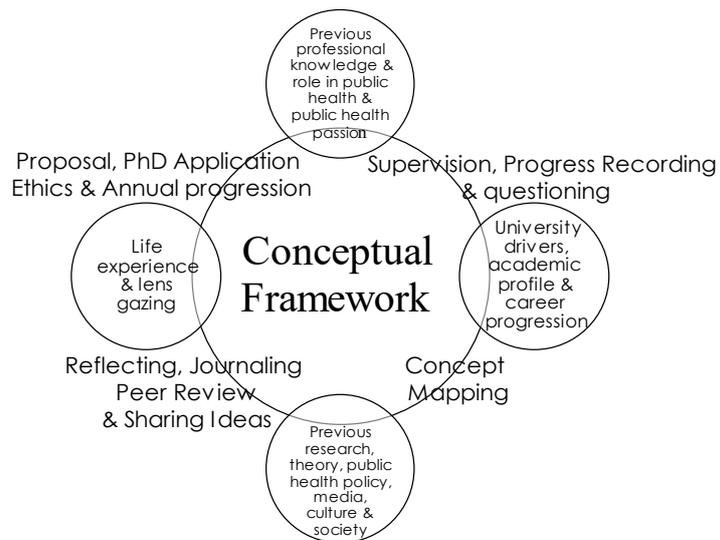
Knowledge: Knowledge is constructed individually and from both social and cultural efforts (Guba and Lincoln 1994, Plack 2005, Amineh and Asl 2015). Language is required for knowledge construction (Burr 2015). Individually, language enables individuals to interpret everyday interaction with others in the context of the environment. This creates meaning (Amineh and Asl 2015, Guba and Lincoln 1994). The environment is our natural attitude of concepts and categories within our cultural context, and specific language is already in use (Burr 2015). It is a social construct, pre-existing our entry to the world. However, social construction is an approach to revealing relative independence of knowledge, notably *researcher knowledge, parent knowledge, and HV knowledge*. Participants subjectively create and intersubjectively validate knowledge in social construction (Plack 2005).

Truth: Theoretical criticisms of social construction refer to its view of truth, and truth only existing as a construct of a given social group (Taylor 2018). Claims about truth within the findings of this research are contextual interpretations as both researcher and participants depend on the complex world the research is in (Taylor 2018). In truth, meaning is not generalised, rather it is individual and context specific to the environment of participants. Interpreting participants' individual and social constructs, and experiences, demonstrates meaning, or a truth belonging to them and its influence on participants' actions (Plack 2005). If research is repeated in other locations, findings will be different (Appleton and King 2002). This is an expectation, and it reflects social construction as a paradigm through an acceptance of multiple realities (Burr 2015 Page 93). In truth, this research is a combined portrayal of participants' thinking, rather than a single, objective or generalised view (Appleton and King 2002) using timely consensus (Plack 2005).

Demonstrating the key concepts in this superstructure or conceptual framing is a way of visually identifying any important components timely to its development. It includes previous

and current professional knowledge of public health and previous roles, intrinsic and extrinsic research drivers, previous empirical research and strategies of development. Figure 2 depicts the process of development.

Figure 2: The Conceptual Framework as a Superstructure – Adapted from Ravitch and Riggan 2017)



3.4. CHAPTER CONCLUSION

The conceptual frameworks for research commenced prior to it beginning. They demonstrate why it matters and why it is valuable as a piece of research. It anchors the research within its Interpretative framework. Conceptual framing provides research reason and rigor. Social construction as an interpretative stance is subjective rather than objective in approach, as it is a paradigm focusing on identifying participants' reality, knowledge, language, and truth. As identified, social construction is an overarching paradigm, or a superstructure of the research, enabling it to be appropriate in design and visualised as an assemblance of interrelated parts. Aligning the research components through the conceptual framework demonstrates research rigor because it grounds research in a strong, progressive and rational argument. A rigorous argument for it establishes its relevance and appropriateness, or in essence why it really matters and why it is valuable.

3.4.1. So what?

Conceptually framing the research enables a literary critique of relevant empirical literature, and this demonstrates a relationship between potential or perceived professional, cultural and social theories of public health, parenting and HV roles. The conceptual framework harmonises positionality, i.e. axiology, ontology and epistemology. Without this, determining both relative assumptions about the nature of knowledge and reality and subjective knowledge of what is known, is difficult in Interpretative research of this nature. A conceptual framework is influential to the research and underpins it. Positionality of the researcher in relation to the research, that is previously invisible because it is unrecognised for its impact when not declared, becomes positionality that is visible. This provides the blueprint for doing the research and is key to understanding the relationship between the researcher and the participants. If positionality is not understood, acknowledged, explored or reflected upon by researchers, research is open to criticism, and the meaning made from this could be questionable. It is clear that within this research paradigm, Interpretative approach and subsequent theoretical perspective that making meaning is a key aim.

3.4.2. What now?

Once the conceptual framework is established it acts as a superstructure which underpins any subsequent research process. As a researcher, theoretical perspectives, methodology and methods require careful alignment in order to achieve the research outcomes and aims. This also means they are required to be fully understood and applied in the context of the research. Only then can a robust argument be made for the research and the way it is

visualised, taking into consideration the perspective of the researcher based on their positionality, which is in this case as an insider/outsider. Being able to adhere to the key components of social construction is also important so that reality, knowledge and trust are sufficiently and conscientiously exposed.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 CHAPTER INTRODUCTION

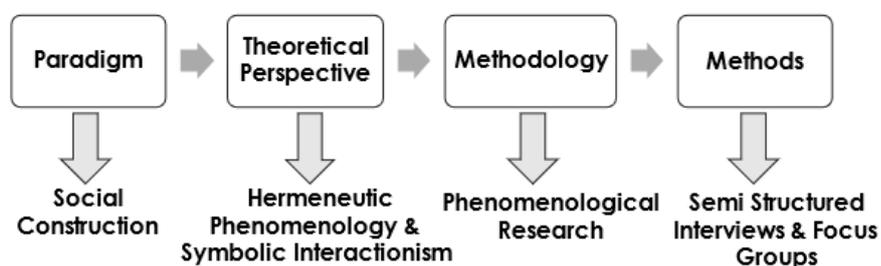
Methodology is a “*strategy, plan of action, process or design*” that underpins research (Crotty 1998, Page 3).

Chapter 3 outlines social construction as the research paradigm. A rationale and importance of developing a conceptual framework is outlined. Chapter 3 addresses the positionality of the researcher so that this is exposed, lessening any potential impact of previous knowledge, experience, values and beliefs, and revealing the position of the researcher to the research.

Chapter 4 defines research methodology. The chapter is logically structured beginning with the overall research aims and research questions to remind the reader of what the research sets out to achieve. The chapter includes several important areas for exploration. These are crucial to understanding how the research is approached and why, i.e. to enable potential discovery. It is important to develop a clear idea of the whole research process for a cohesive approach because social construction as the research paradigm determines theoretical perspectives, methodology and methods, and vice versa. Hermeneutic phenomenology and symbolic interactionism are appropriately positioned as theoretical perspectives for the research. Hermeneutic phenomenology and symbolic interactionism enable understanding of interaction between participants by interpretation, a significant aim of the research. There is a rational argument for two theoretical perspectives to discover what can be known about the research focus. Knowing confirms and articulates achievement of research outcomes and makes for confident articulation of the research findings in Chapter 6.

As the research has a phenomenological Interpretative approach, considering the term “transcendental reduction” is important in this chapter. However, rather than transcendental reduction, “bracketing” is the term of reference. Justification for not bracketing as part of this phenomenological approach is carefully explored for transparency. Data collection methods of semi-structured interviews and focus groups reflect methodology and are included in the discussion. Crotty’s (1998) framework is used to demonstrate how the research is also logically structured, from its superstructure of social construction to theoretical perspectives, methodology and finally methods. All of these key components of the research are required to relate to each other, and Crotty’s diagram demonstrates this relationship (Figure 3 below):

Figure 3: Overview of the research (Crotty 1998)



Firstly, a brief visit to the research aims, and research questions.

4.1.1. Research aims and research questions:

Research aims:

1. To interpret the interaction between health visitors and parents during the act of infant weighing and around infant weight, illuminating meaning, outcome and or actions
2. To uncover and understand influential and contextual public health factors regarding infant weight to generate knowledge and understanding of these from both macro and micro perspectives
3. To identify potential implications and recommendations for public health workforce development and / or transferability to other contexts

Research questions:

1. How and what public health interaction occurs around infant weight between HVs and parents in HV practice?
2. What key factors, if any, need to be in place for public health interaction regarding infant weight to occur?
3. How do key factors influence public health interaction between HVs and parents in relation to infant weight?

4.1.2. What is a phenomenological interpretivist approach offering?

“Only those questions that relate to matters of the real existence and real action are admissible” (Crotty 1998 Page 108).

An interpretivist approach offers opportunity to incorporate individual's subjective reality and is “highly contextual” (Gray 2009 page 166). It is characteristically suitable to enable achievement of the research outcomes. It provides opportunity for theoretical sensitivity in its differentiation between what is important and what is not important about the accounts and words within data corpus. In an interpretivist paradigm, the basis of the research reflects the methodological stance, and therefore enables suitable data collection methods. Starting with a set of assumptions and clarity of the research parameters is a way of gaining relative knowledge and understanding of the research focus in the first instance. This demonstrates potential use of the research findings to other public health contexts, which is important because of the public health nature of the research. Interpretivism with relativist ontological associations uses methods that reveal understanding (Pham 2018). Interpretivism allows rich qualitative data to be uncovered and fosters insight into the perspectives of the participants, revealing itself as an “emic view” of their lifeworld (Glaser and Strauss 1967; Strauss and Corbin 1990). It offers opportunity to gain a deep understanding of the content of public health interactions and a comprehensive picture that commences from the relativist position of researchers. It challenges former thought processes and perspectives (Milliken and Schreiber 2012) and interprets the characteristics of the data, i.e. “*What people say*” and “*What words are used*” (Gray 2009 page 179). There is no one reality or one truth to find in this research because it strives to understand the research phenomenon within the participants' natural setting (Mackey and Gass 2015). Applying attention to detail around participants' real time experiences, and in depth, is a key concept. Interpretivist research produces powerful and transferable findings and legitimately relates to discovering participant realities. This demonstrates trustworthiness, consistency, confirmability, and applicability in the research (Anderson 2010, Noble and Smith 2015). It also enables engagement with smaller numbers of participants without the confines of generalisation (Mackey and Gass 2015).

4.1.3. What about positivism?

Conversely, positivism, a scientific approach to research, determines the evidence base, generalising through empirical enquiry, and objectively presenting facts (Gray 2009). Positivism emphasised a strong design, control of variables and strengths of reliability and validity (Anderson 2010). Positivism is a powerful tool of knowledge that promotes falsifiability

and generalisability in research (Matusitz and Kramer 2011). However, positivism is unsuitable and limiting as an approach in this research for several reasons. It fails to focus on gaining a perspective of truth or reality or application of what understanding is within the research context (Pham 2018), or an emic perspective. Rather, positivism is less desirable because it is devoid of meaning and has less flexibility or opportunity for discovery, which is desirable in this research (Mackey and Gass 2015). Opportunity to probe and explore participants' thinking, feelings, views, and perspectives of interpretivist approaches transcends data collection and analysis of findings (Wellington and Szczerbinski 2007 cited in Pham 2018). As an approach, positivism is unable to bring to the table new knowledge and understanding of what is really going on between the participants in the same way as interpretivism can. In other words, it cannot help discover what can be known about the interaction around infant weight as a result of the research.

Interpretivism relates to underpinning positionality, research aims, objectives and research justification, whereas positivism did not. Research questions are unusable unless they are part of an approach that is able to unearth the values, beliefs, opinions, realities and nuances of participants. A pure scientific, objective and measurable approach opposes this aspirational desire in terms of suitable research outcomes and exploring participants' lived experience. The research wants to seek both the reality and truth of the interaction occurring between parents and HVs around infant weight, and interpretative approaches are the only way to achieve this. Interpretative data collection methods offer flexibility to establish findings using semi-structured interviews and focus groups. Understanding what these offer and why they are suitable methods is important in the context of the research. Focus groups and semi-structured interviews are also part of the discussion in the research design chapter (Chapter 5), exposing how they assist the data collection process.

4.1.4. Focus groups as Interpretative methods

Interpretative methods such as focus groups are a customary way of studying participants' perspectives (Gray 2009, Tausch and Menold 2016). The advantage of focus groups is the provision of thick and rich data with fine detail, directly from group participants via their interaction together (Morrison et al. 2019). Focus groups expose other participants' perspectives during the research experience and opportunities present for active learning through reflection and questioning (National Coordinating Centre for Public Engagement, Durham University 2012). Focus groups create contextual knowledge around infant weight and share this with opportunities for listening to the perspectives of other experiences. Infant weighing at child health clinics is both a historic and current event within HV practice. Therefore, using this method helps participants to create meaning together (Jayasekara 2012). During focus groups participants can collectively expand on the nature of the

conversation taking place between them, illuminating parents' and HVs' different and existing perspectives for analysis. They encourage participants to share, discuss and talk freely about their experiences in a different way than that of participants in semi-structured interviews, and this is an obvious advantage. Taking part in focus groups encourages participants to voice their opinions as other participants engage them. Engagement promotes discussion and is a space where participants "bounce off each other" spontaneously (Tausch and Menold 2016). This is advantageous, potentially leading to discovery of new information.

4.1.5. Semi-structured interviews as Interpretative methods

Semi-structured interviewing is a common method of data collection in Interpretative research (Barrett and Twycross 2018). As a method, it provides opportunity to gather rich descriptive data through participants discussing individual experiences or situations. This illuminates knowledge, values, preferences, and attitudes (Cohen and Manion 2000, Mackey and Gass 2015). Semi-structured interviews provide opportunity for open-ended questions and personalised data (Cohen and Manion 2000). A semi-structured interview is guided by appropriate researcher questions whilst giving participants scope for flexibility. It enables discovery by allowing probing questions to explore participants' thoughts, feelings, views and or perspectives in greater depth (Wellington and Szczerbinski 2007 cited in Pham 2018, Gray 2009). A subjective exploration of meaning, i.e. data, is drawn from participants' responses. As an academic, great effort is made to remove the perception of being an expert in relation to the research and data collection, to avoid inadvertently creating a power differential between researcher and participants. Thus, instead the aim is creating democratic participation in the research (National Coordinating Centre for Public Engagement, Durham University 2012). This includes reducing academic jargon to demystify language and drawing on the skills and knowledge of both the participating HVs and parents by recognising personal and professional expertise and parenting experiences. Guarding against a halo effect is important (Mackey and Gass 2016) for participants to respond during data collection naturally, rather feeling inhibited by the researcher and not saying what they really think or want to say. Rather than an expert or superior, the researcher's role is that of a PhD student, placing equal status between the participants and the researcher. Following the cues of the participants provides them time to express themselves. Acting graciously, gratefully and professionally maintains a professional code (NMC 2020).

4.2. FINDING OUT WHAT COULD BE KNOWN ABOUT THE RESEARCH: Hermeneutic phenomenology – Heidegger (1889-1976)

Hermeneutics is:

“*The theory and practice of interpretation and understanding*” (Urmston and Johnathan (2005) in Charalambous 2010, Page 1284).

4.2.1. Hermeneutic phenomenology (HP)

The use of HP is increasing, as it helps to redefine health research by investigating context whilst focusing on meaning (Horrigan-Kelly et al. 2016). It explores individual values and beliefs (Charalambous 2010). van Manen (2010) emphasises careful and systematic components of reflection on the lived experience, although this is not binding or influencing as bias or prejudice, but rather systematically guiding the research whilst adhering to the principles of its philosophical methodology. Hermeneutic phenomenology underpins the research theoretically, fitting with interpretivism, the conceptual framework of social construction and a desire for interactive methods within the research. Using interactive methods of data collection complimented the underlying philosophy of HP. This is one of discovery of data and interpretation of that data. To interpret data both focus groups and semi structured interviews are used to gather it. Using focus groups in HP enabled participants to share their experiences with each other and the researcher. Although the use of focus groups as a method and HP as a methodology are highlighted as incompatible within the literature (Webb and Kevern 2001) justification for use is embedded in the desire for interaction that is undiluted (Bradbury-Jones, Sambrook and Irvine 2008). Similarly, using semi structured interviews to collect data, in the context of interpretative research i.e. HP enables the construction of data jointly between the participants and the researcher (Bradbury-Jones, Sambrook and Irvine 2008). Finally, using both these methods in the research, were a way of developing a much richer understanding of the phenomenon in focus than observations for example. The use of observation is also discussed in the context of the research in Chapter 5 page 119.

Heidegger (1889-1976) claimed to understand phenomenology more radically than his mentor, Husserl (Moran and Mooney 2010). His most important work, “*Being and Time*” (1962), investigates “*the meaning of being*” from an ontological perspective and is central to the development of HP (Horrigan-Kelly et al. 2016). He challenges Husserl's previous epistemological perspective as too descriptive, and implies that human beings are inseparable from their *lifeworld*, which is therefore the focus of research. Particularly, the *lifeworld* and individual narrative within this is the focus of the research (Lopez and Willis 2004). Heidegger believed that individuals are aware of their being and are able to establish

the meaning of this in their own world and in other people's worlds through questioning (Whitehead 2013). Four main concepts are identified within Heidegger's hermeneutics that add value for this research from an Interpretative perspective: being in the world or Dasein, fore-structures (part of Dasein), spatiality (space) and temporality (time) (Mackey 2005). Although overlapping concepts within each, they are explored separately for lucidity.

4.2.2. Being in the world: Heidegger's theoretical concept of hermeneutic cycle - Dasein (1927/1962)

"Dasein is in each case essentially its own possibility, it can, in its very being, choose itself and win itself; it can also lose itself and never win itself; or only seem to do"
Heidegger, 1962) Page 68.

Heidegger's circle of understanding in hermeneutics refers to the term "Dasein" or "human existence" (Heidegger 1962). Dasein is essentially "being in the world" (Heidegger 1962, Page 65). Heidegger's explanation of Dasein is: "*Human beings having the capacity to comprehend their own existence*" (Heidegger 1962, Page 67). Furthermore, understanding Heidegger's Dasein requires conceptualisation of two distinct yet interrelated parts, "*Being in*" and the "*World*" (Mackey 2005, Laforest et al. 2017). "*Being in*" refers to the world in which individuals find themselves; the context, environment and surroundings, the things we care about. Meanwhile, "*World*" a subjective coexistence with others in the environment where we exist and interact (Mackey 2005, Laforest et al. 2017). In research, Heidegger believes that being and world, i.e. *being-in-the-world* or *Dasein*, are inseparable (Cerbone 2009; Dreyfus and Wrathall 2007; Heidegger 1927/2011; Moran 2000 cited in Horrigan-Kelly et al. 2016, Mackey 2005). In keeping with a Heideggerian methodology, no deliberate intention separates beliefs, professional experience, and researcher role. Rather, embracing this during the research is through being authentic and self-aware, using the hermeneutic process to describe and interpret activities (Mackey 2005). Dasein, according to Heidegger (1962) is structured on the premise of fore-structure (Mackey 2005).

4.2.3. Fore-structure as Dasein

Fore-structure is a process of interpretation (Mackey 2005). Dasein is the term of reference used. Dasein consists of *fore-having*, *fore-sight* and *fore-conception* (Laforest et al. 2017) (Figure 4). The individual components of Dasein are hidden or not as obvious within Heidegger's theory (Mackey 2005). However, once the core concepts of Dasein are understood, this leads to discovery and insight by the researcher, via exploring "*being*" in the context of the research during data analysis and in the pursuit of understanding through interpretation (Mackey 2005). Fore-structure focuses on existing knowledge and knowhow,

prior awareness and influences, caring and truth (Mackey 2005). On a theoretical level the principles of fore-structure and positionality are similar, although the distinction lies in a perception of something more than prior knowledge or awareness of researcher positionality. Heidegger (1962) views Dasein as a deep and far-reaching activity focusing on development and expression of meaning, revealing the reality of interpretation in detail, which in turn leads to understanding, or in other words a full analysis (Mackey 2005).

Heidegger's (1962) circle of understanding in hermeneutics demands reflexivity throughout research and its application is a constant activity using the concept of Dasein. Figure 4 is Heidegger's theoretical concept of the hermeneutic circle – Dasein.

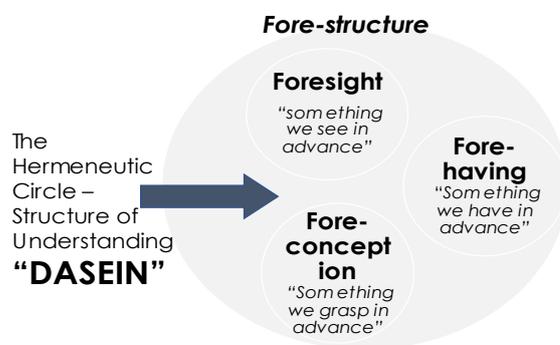


Figure 4: Heidegger's Theoretical Concept of the Hermeneutic Circle – Dasein

4.2.4. Temporality or time

In theoretical terms, time refers to "temporality", allowing individuals to exist through time, i.e. past, present or future (Heidegger 1962). For further clarity in relation to this research, present is associated with what happens in our past and what we expect to happen in our future (Mackey 2005). This "unity of time" gives us awareness of being in the world, or our very existence. Heidegger (1962) believed that time is the construct for understanding and interpreting (Mackey 2005). In other words, the researcher and participant experience is situated within the conduct of the research. This enables the researcher to consider the research findings and participant experience within a specific timeframe (Mackey 2005). As a researcher this methodological theory also suggests emphasis on a central belief in the importance of investment of sufficient time to interpret the research by focusing on

participants' rich descriptions (Mackey 2005), thus drawing prominent and meaningful detail to the fore. Time and space are also considered in the context of positionality through taking the time to focus on avoiding negatively or positively influencing the research process.

4.2.5. Spatiality or space

Space or "*spatiality*" (Heidegger 1962) is a factor that bases us as individuals in a specific environment (Mackey 2005). Within the research this means immersion in the research context and being able to draw out what is important about that context, because it is situational to the participants' world (Mackey 2005). Furthermore, it is fundamental to data collection. Taking the time to care, listen and show concern for participant experiences creates an awareness of what is important, or a priority, to them, which not readily transparent without paying the necessary attention that Interpretative research and hermeneutics offers (Mackey 2005). The relevance of spatiality carries forward from data collection to interpreting data corpus in the data analysis process. This works alongside a development of hermeneutic commentary.

4.2.6. Developing hermeneutic commentary (Conroy 2003)

What is useful about Heidegger's hermeneutics is the propensity for a developing hermeneutic commentary (Conroy 2003). Gaining research understanding in hermeneutics involves paying careful attention to every element of the participants' narrative by observing body language, cues, listening and questioning. Developing hermeneutic commentary is not a superficial activity, but a method of looking for meaning through interpretation. Therefore as a methodological theory it suits this research design. Hermeneutic commentary assists the thematic analysis of data corpus by enabling curiosity on the part of the researcher. It encourages careful questioning, listening, synchrony and searching beyond participants' spoken word to peer into their world (Conroy 2003). This means taking the participants' words beyond face value and discovering their "modes of engagement" and "modes of existence" (Heidegger 1967 cited in Conroy 2003 page 24). Developing hermeneutic commentary is discussed in greater detail as it applies to the research design in Chapter 5.

4.2.7. Criticisms of hermeneutic phenomenology

Nursing researchers adopt and apply HP in their research. However, critics cite a lack of adherence to its methodological basis, although appropriate methods are used (Leonard 1989; Lowenberg 1993; Walters, 1995; Draucker 1999 cited in Mackey 2005 Page 180;

Charalambous 2010). Crotty (1998) described a new phenomenology specific to nursing, a hybrid approach rather than pure phenomenology. This highlights a lack of methodological critique in the work of nurse researchers, alongside a difference in the way nurses interpret the original 19th Century philosophers, such as Heidegger (Barkway 2001; Dowling 2007). A limitation of HP is that core concepts are complex and difficult to understand (Laforest, Krol and Leblanc 2017; Horrigan-Kelly et al. 2016). It is questioned for value and contribution within nursing research (Melia 1982; Salsbeny et al. 1989; Holden 1991). Arguably, in nursing research it is operationalised in several ways (Draucker 1999). Variability relates to its underpinning philosophy, determining methodological process (Mackey 2005). However, a strong argument remains for using HP in this research.

4.2.8. An argument for Heidegger's hermeneutic phenomenology as research methodology

Although hermeneutic phenomenology is seemingly challenging and complex due to both common and unique components and a variety of traditions and orientations (van Manen and Adams 2010; Whitehead 2012; Errasti-Ibarrondo and Jordan 2018), as a methodology it provides a suitable framework, so a proper understanding of the research during its expedition is gained (van Manen and Adams 2010, Whitehead 2013). It is important that the research has propensity for gaining insight and interpretation, rather than merely describing human experience (Wilson 2014), and HP enables a view of the participants' world and what it means to be in this world in a new way. Using an incremental approach through a thematic analysis, interpreting and reinterpreting data makes *explicit what is implicit* (Plack 2005, Page 230). Understanding research data through the lens of HP provides enrichment, or "A sudden comprehension of the phenomenon being seen in a different light" (van Manen and Adams 2010 Page 451). Seeking understanding of the world of the participants through the *hermeneutic cycle* or *Dasein* enables exploration, so the research is an actual interpretation of the participants' interpretation.

4.2.9. The argument against bracketing

Phenomenological researchers are encouraged to undertake bracketing (transcendental reduction) as a fundamental element of hermeneutics to engage with the phenomenon in focus. This is essential for researchers to achieve objectivity (Petitmengin 2018, Finlay et al. 2008 Cited in Zahavi 2019a Page 10). Seemingly, a claim to phenomenological research cannot be made unless transcendental reduction occurs (Giorgi 2010). Making a proper claim to phenomenological research requires researchers to actively assume this by "disengaging from all past theories and knowledge" of the phenomenon in focus and "withholding existential assent of the phenomenon" (Giorgi 2010 cited in Zahavi 2019a). A

researcher requires an abstract view, free from conscious thought or preconception, ideas or opinions, so they do not impact the present study. Conscious thoughts and preconceptions, ideas or opinions require separating or setting aside prior to and during the research process (Carpenter 2007, van Manen and Adams 2010, Reiners 2010). However, bracketing and appresentation are technically difficult (Zahavi 2019a), thus suggesting potential for confusion and a disconnect between the concept (theory of how to) and practice (application of bracketing within the research). The "how to" of bracketing is less clear (Gearing 2004) and this is one of the reasons why it is not actively applied in research.

Previous nursing knowledge beliefs, culture, experience, and theoretical orientation are recognised as beneficial. Rather than deliberately withholding these by bracketing, there is no deliberate intention to separate them. Smith's (2018) cited in Zahavi (2019b age 901) argument for phenomenological research is that we should not be over prescriptive about what it is. Although this may be perceived as a lack of investment in the original phenomenological stance. However, expecting nursing researchers to understand, interpret and apply the concept of bracketing is not justified (Zahavi 2019b). So, misinterpreting key operational concepts can restrain research productivity, whilst grappling with a more conformist approach. Through bracketing remaining objective requires constant attention for bias and or preconceptions (Lopez and Willis 2004). Failing to understand the process inevitably impacts on research rigor, because it requires constant engagement in a process, so objectivity is achieved, simultaneous to learning *when* and *how* to do it. Furthermore, pre-understanding or self-positioning is a disadvantage if limited, untrue or open to misinterpretation (McCaffrey 2012; Laforest 2017). Rather than bracketing, subjective knowledge is utilised in the way that Laforest (2017) indicates as having familiarity with the research phenomenon and applying this to interpret and illuminate data corpus in a meaningful way. In doing so, it is possible to remain methodologically sound with continuous effort to reflect an interpretative stance, reaffirming HP as a good methodological choice.

4.3. SYMBOLIC INTERACTIONISM (SI) – Herbert Blumer (1990-1987)

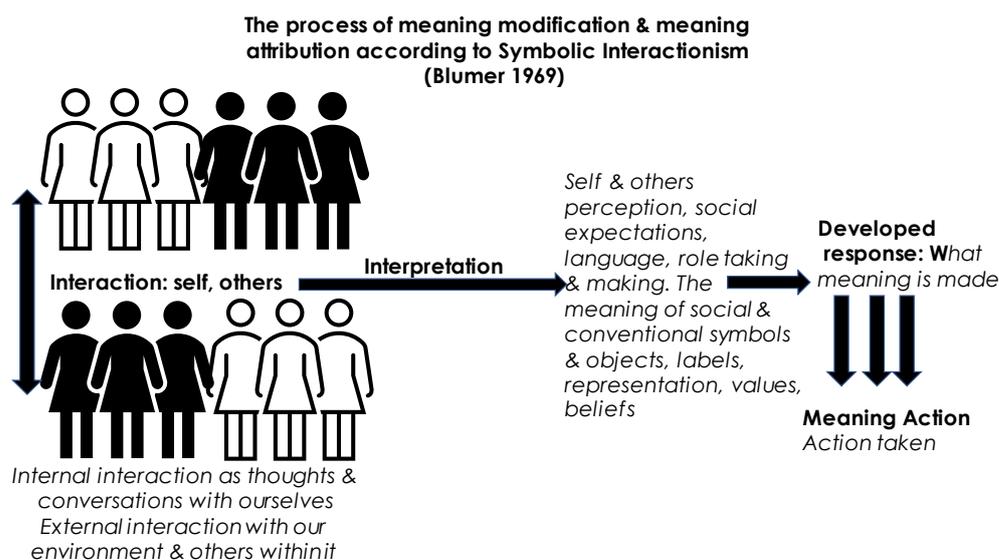
4.3.1. Theory of symbolic interactionism (SI)

Two opposing schools of thought emerge about SI, the University of Chicago (Herbert Blumer 1900-1987) and University of Iowa (Manfred Kuhn), each of which conceptualises SI differently. It is Blumer's perspective that is explored here, rather than independent contemporary symbolic interactionists or "Post-Blumerists" (Aksan and Kisac et al. 2009). SI is compelling for this research because it emphasises human interaction and individual development.

"It is through communication with others that we first learn about ourselves; and we continuously change ourselves to win the approval of these others" (Smith, A. 1759, Cited in Stryker 1980, Page 19).

Blumer's (1969) belief was one of individuals interacting socially by using significant symbols (Blumer 1969). Symbolic language is how we talk to ourselves. We interpret symbolic language to create meaningful communication with others (Redmond 2015). Many gestures or symbols are universal between the sender and recipient (Stryker 1980, 2002). Social acts occur in stages, for example reaching towards someone with a hand gesture indicates a subsequent interaction, and this is interpreted as either a precursor to pleasant or unpleasant contact with others. This conversation of gestures predicts others' behaviours. There are several components to SI, including the process of interaction, interpretation, developed response, meaning modification and meaning action (Blumer 1969). Recognition of symbols and language develops our sense of self, thought and meaning of everyday things, and hence our capacity to interact in the environment where we find ourselves (Redmond 2015).

Figure 5: Symbolic Interaction: Meaning Modification and Meaning Action



4.3.2. Criticisms of symbolic interactionism

SI was not always seen as a method, rather as a philosophical approach that lacked clarity of application (Kuhn, 1964 cited in Benzies and Allen, 2001, Page 546). Several of SI's key concepts originally lacked theoretical explicitness (Benzies and Allen 2001). Arguably, this leads to subsequent misinterpretation. Critics of Blumer's SI theory focus on its ambiguity, particularly around how the intrinsic concepts of self can be identified or even observed (Redmond 2015). SI is deemed less clearly structured than other methodologies (Snow 2001; Redmond 2015). Additionally, Blumer's three main guiding principles are criticised for being too narrow as they focus only on meaning and interpretation (Snow 2001). As a

methodology, SI has potential of failing to consider the social context of the research spatiality, or the wider environment, favouring meaning first and foremost (Aksan et al. 2009). However, further exploration and understanding of the theory and its application within the research demonstrates its worth.

4.3.3. Blumer's three basic premises of SI

Blumer's (1969) three basic premises relate to things we encounter every day (physical, social, or abstract) such as objects, people, impact of others on us, others' wants and needs. It includes how we categorise others and how we categorise societal institutions (Blumer 1969 Page 4). Blumer's (1969) theory enables understanding of the communication process within the research. How participants interact with each other is explored on three basic premises:

Premise 1: *"human beings act toward things on the basis of the meaning that the things have for them"*.

Premise 2: *"the process of interaction between people"*.

Premise 3: *"how individuals actioned this"*.

Within the research context there are many everyday physical and social encounters. Participants have their own wants and needs, individual and societal categorisation of each other, and environments and institutions that exist within the environment. However, each participant actions the process of interaction with others differently and has their own concept of meaning as a result.

4.3.4. The argument for Blumer's symbolic interactionism

SI is a powerful theoretical perspective for an Interpretative research design and suitable for this research (Oliver 2012, Meltzer, Petras and Reynolds (1975) cited in Handberg et al. 2015 (Page 1023). Despite some of the earlier criticisms, key concepts such as role identity have been redefined and redeveloped in Blumer's theory. This strengthens the initial concepts, making them more explicit (Benzies and Allen 2001) and thus increasingly transparent and more readily understood as useful to the research. Meaning making is a challenge to researchers because it requires them to make sense of what is meaningful from the data, and meaning then has to demonstrate a relationship to participants' actions (Handberg et al. 2015). Within the research, Blumer's (1969) guiding principles allow meaning making to be accessible, leading to greater understanding of the participants' thought processes, behaviour and subsequent actions. Additionally, as previously highlighted, SI has potential for

failing to consider the wider context of the research, focusing on meaning first and foremost (Aksan et al. 2009). This is not a disadvantage as HP as a further methodology complements SI, providing a more thorough theoretical perspective and application.

4.4. THE CONCEPT OF MEANING MAKING WITHIN THE RESEARCH

Traditionally, meaning is an intrinsic perspective of realism, influencing how we see ourselves, and think about things, feelings, and ideas (Blumer 1969). For Blumer, meaning was not reliant on intrinsic or psychological fundamentals, but emerges from elsewhere. He viewed meaning quite differently, and described it as having two stages. Stage one, the actor (or participant) engages in a process of communicating with him or herself.

“First the actor indicates to himself the things toward which he is acting; he has to point out to himself the things that have meaning” (Blumer 1969 Page 5).

In doing so, stage two occurs:

“Interpretation becomes a matter of handling meanings, where the actor selects, checks, suspends, regroupes and transforms meaning in the light of the situation in which he is placed and the direction of his action” (Blumer 1969 Page 5).

4.4.1. Applied concept of meaning making

Understanding and applying Blumer’s two stages of meaning making is crucial for research success. It enables an interpretation of findings about how parents make meaning of the actions and behaviours of HVs and how HVs make meaning of the actions and behaviour of parents, each within their perspective roles. This process of redirection and transformation leads to discovery of meaning through interpretation of symbolic language (Benzies and Allen 2001). Illuminating the interaction between parents and HVs results in a “State of Enlightenment” (Schwandt 1994, in Plack 2005, Page 129). There are two ways that participants interact with each other, both central to Blumer’s theory; “a conversation of gestures” (a non-symbolic interaction) and “use of significant symbols” (a symbolic interaction) (Handberg et al. 2015). The former is a reflex action, and the latter occurs as meaning and meaning action is shared between participants (Handberg et al. 2015).

4.4.2. Going beyond meaning making

Methodological discussion of limits of Blumer's three basic premises is that it is too narrow if focused only on meaning and interpretation (Snow 2001). Therefore, application of the underlying assumptions of SI, beyond the basic principles, adds theoretical adherence and rigor (Handberg et al. 2015). Several other concepts or root images provide further methodological adherence by offering greater definition in the research. Combining six separate root images into three categories for the purposes of the research provides a sharp focus, and a stronger argument for SI selection in the first instance. The process of combining and refining root images for the purposes of this research is outlined in Table 9.

Table 9: Blumer's six root images combined to become three

Root Image 1	Nature of Human Society or Human Group Life	1. Human Group Life and the Nature of Social Interaction
Root Image 2	Nature of Social Interaction	
Root Image 3	Nature of Objects	2. Objects & Nature of Human Action
Root Image 4	Nature of Human Action	
Root Image 5	The Human Being as an Acting Organism	3. Human Beings as Acting Organisms and Interlinkage of Action
Root Image 6	Interlinkage of Action	

4.4.3. Root image one (Blumer, 1969): Human group life and the nature of social interaction

As human beings we act on what others do during our interactions with them (Blumer 1969). This shapes and directs our own actions (Blumer 1969). In fact, social interaction is of vital importance (Blumer 1969). The social interaction of participants is clearly central to this research. This is understood to mean that participants act in the social context of their surroundings, i.e. in the clinic. Although participants are individual, they are also a group of

either parents or HVs. HV participants represent a Trust organisation and are bound by both social and cultural norms of the organisation, as well as professional policy and guidance. This is different from the social structure and cultural norms of parenting.

4.4.4. Root image 2 (Blumer 1969): Human beings as acting organisms and interlinkage of action

Blumer (1969) believed that society is comprised of individuals, and each decides what action to take based on the actions of others (Stryker 1980, 2002). However, this notion of individual and collective action is contested by more conventional sociologists proposing that society is not made up of individual actions or units, and instead it structurally determines any actions in the first instance (Stryker 1980, 2002). Actions are recognised through common understanding if the lines of collective action are clear. If unclear, collective action is prevented and interpretation has to be made before action is taken (Stryker 1980, 2002). Additionally, Blumer (1969) asserts that joint action occurs when individual characteristics are recognised as making up a whole act. It is unnecessary to break down the meaning of individual acts, for example what it means to be married or be a family, because there is recurring recognition of societal patterns for this joint action, and therefore existing understanding of individual and other actions.

4.4.5. Root image three (Blumer 1969): Objects and nature of human action

Blumer (1969) identified that socially constructed things relate to physical objects, such as furniture, items from nature (plants or trees) and human beings in predefined roles (teacher, mother, or shop assistant). Roles are categorised into different sets (friends, enemies, or institutions). Categories of objects have individual meaning for people based on how they define them, for example honesty or trust, and the activities of those around them, or wishes or desires, based on our individual and daily encounters (Blumer 1969 Page 2). The nature of human action results in a constant flow of situations requiring interpretation. This is visualised like a map of action lines, travelled by individuals or groups within society but not linear or continuous, perhaps stopping and starting or reckless based on the action taken (Blumer 1969).

4.4.6. Application of root images within the research

Participants within this research have individual pre-existing knowledge through socialisation and experience. This is understood as an important factor for grasping participant behaviour.

Being able to determine how participants conduct and represent themselves within society means not presuming or assuming that this is already understood. Additionally, the social context of the participants may be discounted based on general perceptions, rather than as individual to them. We all have general perceptions of others in society and a perception of how others see (Redmond 2015). This “*generalised other*” remains important for the research because it is responsible for our expectations of others’ behaviours, particularly within the roles they adopt, i.e. parent, HV or researcher. In turn, each also have subsequent role expectations.

Importantly, focusing on the key influential factors of the interaction determines common lines existing between participants in the data. The structures and patterns exposed identify common lines of understanding as clear between participants or if barriers or challenges prevent understanding, or have potential for interactions to be misinterpreted. The relevance of joint action for the participants links to pre-understanding of parenting and HV roles. When parenting or HV is a new occurrence, for example “first time mum” or “newly qualified HV”, joint action is hazier, and lines of action require forging before they become established. The relevance of human action in the research is based on the interpretation of the situation at hand, or how each participant defines and interprets “things”. This leads to an exploration of what is considered important to them. These “things” are the participant’s patterns of normality (Handberg et al. 2015) and are meaningful to them. This illuminates the participant wants and needs of the interaction within the clinic, particularly around infant weight. This takes the form of how they see their own and other’s roles and how these are categorised by individuals. Familiarity of symbols as a means of communication allows participants to anticipate what another’s course of action might be as a constant process of action and reaction (Redmond 2015), thus, according to Stryker (1980, 2002), illuminating how participants take the standpoint of others.

4.5. AN ARGUMENT FOR A BLENDED METHODOLOGY

There are similarities between SI and HP methodologies, and they have collective features (Starks and Trinidad 2007). Mackey and Gass (2015) refer to methodological triangulation as being the presence of different research methods or measures to carry out research on a particular phenomenon. This is interpreted in the research by utilising two methodologies, ensuring each is correctly understood in theoretical application with the belief that multiple methodologies increases credibility, transferability, and dependability. As complementary interpretative approaches, HP and SI enable exploration of the research from different perspectives and foster a micro-macro methodological strength in the research. Both have relevance to overall researcher positionality, axiological, ontological and epistemological

perspectives. Furthermore, SI is part of the early work of the social construction of reality (Burr 2015).

4.5.1. Hermeneutic phenomenology – enabling a macro (etic) perspective

As an interpretative methodology, HP enables us to know about the research by establishing data “thick and rich description” that is natural and holistic (Mackey and Gass 2015). This relates directly to participant experiences of self and everyday situational encounters within the lived experience (van Manen and Adams 2010). HP offers situated freedom to analyse the macro factors that impact on HV and parents from a wider sociocultural, environmental, and organisational perspective (Lopez and Willis 2004). It is acknowledged that HP can also interpret micro phenomenon associated with the research in a similar way to SI (Mackey and Gass 2015). However, interpretation of the experiences of HVs and parents within the wider context remains crucial for knowledge building on several different levels to reflect research findings. Understanding potential for public health action means considering the impact of the community more broadly and from an etic perspective. In this research an etic perspective means being cognisant of external impacts on participants, such as an organisation or culture. This is relevant to research positionality in Chapter 3 in that the researcher comes from an insider/outsider perspective peering into the participants' world, rather than being culturally embedded within it.

4.5.2. Symbolic interactionism – enabling a micro (emic) perspective

SI is a plausible complementary methodology to HP and perspectives from SI are also rich and variable in their application. Rehman (2018) identifies SI as suitable to gain a micro perspective for researchers because it concentrates on individual interaction and individual meaning. If this is ignored, the research is failing to acknowledge the importance of participants' behaviour. As the guiding principles are applied and the interaction between participants is interpreted, meaning is formed from participant behaviour (Blumer 1969). As a methodology, SI reveals meaning, actions and behaviour because actions are based on the meaning held. Despite criticism for ambiguity, and lack of clarity or structure (Redmond 2015), SI is significant to this research because it identifies and interprets participants' lines of action (Oliver 2012), and making meaning from the interaction enables subtle detail and / or nuances to emerge that have previously been hidden or unexplored in existing research.

How a micro-macro model methodological approach is depicted within an Interpretative research approach is outlined in Figure 6. This highlights the role of the theoretical

approaches of HP and SI and how an etic perspective involved a wider cultural context, policy and organisational delivery of services, for example (where and why). An emic perspective focused on revealing the finer detail, i.e. how the interaction presented in a given time and place.

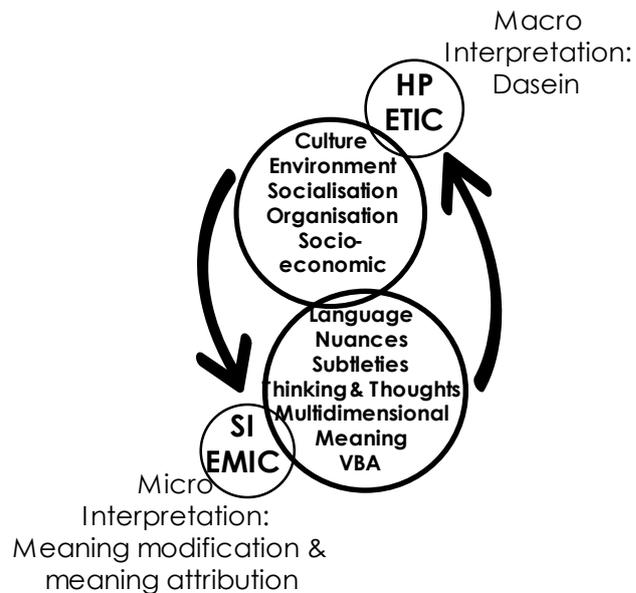


Figure 6: A methodological micro-macro research model

4.6. CHAPTER CONCLUSION

This chapter outlines research methodology, including research methods and theoretical underpinning. Several key components are discussed for transparency. Whereas Chapter 3 highlights how the research is conceptually framed, this chapter elaborates on the research strategy. This is important because the chapter demonstrates how the research methodology shapes the way the research is completed, demonstrating logical structure, and a relationship between social construction, methodology and methods. This requires understanding of any potential impact of researcher positionality on the research overall.

4.6.1. So what?

The interpretative approach that underpins the research helps development of suitable research questions and aims. Without methodological adherence, the research questions and aims are not achievable and the research itself risks lacking rigor. If it lacks rigor, the findings are questionable and the research in its entirety may be perceived as untrustworthy.

As the researcher, understanding what is required from the research, how the research is approached and why it is approached in a particular way is crucial. How, an Interpretative paradigm, theoretical perspectives, methodology, and methods (including data analysis outlined within Chapter 5) are used, so that the phenomenon of infant weight is understood in a particular time and in a particular context, is critical for success.

4.6.2. What now?

The interaction that occurs between participants is able to be captured by adhering to an Interpretative approach. Having both HP and SI enables demonstration of findings from both micro and macro perspectives, providing a mechanism for discovery of new knowledge from the research participants, whilst exploring it from two different theoretical approaches, thus maintaining a phenomenological stance. Chapter 5 further demonstrates research design, specifically how the thread of the Interpretative research was continually maintained. The chapter provides an account of adherence to ethical requirements as part of participant recruitment, methods of data collection and approach to data analysis.

CHAPTER 5: INTERPRETATIVE RESEARCH DESIGN

5.1. INTRODUCTION

Following Chapter 4, Interpretative Research Methodology, this chapter explores research design. The research involves several junctures in its development. Therefore, research planning, gaining ethical permissions, participant recruitment, sampling strategy, sample demographic, data collection and data analysis are an important inclusion. As is the process of dissemination of the research on completion. The core principles of the Framework for research ethics (FRE) (Economic and Social Research Council 2015) university guidelines and principles for Community-based research for public engagement (National Coordinating Centre for Public Engagement, and Durham University 2012) guide the research. Discussion starts with separating procedural and in-practice ethics. Each stage of ethical underpinning is explicit and adherence to ethical principles and standards is embedded in the discussion. Presentation and dissemination of research findings is part of ethical standards (Kara and Pickering 2017) and is also included.

Method of data analysis that manages the data across several stages provides transparency, and a thematic analysis (TA) leads to the research findings reported in Chapter 6. TA is adapted from Castleberry and Nolen's (2018) and Braun and Clark's (2006) frameworks. Castleberry and Nolen's (2018) framework has 5 stages for data analysis: *compiling, disassembling, reassembling, interpreting and concluding* (Castleberry and Nolen 2018). Braun and Clarke's (2006) framework has 6 stages, similar to those of Castleberry and Nolen. However, Braun and Clarke's model involves the development of diagrammatic accounts, and this is an approach that appeals to the researcher for a systematic, yet in-depth, data analysis process (Joffe 2012) that provides visual data analysis concept mapping. Additionally, the 6th stage of TA (Braun and Clark 2006) includes the process of writing an analysis in a way that is transparent, and convincing enough to "*tell the story of the research through the research themes*" (Braun and Clark 2006, Page 23). Both TA frameworks are compatible with the research paradigm of social construction, although they are not required to align completely with the epistemological or theoretical preface that underpins the research (Braun and Clarke 2006). However, they do systematically assist analysis of the research whilst providing theoretical freedom (Braun and Clarke 2006).

Additionally, focus groups and semi-structured interviews are critiqued as suitable interpretative research methods within the previous chapter (Chapter 4). However, how these are utilised to collect data is outlined in this chapter. Finally, embedding reflexivity within the discussion demonstrates researcher thought processes and considerations in real time.

5.1.1. Procedural ethics

"Ethics of research methodology requires a methodology of research ethics".
(Knottnerus and Tugwell 2018, Page 2).

Ethical approval is one of challenges of initialising a PhD, particularly for novice researchers bound by academic timelines. Initial ethics documentation to gain approval by Northumbria University ethics committee was submitted on 1st June 2016. A delay of 5 months resulted in approval on November 24th, 2016. Further ethical approval was granted through the Integrated Research Application System (IRAS), Health Research Authority (HRA) and Research Ethics Committee (REC). This includes the development of research documentation, for example informed consent forms, to support the research process and secure a local Trust research passport. This provides the means to complete research within the NHS. It adheres to any necessary ethical requirements and is central to researcher obligations.

There is an ethical distinction within the literature between *procedural ethics* and *ethics in practice* (Chiumento, Rahman and Frith 2020). Although the subheadings used in the writing of this chapter make a distinction between these, it is a theoretical one (Chiumento, Rahman and Frith 2020). Procedural ethics demonstrate that ethics documentation is completed appropriately, and is proof of conformity, compliance and research governance (Chiumento, Rahman and Frith 2020). Procedural ethics demonstrate a moral intent to act in a specific way during the research, i.e. with ethical probity. Simplistically, ethics determines what is done, what is asked, who is asked, who is asking, why it is being asked, where it is being asked and how it is being asked (Guta et al. 2013 Page 307). However, IRAS ethics documentation is more suited to positivist research than interpretivist research because it emphasises a scientific, physical harm reduction approach, less applicable to research of health and social science. However, ethics remains central to the research process because it enables mandatory requirements to be established and satisfactorily met. Procedural ethics is not viewed as a one-off task just to get approval (Ciuk and Latusek 2018). It reflects how the research is executed in practice with a basis of adherence to the core ethical principles mentioned.

5.1.2. In-practice ethics

As a researcher it is important to understand that interpretative research design is different to positivist research design. Interpretative research has data collection methods considered less structured in comparison (Traianou 2020) to positivist research. Interpretivist research in healthcare settings, such as the NHS, is proving to be challenging for researchers due to

requirements of navigating clinical areas where participants are reached (Guta 2013). Therefore, thinking and acting ethically within the research process in its entirety maintains the reputation and status of researchers, the reputation and status of the university and Trust organisations where recruitment and data collection takes place. Furthermore, it aids production of robust and authentic research. All researchers have ethical responsibilities of demonstrating that research findings are genuine and reflect data analysis (Gray 2009), and it is commonly acknowledged that research is to be conducted in an ethical manner because ethics is critically vital (Chiumento, Rahman and Frith 2020). Central to the research, ethical conduct involves ethical thinking and ethical decision making around the wider research issues. This means ethics is recognised and embedded throughout the research process, rather than only during data collection and analysis stages.

Doing this research ethically well creates findings to add to the body of research knowledge that exists around infant weight, childhood overweight and obesity, and knowledge transfer to similar health professional roles. *Making a difference* is considered ethically important if the research is beneficial to HV service delivery and / or workforce development in the research context of the NHS (National Coordinating Centre for Public Engagement, and Durham University 2012). Being autonomous and responsible, part of good ethical practice, includes being prepared to expect the unexpected (Silverman 2016) and there is a duty to uphold *personal integrity* when engaging with participants as members of the public (National Coordinating Centre for Public Engagement, and Durham University 2012).

As HV is a demanding role and parents juggle family and work life balance with parenting responsibilities, data collection was scheduled at convenient times and in convenient locations. This adhered to the ethical principle of “*justice*” (Gray 2009), is respectful to existent participant commitments, and caused as little disruption as possible to daily routines. “*Mutual respect*” is encouraged by being respectful to all participants, the general public and NHS staff that are not taking part in the research but are exposed to the researcher during recruitment and data collection (National Coordinating Centre for Public Engagement, and Durham University 2012). The literature acknowledges overweight and obesity in childhood is a sensitive subject to address, particularly if parents are considered overweight or obese themselves (Sjunnesstrand et al. 2019). This sensitive research focus requires careful non-judgmental approaches to communication with participants. Informing them of the type of questions potentially asked was important and it was stressed that no question was obligatory.

Doing this research ethically was not just for personal gain, i.e. improving career chances or choices, but was perceived to be beneficial to others with a vested interest, such as the professional organisations that advocate for improving public health of children and families.

Acting with integrity and ethical probity is required as a registered health professional by the Nursing and Midwifery Council, as directed by "The Code" for Professional Standards of Practice and Behaviour for Nurses, Midwives and Nursing Associates (NMC 2020). Overall, the research design and process adheres to the principles for community-based research for public engagement as these are considered good practice. They are utilised as a reminder and guide to remain aware of how to behave (National Coordinating Centre for Public Engagement, and Durham University 2012). As a researcher the responsibility is to avoid harm to participants, ensure informed consent, respect participants' autonomy and privacy and avoid deception during the lifecycle of the research (Gray 2009, Silverman 2016, Traianou 2020).

5.1.3. Avoiding harm

For interpretative research the term "harm" has multiple meanings, such as psychological distress, anxiety, loss of self-esteem, pain or physical injury (Traianou 2020). However, it is less likely that significant harm occurs to participants in an interpretivist research design (Traianou 2020). This research did not include participants from vulnerable groups. It did not present complex issues such as pseudo consent for lack of mental capacity or because participants are minors. Neither did it involve covert observation or intrusive procedures. Despite there being no risk of adverse medical effects, it remained paramount that any potential threat or risk of harm to all participants was minimal whilst carrying out the research (Silverman 2016). As a loan researcher, the onus of responsibility is clear and involves avoidance of participant harm, for example embarrassment, anxiety, emotional upset or distress. This requires the development of a robust research plan. A well-designed piece of research is key and avoids the risk of harm. Without this, research outcomes are not robust enough, and there is potential for research participants and the Trust organisation to feel disrespected. Poorly designed and executed research provides little benefit to those involved because results are questionable (Gray 2009). To prevent harm and ensure anonymity of participants, and participating organisations, as data collection takes place, identities are protected when findings are reported. How this is achieved is discussed further with the data collection and analysis section of this chapter.

5.1.4. Informed consent

The ability to maintain ethical principles through reflexivity, and understanding of and adherence to ethical standards, includes gaining voluntary informed consent (consent forms appendices 1 and 2). One of the limitations of the process of informed consent for

interpretivist approaches is that it is inherited from the consent process of positivism (Silverman 2016). However, obtaining informed consent for research has gained presidency to protect those involved, no matter what the research approach (Mumford 2018). Therefore, no assumption is made about participants being fully able to comprehend the research, i.e. fully informed consent is never guaranteed. That said, being aware of this fact makes for more ethical research that responds appropriately to any potential ethical issues raised. Silverman (2016) argues that participants never truly consent to how researchers portray or describe their contribution in the reported findings, therefore true consent is never achieved. It is also assumed that research participants do not read consent forms thoroughly and therefore do not effectively process them (Mumford 2018). The term *informed consent* is seen simply as consent in the minds of researchers, with emphasis on the word consent rather than consent process (Pierre 2018). To ensure that a consent process is valid in this research, 5 key areas of adherence, providing adequate information, participants' understanding of information, voluntariness of participation, competence and consent, are employed (Beauchamp and Childress 1989 in, Pierre 2018).

The principles of consent and autonomy are similar because autonomous choices of taking part in research are embedded in the following concepts: intention, understanding and an absence of controlling influences (Pierre 2018). Without careful consideration of these concepts guiding compliance for informed consent, research is not fulfilling ethical dictates of non-maleficence (Pierre 2018), beneficence or preventing researcher negligence. To safeguard participants, no coercion or pressure to take part in the research exists, and there is *sufficient information* relative to the adoption of a reasonable person standard for participants (Gray 2009, Silverman 2016, Pierre 2018). This translates to what information participants want and need to know before they agree to take part. Although the desire is for participants to understand the research in all its glory, we must be mindful that information that is not theoretical or jargon-laden takes precedence (Silverman 2016). Relevant and understandable information makes the research purpose explicit, so participants can make informed choices about consenting. Giving too much information may contaminate the research (Silverman 2016) by altering the behaviour of the participants so they conform or behave stereotypically, or because they feel targeted if perceived as overweight or obese, or if there is perception of infants being targeted in the same way. Both verbal and written information is provided to all participants about the research, prior to consent. This is clear, minimal and informative, confirming ethical approval, and the "what, why and how" of the research, including participants' roles. Detail about confidentiality, risks, benefits and capacity to opt out of being informed about research findings was also in the information sheets (Appendices 3 and 4). It was explicit that the "*right to withdraw*" at any

time during the research was without repercussion (National Coordinating Centre for Public Engagement, and Durham University 2012).

Successful research relies on participants agreeing to take part as consent is not obligatory, and no participant is pressured to engage. Being at the mercy of potential participants produces feelings of anxiety about subsequent recruitment to the research. Insufficient recruitment makes the research unlikely to be of high quality and no recruitment makes it impossible (Campbell et al. 2020, Page 658). This presents an ethical dilemma if impatient to commence recruitment and data collection stages, knowing that sufficient time must be allowed for potential participants to make the right decision for them, without interference, cajoling or influencing. This respects participants' dignity as individuals and as a group (Mumford 2018, Manti and Licari 2018). The researcher acknowledges that participants need to feel prepared, however several participants happily agreed to sign consent forms without taking the time to read the information provided. This "biased to act" or "get on with it" approach (Mumford 2018) results in participants not fully understanding the research, therefore there was strong encouragement to engage in the consent process thoroughly over a 7-day period, so participants can decide what is best for them. They are then more likely to invest in processing and making sense of the research they are signing up to (Mumford 2018).

Furthermore, the information for consent differs for parents and HV participants because of professional and lay backgrounds. For example, the term focus group and semi-structured interview is in HV information sheets, and group discussion or one-to-one interview is in parent information sheets. As key stakeholders, Trust managers and safe care leads were approached to consent to the research taking place in HV participants' working hours. As previously mentioned, there is a duty of care as the researcher, and as a health professional, to act appropriately if information is disclosed during the research, i.e. a parent or infant is at risk of harm or a HV breaches their professional code. This was highlighted to all participants in the information sheets. Participants wanting to report questionable researcher conduct if impacting negatively had contact details of an ethics lead as a person of responsibility.

5.2 SAMPLING STRATEGY

Sample size is as important in the research as planning, recruitment, data collection and data analysis stages (Malterud et al. 2016). Within the research design a transparent sampling strategy is developed, integral to the way the research is completed and reflecting

interpretative research approaches. Sampling strategy reflects the purpose and goals of the research, as well as methods of analysis (Malterud et al. 2016). It is productive enough to deliver reliable and conclusive research outputs and ensure sufficient quality information is gathered within the timescale of the research, the process of which is explored below.

5.2.1. Inclusion and exclusion criteria

Inclusion and exclusion criteria were appropriately developed, and an audit trail of participants enables a clear understanding and description of who was approached, who agreed to participate initially and who then consented and were subsequently involved. This increased research credibility by defining the rationale behind sampling (Campbell et al. 2020). Additionally, transferability and dependability of the research were enhanced because clear inclusion and exclusion criteria helped identify if research findings were beneficial and could be utilised in other local Trust areas where HVs and parents came together, and infants are weighed (Campbell et al. 2020). However, this did not mean that assumptions are made about finding similarities if the same research is repeated elsewhere using different participants, or in other Northeast locations (Campbell et al. 2020). Inclusion and exclusion criteria are considered contextual factors within the research and therefore a “full description of all contextual factors is required” (Guba 1981, in Campbell 2020 Page 675). Based on the inclusion and exclusion criteria in Table 10 (Page no limits were placed on the inclusion of HVs relating to level of professional experience and all parents were included no matter what parenting experiences they had. Inclusion and exclusion criteria are formulated to exclude or include participants appropriately whilst being flexible enough to allow sufficient numbers as eligible to take part.

Table 10: Inclusion and Exclusion Criteria

Inclusion and exclusion criteria			
Inclusion Criteria Sample Group 1: Health Visitors	Inclusion criteria Sample Group 2: Parents of infants 0-2	Exclusion criteria Sample Group 1: Health Visitors	Exclusion criteria for Sample Group 2: Parents of infants 0-2
<ul style="list-style-type: none"> - Active health visiting caseload within research Trust - Member of a health visiting team delivering the Healthy Child Programme - Access to and attendance at a 	<ul style="list-style-type: none"> - In receipt of the Healthy Child Programme - Parental responsibility for infants 0-2 years - Located in an area served by research Trust 	<ul style="list-style-type: none"> - No active health visiting caseload within research Trust - Not a member of the health visiting team delivering the Healthy Child Programme - No access to or attendance at a 	<ul style="list-style-type: none"> - Not in receipt of the Healthy Child Programme by health visiting services - Not caring for an infant's 0-2 years - Not located in an area served by research Trust

<p>child health clinic within research Trust</p> <p>- Capacity to refer specific infants with a weight or BMI above the 91st and or 98th centile through staff indication</p>	<p>- English as a first language</p> <p>- Parent over the age of 18 years</p>	<p>child health clinic within research Trust</p> <p>- No capacity to refer specific infants with a weight above the 91st and or 98th centile through staff indication</p>	<p>- English is not the first language</p> <p>- Through staff indication where there is safeguarding issues</p> <p>- Through staff indication where there is a weight or BMI below the 2nd centile</p> <p>- Parent under the age of 18 years</p>
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5.2.2. Purposive sampling

In qualitative research, authors are inclined to confuse sampling strategy and sample group by discussing them as one and emphasising sample demography rather than sampling strategy (Gentles and Vilches 2017). Interpretative sampling design is purposive and takes place within the context of the NHS, based on the inclusion and exclusion criteria. Purposive sampling is a common sampling strategy for interpretative research (Schensul 2011, in Campbell et al. 2020 page 656, Palinkas et al. 2015, Gentles et.al. 2015, Malterud 2016 et al. Farrugia 2019), and if limited resources are available (Malterud et al. 2016). Purposive sampling requires researcher judgement about the number of participants acceptable to yield desirable results (Sharma 2017). However, according to the literature the process and rationale for sampling this way is less transparent (Palinkas et al. 2015, Malterud et al. 2016). Nevertheless, purposive sampling is preferred because it aligns with interpretative methodology and reflects the axiology, epistemology and ontology of the research overall (Campbell et al. 2020). Rather than using probability or applied mathematics, sampling is based on a judgement of who provides the most likely method of achieving research goals of gathering rich data around the research focus of infant weight (Gray 2009, Palinkas et al. 2015, Etikan and Bala 2017, Campbell et al. 2020, Morse 2000 cited in Campbell 2020 page 658). Other sampling approaches, such as random or convenience sampling, are not suitable for the research methodology or interpretative paradigm underpinning the research as they are impractical (Gray 2009). Convenience sampling is faster, has non-specific participants, and sample size is usually larger than that used here (Malterud et.al. 2016). Again, this is not suitable to a lone researcher, the research context or the research focus because it did not provide desirable participants, but is instead more random.

Although purposive sampling is suited to the research approach, it is not without issues for consideration. Having a sampling approach that is based on researcher judgement can

introduce bias in comparison to other sampling techniques (Sharma 2017). Having explicit inclusion and exclusion criteria is one of the strategies to manage this bias. Additional to this are the approaches of robust underpinning of ethical probity, theoretical methodological adherence, research that is conceptually framed and research that has an information power approach. Given that the sample is determined by sampling and recruitment (Gentles and Vilches 2017), one of the challenges is not knowing how many participants are going to be involved, interested, willing or able. The variation range of the wider sample of HVs and parents from which a purposive sample is secured, is often unknown in the planning stages (Palinkas et al. 2015). Therefore, sampling requires a systematic approach.

5.2.3. Sampling, saturation and information power

As a novice researcher, finding a specific guideline for a worthy sample size is problematic. In fact, transparency in sampling process for interpretative research is generally poorly done (Gentles and Vilches 2017). Defining sample size in interpretative research seems vague, and one of the principles relies on having enough participants to meet the aims of the study and answer the research questions (Malterud et al. 2016, Farrugia 2019). Feasibility of sample size also relates to being a lone researcher with limited resources (Palinkas et al. 2015). The research did not seek to be representative of the general population of HVs or parents, however a sample that is too small may yield insufficient data and impact on research quality and outcomes. Equally, a large sample size may yield too much data, be harder to manage and overwhelm manual data analysis. This will result in superficial research findings or weak analysis, whereas a smaller, well-examined sample enables deeper exposure to the research context and the influences and dimensions of the phenomenon studied, in this case infant weight (Silverman 2016).

A systematic and transparent approach is used to sample. Transparency of sampling adds to research trustworthiness (Campbell et al. 2020) and this includes making transparent any decisions about sample size. However, this alone is insufficient for the process underneath sampling to be explicit. Sampling size reflects the research aims and objectives. Rather than feel defensive about the sample size, a smaller sample size is feasible and allows a more in-depth, interpretative understanding, rather than increasing breath of understanding. As the research progresses this is conceptualised as a spiral or cylindrical process that indicates when enough participants are reached based on the content of the data (Farrugia 2019). Whether or not those that participate represent the wider group of parents and HVs available is addressed by returning to the Trust areas to sample and re-sample potential participants at various dates, times and locations, and by reflecting on data already collected. When enough participants have consented, this is referred to in the literature as

sample saturation (Gentles et al. 2015, Palinkas et al. 2015). Sample saturation as an idea was first posed by Glaser and Strauss (1999) within grounded theory (Malterud et al. 2015). In order to claim sample saturation is achieved as an interpretative researcher it is important to understand when a large enough sample has been recruited, and to articulate the decision-making process underpinning this for transparency (Malterud et al. 2015). An information power model is used as a guide, and this enables a smaller sample size for the research based on narrow research aims and specific inclusion and exclusion criteria (Malterud et al. 2016).

Although the phenomenon of infant weight in the context of this research, and its aims and research question, is not well documented, a plethora of research theory and data is available about childhood overweight and obesity. Little available theoretical research about the research focus necessitates a larger sample size (Malterud et al. 2016). In essence, it is less about the number of participants taking part in the research and more about focussing on data quality obtained from them, and an appropriate sample size allows for this. Malterud et al. (2016) summarises this as the power of the sample rather than the size, meaning that a large sample size does not always mean quality data is gathered. However, this also depends on the quality of the communication between the participants and the researcher. This is primarily based in how focused and appropriate each other's communication skills are and how participants are made to feel by the researcher. Putting the participants at ease during data collection establishes a base for a fruitful relationship and one that is productive enough to collect useful data (Malterud et al. 2016). Although sample size did not seek to make generalisations, adopting an iterative approach of returning to data collection to *sample and then resample* (Palinkas et al. 2015, page 536) makes data significant enough to expose the nuances within the research, alongside relating to existing and unexplored social processes around the phenomenon of infant weight.

5.2.4. Participant recruitment strategy

Recruitment for interpretative research is considered a challenge even for experienced researchers, and not always transparent within the research design. Little guidance is available on how to do this effectively and issues can present at every stage of the recruitment journey (Jessiman 2013, Price 2020). To minimise this early in the process of designing the research and before recruitment commences, the process is logically mapped providing a transparent strategy to work with (Appendix 5: Mapping Research and Recruitment Strategy). Neglecting to plan appropriately is a misdemeanour (Jessiman 2013) and can limit recruitment or result in insufficient engagement or collaboration. Establishing

and developing trust in the researcher is a huge factor for participant recruitment (Jessiman 2013). As the core setting for the research is the NHS, rather than contravening University and HRA guidelines, no participant recruitment or data collection took place until full ethical approval was obtained. The NHS is selected first and foremost because it enables access to a number of different and suitable research participants within the context of a clinical environment. Although purposive sampling is the approach, there was an element of convenience involving recruitment here because child health clinics, attended by parents and led by HVs, are a standard part of service delivery within primary care. In fact, 90% of contact with NHS patients occurs in primary care settings (Hodes et al. 2021). This enables engagement with a convenient and easily-accessed NHS service, appropriately located and suited to the research. Recruitment therefore involves participants across three separate locations governed by one Trust (Labelled A, B, C). The Trust is situated in the Northeast of England.

Lone researchers are the first and only contact for participants, act as gatekeepers and are responsible for acting with ethical probity or risk negatively influencing participants during recruitment (Daly, Hannon and Brady, 2019). There is a commitment to equality and inclusion as an ethical principle (National Coordinating Centre for Public Engagement, and Durham University 2012) within the research by drawing on a range of participants from different backgrounds and from both socially deprived and affluent clinic locations. Bourke (2014) suggests that participants can feel marginalised if the researcher's socioeconomic status, background and beliefs somehow influence the interaction during and beyond recruitment. Recruitment is particularly difficult within the community among women and children (Rose et al. 2021). Therefore, during recruitment every effort was made not to be positioned as the academic expert in relation to the research because having an academic role within the University may be perceived as a position of power. Academic jargon was reduced to demystify language used. An emphasis was placed on being a PhD student, rather than academic, to help to draw on the skills and knowledge of parents as potential participants because personal and parenting experiences are valued.

Being mindful of this during recruitment and data collection was part of the recruitment strategy and no initial assumptions were made about participants wanting to be involved just because they met the inclusion and exclusion criteria and were invited to do so. No financial incentives were offered to participants that may be viewed as coercion (Jessiman 2013). Alternatively, financial remuneration, if available, may indicate a level of respect to participants for their time, effort and involvement. However, as a lone researcher this was not feasible because funding for incentives was not forthcoming or available. An open, non-threatening and respectful approach to communication with parents and HVs in clinic. Parent participants are only approached either before or after the infant has been weighed by the

HV during the clinic visit. This never occurred during the interaction. This avoided disruption to the flow of the clinic and to both parents and HVs. Parents were asked if they have sufficient time available to find out about the research. Using this checking mechanism enabled those who have time to stay and listen if they choose to and those who do not feel were open to disengage.

Initially, in planning the research, HVs as intermediaries had option to refer parents and infants into the study if overweight or obese according to the centile chart. HVs were interested to know more about the research, albeit without taking part during parental clinic recruitment sessions. In these conversations, several HVs expressed awareness of infants on caseloads within this category, however no infants were referred into the research this way. Although initially useful to boost recruitment activity, this can also introduce bias (Redsell and Cheater 2001, in Jessiman 2013, page 21). A general anxiety about potential repercussion on HV-parent relationships prevents HVs, although well positioned, to act as intermediaries in recruitment. Therefore, it was not pursued as part of ongoing recruitment. Potential for repercussion from parents is recognised as something that bothers HVs because the thought of engaging in the research in this way was expressed as discomfort. There was no desire to place undue pressure on HVs to refer parents of infants that meet the criterion and so the notion of HV referring parents and infants was quickly discarded. This notion of discomfort about referral has parallels with the literature outlined in chapter two. The importance of building and maintaining collaborative relationships between HVs and parents was evident as key (Willis et al. 2012). This also reflects further the findings in Chapter 6 when the therapeutic relationship around infant weight features in the discussion as *Subtheme: The therapeutic relationship around infant weight* and *Subheading: Avoiding the weight of blame*.

Several parents and HVs expressed an interest in participating when initially approached. The number of parents expressing interest was 35, 20 parents consented, and 14 parents participated in the research. Similarly, for HVs the number of HVs expressing an interest was 28, 22 consented and 20 HVs participated. The total number of participants was 34 (Table 11 Overall data recruitment).

Table 11: Overall data recruitment

Parent EOI	No. of parents consented	No. of parents participated	HV EOI	No. of HVs consented	No. of HVs participated
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35	20	14	28	22	20
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5.2.5. Stages of HV recruitment

Stage 1 of recruitment was making contact to arrange individual meetings with matrons and safe care leads across the research Trust and establishing permission to target localities. As gatekeepers to HV teams and information about suitable clinics in the research area it was important to share initial documentation with them relating to the research purpose. This was viewed as a marketing exercise as “buy in” to the research was the primary goal. Buy in is required across all three Trust locations for triangulation. Once established, initial information about the research was distributed to HV teams electronically, including a research flyer Appendix 6 and an introductory letter of invitation (Appendix 7). This initial distribution provides a “way in” to spark interest, followed by moving forward, as recruitment is managed face to face. This avoided any impression that the research was mandatory for HVs because it was actively introduced by safe care leads and matrons. However, having such individuals sanction the research was helpful to recruitment because it enabled quick access to a large group of relevant potential participants. Moving to face-to-face recruitment emphasised research participation as a voluntary activity and no undue pressure is placed on HVs to take part.

Stage 2 was a request to attend HV team meetings across the three localities within the participating Trust. These meetings are normal practice for HVs, and occur monthly. The research was presented to HVs in attendance, giving opportunity to hear more about it, receive information sheets, ask questions, and express an initial interest as a potential participant. Names and contact details were stored appropriately for future contact.

Stage 3 saw potential participants expressing an interest contacted individually. They were provided with opportunity to ask questions again, and to be positioned to make an informed choice about taking part. Opportunity to read and digest research information was seven days, after which they could decide to consent or not. Establishing consent includes an option to join either a focus group, or semi-structured interview. Table 11 is a record of recruitment activity of HVs.

Table 12: Record of recruitment activity - HV

Research Locality	Time	Activity	Date(s) attended	Number of HV EOI
A	15.30-16.30	Presented research at locality team meeting	07.03.18	10
B	09.00-10.00	Presented research at locality team meeting	30.04.18	8

C	09.30-10.30	Presented research at locality team meeting	04.07.18	10
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5.2.6. Stages of parent recruitment

Stage 1 was to maximise contact with parents and therefore potential recruitment of parent participants via busy clinics in the location were attended. A research flyer specifically for parents (Appendix 8) was distributed and displayed in local child health clinics to encourage recruitment of parents. It included a researcher photograph and contact details. Parents did not use the research flyer to enquire about the research, despite it being displayed prominently in several infant clinics as recruitment took place. However, this did not impact negatively on the recruitment overall. An introductory letter of invitation was also available (Appendix 9).

Stage 2 involved attending clinics across the three research areas within the Trust over a five-month period to actively engage parents. The timeframe was subject to workload schedule and commitments merging with dates and times of available clinics. Parents expressing an interest in taking part were provided an opportunity to read the information sheet. The research process was explained, and information was provided, both verbally and in writing. Between March and July 2018, seven clinics were attended for recruitment of parents. A consent form was also available, and parents were encouraged to take this home with them, giving time to consider if they want to take part. Contact names and details were recorded and appropriately stored.

Stage 3 involved a record of interested parents as potential participants reaching 35. Each parent was contacted individually either by text, phone or email depending on their preference, 5-7 days later for clarification of involvement. Those that expressed an interest and willingness to be involved were asked to complete voluntary informed consent. 20 consented and agreed to take part during the recruitment period. 14 took part. The reasons for the decrease in parent participants was either illness, and/or work life balance. Once the recruitment process was complete, convenient dates, and times were arranged for data collection within NHS premises using focus groups and semi-structured interviews. Table 13 is a record of recruitment activity of parents.

Table 13: Record of recruitment activity - parents

Research Locality A	Time	Date(s) attended	Number of parents EOI
Clinic 1	09.30-11.00	28.03.18	3

Clinic 2	13.30-15.00	28.03.18	3
Clinic 3	09.30-11.00	18.04.18	6
Research Locality B		Date(s) attended	Number of parents EOI
Clinic 4	09.00-11.00	22.05.18	8
Research Locality C		Date(s)	Number of parents EOI
Clinic 5	13.30-15.30	27.07.18	3
Clinic 6	09.30-11.30	10.07.18, 17.07.18	4
Clinic 7	09.30-11.30	05.07.18, 19.07.18	8

5.2.7. Participant profiles

All participants in the research had specific experience of infant weight, either as a parent of an infant (0-2) or as a HV, therefore they reflected the characteristics required for the research. Participants were a homogenous group, selected purposively because they share experiences of either attending child health clinics as parents with their infants for weighing or as HVs weighing infants whilst delivering and leading these clinics. In essence, personal or professional experience and perceptions of the phenomenon in focus, namely infant weight.

Parents: Some parents regularly attended child health clinic, and some were new attendees. At the time of the study, the timing of the introduction of weaning varied from 4 to 6 months. Infants older than 6 months were already weaning on entry to the research and weaning introduction was variable. Only one parent had waited until the infant was 6 months old and only 2 infants were not yet weaning. Table 14 presents parent profiles.

Table 14: Participant profiles – Parents

Participant number	Infant age	Participant number	Infant age
Parent 1	7/12	Parent 8	16/12
Parent 2	9/12	Parent 9	11/12
Parent 3	8/12	Parent 10	6/12
Parent 4	14/52	Parent 11	10/52
Parent 5	12/12	Parent 12	8/12
Parent 6	9/12	Parent 13	7/12
Parent 7	5/12	Parent 14	10/12

Participant profiles - HVs

HVs: Participants were employed by the healthcare Trust involved and worked across one of three localities identified as either A, B or C within that Trust. They had been in their HV roles

for a period of between 1-20 years and had a variety of past experience because of this. All but one were first level registered nurses and had completed a specialist qualification in health visiting. Three had completed a qualification to be practice assessors for health visiting students according to the student assessment and supervision standards (NMC 2018). All roles involved teaching, supporting and assessing students during their academic programmes. One participant was a nursery nurse (NN). No participants were excluded based on the number of years in the role, their experience, title or qualifications. Table 15 presents HV profiles.

Table 15: Participant profiles – HV

Participant number	Designation	Participant number	Designation
1	HV	11	HV
2	HV	12	HV
3	HV	13	HV
4	NN	14	HV
5	HV	15	HV
6	HV PA	16	HV
7	HV	17	HV
8	HV	18	HV
9	HV PA	19	HV
10	HV PA	20	HV

5.3. DATA COLLECTION

How quality is demonstrated across all stages of data collection is important. In interpretative research the terms credibility, neutrality or confirmability, consistency, dependability, applicability or transferability are essential, as trustworthiness, these elements demonstrate research quality (Jayasakara 2012). Methods of data collection complement interpretative research methodology and are “the most direct and straightforward” to use (Barrett and Twycross 2018; page 63). For data collection, 4 focus groups, (2 with HVs and 2 with parents) and 8 semi-structured interviews (4 with HVs and 4 with parents) take place. Justification for this is reflected in the literature as a way of maximising data collection in interpretative research by undertaking 4-6 focus groups (Jayasekara 2012).

5.3.1. Managing data collection

Parents and HVs were not mixed at data collection because of the risk of confidentially breach or creating an atmosphere where either parent or HV cannot speak freely. Data collection occurred prior to Covid restrictions and was face-to-face. Geographically, venues

for data collection were suited to the participants, rather than the researcher, and as highlighted earlier take place in NHS premises. Focus groups and semi-structured interviews were audio recorded with consent, handwritten notes were made in real time and all recordings were transcribed verbatim. This enabled "raw data" to be captured for later analysis (Morrison et al. 2019). In keeping with agreed definitions of privacy (National Coordinating Centre for Public Engagement, Durham University 2012) and ethical probity, mutual respect was encouraged, and acceptable behaviours and ground rules were identified and verbally agreed with participants prior to commencing data collection. Participants were productively engaged during data collection and a specific skill set was required by the researcher to achieve this. Firstly, this was to ensure not being perceived as being influential during data collection and secondly to develop a range of appropriate questions that were acceptable enough to avoid any miscommunication between researcher and participants (Mackey and Gass 2015).

Any specific concerns or questions were answered honestly and both parents and HVs as participants were treated equally. As discussed in the previous chapter (4), focus groups were planned as the initial method of data collection, followed by semi-structured interviews. On reflection, data collection was less structured and more ad-hoc than first imagined because semi-structured interviews took place before all focus groups were complete due to a combination of time constraints, workload and availability of researcher and participants. However, this did not impact negatively on the recruitment, data collection or analysis of the research because as recruitment was still taking place over the course of five months, data collection was ongoing as initial analysis commenced. This complemented the development of attaining sample saturation discussed earlier because it enabled a continuous appraisal of the situation and initial findings to be established. For democratic participation, parents and HVs were given the opportunity to share their views and encouraged to contribute equally during data collection. If participants became emotionally upset during data collection, precautionary steps were taken to delay data collection until participants decided if they wanted to continue (Silverman 2016). Time was also available for debrief should this be necessary. These steps resulted in a supportive and confidential arena as focus groups took place and discussion was generated because participants felt they were in a safe and comfortable environment.

Focus groups: Anywhere between 4-12 participants are considered optimal for focus groups to allow for discussion (Jayasekara 2012). In doing so, it is important to consider group dynamics and facilitation skills to further ensure that all participant voices have equal opportunity to be heard. Mechanisms for contribution, such as turn taking and listening, are

encouraged to promote respect for the values and beliefs of others. One of the benefits of focus groups is the group dynamic that is created, which reduces interviewer capacity to exert any power and / or influence (Jayasekara 2012). Having too many participants is actively avoided within the research design as large numbers in focus group can prevent participants from contributing within the time allowed or, perhaps, because they feel intimidated by other, more verbal participants. To assist data collection responses, open-ended questions were used in focus groups. Questions for focus groups were formulated and discussed at length with PhD supervisors, colleagues and piloted with a small number of HVs and parents for useability and appropriateness. This way they reflected the research aims overall. A specific set of broad open-ended questions were formulated for parents, focused on infant weight (Appendix 10 and 11), for example *“What kind of advice have you had from the HV in clinic about baby’s weight?”* or *“What do you talk about”*. Questions also clarify parent participants' responses, for example *“I want to make sure I have a clear picture of what you are saying, can you explain it again?”*

Negating any potential risks is part of a researcher role, therefore an onsite nursery nurse was available providing childcare for parent participants when focus groups took place during the clinic. Parents felt comfortable because they knew that infants were being cared for in their absence. Alternatively, they were welcomed to be present, and several parents opted to have their infants in the focus group. For HVs, focus groups took place during the working day and were prearranged to suit HV workload schedules. HV focus group questions were different to those for parents, focussing on their professional role as well as being open questions. This included, for example, *“What kind of advice do you give to parents during clinic about infant weight?”* or *“What do you think is the most important piece of information to give to parents in relation to infant weight?”*

Semi-structured interviews: Utilising semi-structured interviews enable flexibility and a data collection process that is less rigid than that based on a structured interview (McIntosh and Morse 2015). For HVs, semi-structured interview questions are phrased differently and focus on their role, for example, *“Describe your priorities in relation to infant weight?”* and *“How would you know if an infant was overweight or obese?”*, *“What do you think the role of the HV is around baby’s weight, overweight and obese babies?”* or *“What conversations do you and the HV have about baby’s weight in the clinic?”*, and as a probing question *“Tell me a little more about that?”* (Appendix 12: Semi-structured interview schedule – Parents; Appendix 13: Semi- structured interview schedule HVs). All infants attended parents' semi-structured interviews with them.

Research area	Activity	Date	No. of attendees	Designation
A	Focus group	25.04.18	8	HVs
B	Focus Group	23.05.18	8	HVs
A	Focus group	30.05.18	5	Parents

B	Focus group	05.06.18	5	Parents
B	Semi-Structured Interview	30.05.18	1	HV
A	Semi-Structured Interview	29.06.18	1	HV
C	Semi-Structured Interview	29.06.18	1	HV
A	Semi-Structured Interview	29.06.18	1	Parent
C	Semi-Structured Interview	04.07.18	1	Parent
C	Semi-Structured Interview	11.07.18	1	Parent
C	Semi-Structured Interview	12.07.18	1	Parent
C	Semi-Structured Interview	17.07.18	1	HV
Total number of participants			34	

Table 16: Record of data collection methods and total number of participants

Direct observations: Given the interpretative approach of this research, direct observations were considered as a possible data collection method. Observations are either participant or non-participant. In this research, observations would have been non-participant because the researcher was “*present but not part of the situation*” (Busetto 2020) (Page 3). The decision surrounding the potential use of direct observation of the interaction and why this was rejected early in the research design process was based on several key considerations. Firstly, the focus of being present in the clinic was one of recruitment. Recruitment to the research was the primary objective of being in the clinic, rather than gathering data. Data was gathered either in a separate room during the clinic, before or after clinic. Therefore, it was not feasible to include direct observations. Neither was it an objective to observe the interaction at that time. Secondly, having more than two data collection methods would have made data analysis more difficult and less manageable as a lone researcher. Thirdly, the approach of the research was interpretative, not ethnographic. Should ethnography have been the methodological approach rather than phenomenology, observations would have been a more likely choice because researchers are emersed within the clinical area. This was not a primary objective of the research. Finally, the focus of the research was interpreting the interaction between parents and HVs. Observations would have yielded data, however, FGs and semi structured interviews was preferable because they provided a greater level of flexibility, with the opportunity to ask probing questions, understand and expose the lived experience of the participants in order to meet the aims and objectives of the research.

Considering what counts as data warrants returning to Heidegger's (1962) theoretical concept of "Being in the World" or Dasein. In the context of the clinic where recruitment took place, direct observations as a method was rejected as indicated above. However as a previous HV "Being in the world" of the clinic during its delivery, and while recruitment took place had potential to provide a theoretical crossover between the principles of Dasein and researcher positionality. Additionally, opportunity for informal observations assisted in understanding how the clinic operated. It also presented sights and sounds that a previous HV with several years' experience was tuned into such as the use of language, tone of voice, body language and the knowledge to contribute and respond to parents, rather than sit in the background. With existing knowledge and knowhow, prior awareness and "Being in the World", was not used in this way, there was no desire to step out of my current "Being in the World" of academic and any observed data was distinct from how the research was perceived and contextualised within an interpretative paradigm as a PhD student. As previously mentioned (4.4.2.) Heidegger (1962) viewed Dasein as a deep and far-reaching activity focusing on development and expression of meaning. Informal observations, although interesting, did not present a detailed reality for interpretation or understanding of the research in context. In terms of data, they did not contribute to the full analysis that took place within the research, were not recorded or interpreted. Heidegger's (1962) Dasein demanded reflexivity as a constant activity throughout the research for application. Informal observations resulted in self-reflection as a previous HV rather than reflexivity of "Being in the World" and therefore in this research did not count as data. It was not considered part of building quality and rigor into data collection, explored below.

5.3.2. Building quality and rigor into data collection

As a lone researcher, responsible for each stage of the research, there is potential for researcher bias during data collection (Miles and Huberman 1994). However, there are several ways this is addressed to reduce the scope for bias and increase research rigor. On-the-spot member checking is in operation throughout data collection as a method of building trustworthiness and credibility into the research (Birt and Scott et al. 2016). This acknowledges that credibility is dependent on correctly describing what participants have said (Lincoln and Guba 1985). Once clarified, it means that it has been accurately understood by the researcher, thus accuracy is determined, and participant responses are validated (Birt and Scott et al. 2016). Member checking increases research rigour and credibility if it involves this check-back mechanism (Guba 1981 cited in Campbell et al. 2020 page 657). Participants have opportunity to recount what they say when asked to explain further by the researcher. Understanding and interpreting meaning fully is a method of hearing participants' voices, rather than assuming understanding. Therefore, further exposure

of participants' meaning contributing to the research. This identifies correct interpretations and rules out assumptions. It also gives participants opportunity to re-word, embellish or retract what they have said. Establishing clear meaning is necessary because meaning is attributable to the findings of the research in a co-constructive way (Doyle 2007, in Birt and Scott et al. Page 1805). There is criticisms of member checking as an activity and its value has been doubted (Birt and Scott et al. 2016). However, it is listed as a quality marker by the Consolidated criteria for reporting qualitative research (COREQ) (Birt and Scott et al. 2016). The COREQ quality check list was used at the proposal stage of the research and, therefore, member checking was inherent as part of maintaining research quality.

Data collection is triangulated because it involves collection across three localities (A, B, and C). Each focus group or semi-structured interview was allocated a number and code and all identification of location was removed. Two data collection methods and two separate participant groups enabled rich and detailed data around the interaction occurring between participants about infant weight to be heard. This brought the voice of all participants into the research (Jayasekara 2012, Mackey and Gass 2015). Overall, this supported credibility, transferability, and dependability of the research (Mackey and Gass 2015) because it demonstrated triangulation as a way of adding rigor to research findings (Kidd and Parshall 2000).

5.4. DATA ANALYSIS

Data analysis was manual and undertaken from the single perspective of the researcher. No software programme was used as technical support as this is only useful for organising data, rather than analysing data (Castleberry and Nolen 2018). Additionally, finding the time to figure out the software package is time consuming in itself. Manual data analysis sees the whole inductive data analysis process as owned by the researcher from start to finish.

Owning the data is an attractive proposition because it represents continual engagement and familiarisation. As previously noted, data was analysed using thematic analysis (TA), a common method of analysing interpretative data. TA is defined as; *“a method of identifying, analysing and reporting patterns (themes) within data”* (Castleberry and Nolen 2018, Page 808), and in this case used diagrammatic accounts of analysis and comprised of six similar phases (Braun and Clarke 2006).

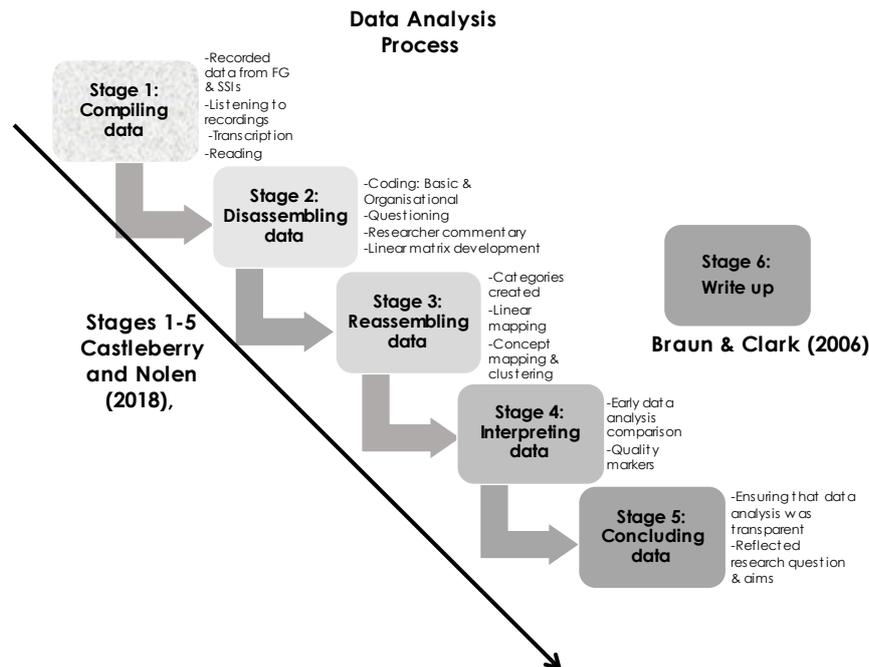


Figure 7: Thematic analysis (Adapted from Castleberry and Nolen (2018), Braun & Clark (2006)).

5.4.1. Building quality and rigor into data analysis

As part of interpretative research, several stages assist the production of a quality analysis, recognising that quality is not always achieved unless analysis is methodically robust (Castleberry and Nolen 2018). Without the data analysis process being clearly demarcated, research findings are questioned for trustworthiness or credibility (Castleberry and Nolen 2018). Analysis commences as soon as data collection commences. That way, interim findings are established (Appendix 30). Early data collection is then compared for similarities with subsequent data collection. This promotes internal consistency of the analysis process as similarities are found (Castleberry and Nolen 2018). This activity involves a process whereby any adjustments to data collection are made, for example questions posed to participants acknowledging a need for additional questions or rephrasing existing questions for a chance of a more robust response. Formulation of additional questions did follow initial data collection and analysis.

Using intra-coder reliability is a level of internal consistency and method that develops a level of confidence in the coding process (Castleberry and Nolen 2018). It removes the risk of participants being unduly influenced by the researcher and enables subsequent findings to be defended if questioned (Castleberry and Nolen 2018). Having more than one coder can increase consistency of the data analysis (Castleberry and Nolen 2018). For lone researchers and PhD students, this is not practical or achievable. Combatting this is done through being diligent about note taking, documenting the data analysis process and using verbatim quotes in reporting findings for transparency and dependability (Castleberry and Nolen

2018). A further caveat is that of recall (Mackey and Glass 2015), as participants have potential for inaccurate recall. Remaining subjective during data analysis avoids the impact of this (Hall and Rist 1999 cited in Mackey and Gass 2015, Page 226) and is a method of building quality into the research.

Member checking in interpretative research occurs during data analysis by offering participants opportunity to share discussion of their transcript with the researcher. Although it enables participants to confirm, modify or add further information or insight, or challenge meaning, having the researcher present whilst this occurs can signal coercion and make it difficult for participants to feel able to disagree with the interpretation (Carlson 2010). Furthermore, although appropriate, it requires further analysis if new data is added as a result (Harvey 2015). Overall, it does not provide further trustworthiness of data corpus unless combined with the overall analysis (Harvey 2015). Confidentiality and anonymity of people, place and organisations protects both the researcher, participants, local Trust organisation and university, where ethical permissions are granted (National Coordinating Centre for Public Engagement, Durham University 2012). Also, the process and progress of data analysis is subject to internal scrutiny by PhD supervisors at regular and consistent intervals during the research process, where feedback and guidance is provided and actioned. Data corpus remains anonymised in order that no participant contribution is identified.

During data analysis, methodological theory of HP is used to interpret data corpus. This includes development of hermeneutic commentary to further enable research rigor. Time is taken to listen to recordings carefully and take note of any nuances, the way speech and language is used within the conversation, similarities and differences between participants' perspectives, and their values, beliefs and past experiences. In addition, it also highlights the search for the things that cause participants anxiety or elicit emotion and those that are initially hidden from view to be revealed (Conroy 2003). Understanding what is said is so important, therefore, as well as member checking, *precis* also occurs where the words of the participants and the researcher came together as one (Conroy 2003). Heidegger's (1962) *Modes of engagement* and *Modes of existence* signify this approach of searching beneath the spoken word to discover what the participants' data is really saying.

SI theory is also utilised during data analysis by unpicking the interaction that takes place by focusing on "conversation of gestures" and use of "significant symbols and language" by participants (Blumer 1969). Role making and role taking are considered to understand how social encounters take place and are interpreted. Overall, the process of developing and demonstrating trustworthiness is evident in Table 16.

Table 17: Developing & Demonstrating Trustworthiness (Lincoln and Guba 1985)

Developing & Demonstrating Trustworthiness (Lincoln & Guba 1985)		
Criterion	Strategy	How defined
Credibility through triangulation	Different data sources, reduces bias Different methods of data collection for cross site consistency	Three localities across one NHS Trust and 2 sets of participants 2 x methods semi-structured interviews and focus groups
Credibility through plausible truth	Integrity of findings as they represent an honest representation of raw data collected Researcher self-awareness	Interpretative methodology, audit of data collection and analysis process. Adherence to TA and demonstration of this process through each stage
Credibility through member check	On the spot member checking	Checking interpretation of meaning with participants to increase strength of data
Transferability	Development of "thick descriptive" data	Demonstrated more than participant behaviour and experience, accounting for context by making meaning explicit within the findings Capacity of findings of research to be used in other public health settings Purposeful sampling (Korstjens & Moser 2018). Specific participant thought to be able to answer the research questions (Anney 2015)
Dependability	Code-recode	Returning to initial coding activity and recoding and finding the same level of consistency in the data
Confirmability	Visible evidence	Audit trail of the research process, Journaling, making the research process transparent by maintaining an account of the steps
Consistency	Objectivity	Interpretation reflects raw data
Reflexivity	Journaling, peer review and discussion, reading, critique and supervision	Exploring positionality, concepts of reality and assumptions. Impact of self on the research, reflexivity. Reflection through conceptual mapping

5.4.2 Advantages and disadvantages of TA

TA is utilised for data analysis to ensure trustworthiness and credibility is maintained. However, there is a lack of agreement regarding how to do TA and what TA is as a credible approach

to data analysis, in the same way as grounded theory for example (Braun and Clarke 2006). Nevertheless, it provides flexibility and is recommended for novice interpretative researchers. Although flexible, it has potential to provide rich and detailed data if used methodically (Braun and Clarke 2006). TA also enables meaning to be established about the research focus, i.e. the phenomenon of infant weight, by illuminating participants' thinking, feeling and behaviour (Joffe 2012). Having an inductive approach means that themes emerge from the data rather than from existing theory (Braun and Clarke 2006). Themes are perceived as specific and are recognised by their meaning pattern, in that they are directly observed across the transcripts, for example participants' emotional triggers. Latent themes are also in focus, for example how emotion made the participants act or react as a result of the interaction around infant weight (Joffe 2012). As an initial method TA develops fundamental interpretative analysis skills for later practice (Braun and Clarke 2006). However, it has been perceived as lacking in rigour if each stage of the process of analysis is not transparent or detailed enough (Castleberry and Nolen 2018). Used advantageously, it clearly demonstrates the analysis process at each stage within this research.

5.4.3. Stage 1: Compiling data

Pragmatically, participant data sets were separated for analysis and two sets of findings were developed from the research (Parents and HVs). Two findings chapters were initially written as findings emerged from the data. However, they were merged into one chapter as the thesis developed more fully. Completing a comprehensive TA involves being deeply engaging with the data. In order to achieve this, data corpus from focus groups and semi-structured interviews was shaped into something useful and concrete. Focus groups and semi-structured interviews were recorded with participants' consent and saved in accordance with GDPR and university guidance. It is acknowledged that a deep and meaningful analysis of the data was required, therefore handwritten notes made in real time aid familiarity and, once data collection is complete, each recording is listened to several times. Self-transcribing is another method to gain a first opportunity for familiarity (Castleberry and Nolen 2018). However, rather than self-transcription, funding was available for an in-house transcribing service, and this was used pragmatically to save time. Data familiarity was achieved by moving through the stages of the analysis to enable a robust and consistent approach to be demonstrated. Once all recorded data was transcribed, data corpus became transparent, accessible, and pragmatic, because it was visualised in its entirety. This helicopter view of the raw data as visually accessible is a way of transferring recorded transcriptions to a useable data format for the next stage of the thematic analysis, when data corpus is disassembled through coding (Castleberry and Nolen 2018).

5.4.4. Stage 2: Disassembling data

Coding is *"The process by which raw data are gradually converted into usable data through the identification of themes, concepts or ideas that have some connection with each other"* (Castleberry and Nolen 2018, Page 808).

Rather than having coding already established, i.e. *a priori* data corpus is disassembled by a process of coding that is created during data analysis. This inductive analysis process means moving the data from its current format to something more manageable and meaningful by separating its different components (Castleberry and Nolen 2018). This process involves a questioning approach to data analysis. This is when meaning begins to emerge from the data. In adhering to HP, a number of questions were posed in order to code the data in a meaningful way, based on *"what"*, *"who"* *"where"*, *"when"* and *"how"* (Castleberry and Nolen 2018). For example, asking questions like *"What is actually going on here?"*, *"What does this mean?"*, *"How does this process work?"*, *"Who is involved and what do they do?"* and *"What is the data showing"* are part of the development of hermeneutic commentary again as *"Modes of engagement and Modes of existence"* (Heidegger 1962). These types of questions are necessary to draw out the content of the transcripts, and register similarities, differences or contradictions, to illuminate patterns or connections that can be labelled or coded (Castleberry and Nolen 2018). This level of cognitive questioning takes place to ascertain if what is said in the transcript reflects the empirical literature or demonstrates variation in the level of knowledge, understanding or influences between participants' voices based on the data. Where transcripts highlight something of interest, such as a potential issue, a similarity, problem or concern that is consistent across the data set, this is noted. It includes sentences or whole paragraphs within and across all transcripts. These areas of the transcripts are highlighted in bold to signify the presence of a deeper analysis of something that is potentially meaningful at this stage in the dissemination of the data collected. Where transcript text is highlighted in bold, researcher commentary is included. This is highlighted in yellow, based on the cognitive questioning process and further demonstrates the process of analysis. Examples of this are provided within Figure 8.

Once annotated electronically, all recorded transcriptions are printed on A3 paper. Having each transcription printed as a hard copy is a way of visually compiling and organising data for the next stage of analysis. It is then easier to present transcripts alongside each other if necessary to further note similarities and possible codes. This process demonstrates reliability of the analysis process (Castleberry and Nolen 2018). It is consistent, and completed in several stages and acts as an audit trail of data analysis activity. It is a structured way of managing the data in its initial stages of analysis and something tangible that can be referred back to if or when necessary. At this stage in the data analysis process, a systematic approach to analysing all transcripts was adopted and described as a manageable method

that identifies the initial content that firstly sparked researcher interest, secondly was also perceived as important or meaningful, and thirdly signified how familiarisation with the data was achieved. It enabled basic codes to become organisational codes, and these are labelled as such.

Basic codes and organisational codes were mapped against each other across all transcripts and allocated the same number in order that the origin and relationship was transparent. This highlighted the initial process of grouping and defining separate codes together to become what Castleberry and Nolen (2018) label as “higher order codes”. This was also a method of recording the data analysis process in real time for the purposes of audit. The organisational codes as definitions became the descriptors of the basic codes, as a more meaningful and manageable version of the basic codes previously established. A preview of this activity as part of data analysis is demonstrated in Figure 9. Using tables, initially reduced the data down through the development of a number of linear matrix. The process of data analysis is located in Appendices 14-29. It is also important to keep referring back to the research questions and aims to be reminded of these whilst developing any codes, and so these were highlighted at the top of the documentation for consistent referencing. Organisational codes were revisited as coding developed so that any earlier and initial data (June/July 2018) were coded in exactly the same way as any subsequent data obtained (November 2018). This ensured that there were similarities between any early code development and later development of the same. Once no new codes were apparent or emerging from all data collected, this stage of the analysis was considered complete (Castleberry and Nolen 2018).

As well as developing basic codes to organisational codes, a matching numbering system was utilised, as demonstrated in Figures 9 and 10. Annotating the transcript notes further demonstrated how data was perceived and analysed using a questioning approach. It created first impressions of what data may suggest and what is happening. Gaining initial impressions involved being curious about the data, asking specific questions as part of the coding process (Castleberry and Nolen 2018). Additionally, any new codes that emerged were noted as such. This was recognised as a way to identify if any new data had emerged.

Figure 8: Example of initial data analysis: Disassembling stage

1 FG One Health Visitors CLSTS

2

3 I: The focus of the group this morning is to think about the conversations that take place between health visitors and parents around infant weight particularly overweight and obesity so that is going to be the focus so if we think about the context being

4 the health child programme what are your experiences just to start off really of delivering the healthy child programme in relation to infant weight?

5 P: *Experiences of training* because it is different.

6 I: Your experiences but if you want to talk about training that is fine.

7 P: The *first experience is as student and watching what other people do*, have opportunities to go to other areas for example to see what the nutritionists and *paediatricians* are recommending.

8 P: I think certainly with *experiences* a lot of it is in *clinics*, we deliver a lot of *the healthy child programmes in clinic* and it tends to be a *parent's request for information* even though we do our *standard visits infant feeding is a massive part of that in*

9 *the ante natal period* for pretty much every contact where we do *increasingly get asked a lot of questions around feeding in clinic contacts*.

10 P: I have been to a few clinics really and that is almost without fail.

11 P: *Weight is an issue for parents* but it is sometimes to ascertain what their concerns are *they seem to be preoccupied with it* without always *understanding* what the *growth* of a baby should be so sometimes it is a *challenge to try and interpret what*

12 *the growth of the baby should be* and what *their expectations of feeding and weight and growth they are sometimes poles apart so it is a challenge*. Researcher commentary: Where does the notion that parents are preoccupied with weight come

13 *from? HVs highlighting challenges between the parent's expectations, knowledge and understanding of infant growth and their own knowledge and understanding; "poles apart" How do HVs manage this?*

14 P: I think it also starts off from the *ante natal period and being proactive*. I think *as a society* we are very much *led by specialists and professionals* and at *ante natal visits* I will constantly find out that there has been *no preparatory work* at weeks 28

15 to 32 done by either prospective parent so you find you encourage them to actually do background reading and giving them all the appropriate insight.

16 P: In relation to how they are going to feed are you meaning?

17 P: In relation to *how they are going to feel about anything in reality with regard to the birth of their baby to parenting*.

18 P: That *influences the feeding habits* of the baby doesn't it.

19 P: So if you are getting to a stage where there could in some cases be *ignorance once that baby is born and then the shock of the baby being born the immense peer pressure from grandparents* ??? everybody else they start to compare and then you

20 have to actually, well *you cannot sit them down in clinics and talk about genetics*. Researcher commentary lines 19-27: "Poles apart continued" HVs highlighting societal influences as a challenge to themselves as professional specialists (seeing

21 *themselves as this*) versus ill-prepared parents sometimes ignorant and shocked parents new to parenthood and more likely to be influenced not by professional specialists, by society, peer pressure and close family. *Contradiction is that feeding infants*

22 *and parenting in general appears to be led by professional specialist however, in reality it is related to other strongly influencing factors*.

23 P: In the *primary visit* I explain the *centiles* and I always say remember they are looking at *the line* they are *not looking at the weight* and you will think XXXX said that and you will remember this conversation so that *they are not thinking of amounts of*

24 *weight they are looking at whether they are following the centile* for hopefully when they then come to *clinic* so when I see them in *clinic they will say that is not a lot to put on or is that too much* and I will say remember what we said at primary and

25 we go back to the *primary visit*. Researcher commentary: HVs demonstrating reinforcing strategies as a means of giving information and reassuring parents.

26 I: So that is your experience looking at the centiles and talking to parents at primary, do you think that is something that most of the team do?

27 P: We all have the same *training* about when they *introduced the new growth charts* so there shouldn't be a lot of *disparity* about the *information given* about the interpretation of the chart and what it means. *I would like to think we have*

28 *standardised information but maybe the style of how it is delivered may vary* but we were all given the same training on understanding the growth.

29 I: it is just when you said the pre occupied which is really interested.

30 P: I think it is a *culture, big robust babies* are associated with health rather than Researcher commentary: highlighting how culture influences parents and HV views on infant weight.

31 P: It is such an *emotive issue feeding as well* it seems like that *is what informs parents that they are doing a good job* if they are *putting lots of weight on the are growing and it really enforces well I am a good parent*. Researcher commentary: Weight

32 *increase = good parenting* Do parents withdraw from clinic and weighing infants if weight is highlighted as an issue because they see themselves first and foremost as a good parents and it is this notion that the HV challenges?

33 P: We have the other ones who are the *other extreme* who are the *vegans* and always being on a *diet themselves* who are then *really concerned if the baby puts on weight* there is *not really that healthy middle ground*. Researcher commentary:

34 *Societal influences and no middle ground* "two extremes poles apart" parents with overweight or obese infants versus parents concerned about any weight gain. Continues the parents are preoccupied with weight notion.

35 P: I agree that what I tend to do in my *primary visit* is I will view the day 10 weight so what you are doing you are *taking over from the midwife* so we all know and I think if *it all comes from the same sheet would be great but that doesn't always work*

36 *so you are overtaking from the midwife so I would reflect to the family that the baby would typically be expected to lose a little bit of weight so everybody is going to be saying that so by day 14 the baby normally regains that birthweight so look to the*

Figure 9: Example excerpt of basic and organisational code development Focus group 1, HVs

<p>Research Question: "What conversations take place between HVs and parents in relation to infant weight in the delivery of the HCP?"</p> <p>Research Aims: 1. How and what public health communication occurs around infant weight between HVs and parents in HV practice? 2. What key factors, if any, need to be in place for public health communication regarding infant weight to occur? 3. How do key factors influence public health communication between HVs and parents in relation to infant weight?</p> <p>November 2018 FG1HV</p>	
<p>Basic Codes</p> <p>1. Experience, Training, Giving information, Healthy Child Programme, Standard visits, Growth & Growth charts, Understanding & interpreting infant growth, Standardised information, Primary visit, Being proactive, Antenatal visits, taking over from the midwife, Assessment, Measuring and recording head circumference and assessing proportion, Questioning & exploring feeding habits, routines, Providing reassurance to parents, weighing infants, Recognising normal growth patterns, Highly qualified specialist nurses, Understanding anatomy & physiology of an infant's gut and the impact of overfeeding with formula, Understanding genetics, Recognising overfeeding of infants, Advising on weaning, Being public health practitioners, On show to parents, and influential, HV requires a user-friendly approach and professional way, Experts who have the knowledge & background about overweight & obesity, providing support to parents, not just giving information, Named HV maintains partnership with parents, Preventative, Monitoring, Assessment for provision of Universal service-what level?, Trained to challenge everybody, We have unique skills, specialist communication skills, Share good practice Sharing the evidence base,</p> <p>2. "I don't know if I am saying exactly what everybody else is saying" Singing from the same hymn sheet, "I would like to think we have standardised information" Making sense of the graph, Professional confidence, Being exact & interpreting the same as others when talking to clients, Making sense of drop in weight or increase in weight in a clinic setting, Finding common sense explanations, rationalising why, Lack of understanding of the centiles, Parents topping up with formula when breast feeding to meet the centile because they think they are underfeeding (linked to centile weight recorded by midwife), baby cues for feeding, Challenging what parents and grandparents are saying to new parents, Combatting inaccurate information widely available, Parents perception of what the HV has said about infant weight and the expressions used, implied meanings, Addressing overfeeding of infants with parents, "feeding just to stop the infant crying" Identifying if infant vomiting is a result of overfeeding infants, Addressing reflux and differences in prescribing practices, Advice and managements by</p>	<p>Organisational Codes</p> <p>1.HV Professional practice role</p> <ul style="list-style-type: none"> - Evidence based practice - USP <p>2. Challenges HV face relating to infant weight and infant feeding</p> <ul style="list-style-type: none"> - Challenges span several levels; parents knowledge, HV knowledge, media & marketing, other health professionals

Figure 10: Example excerpt of basic and organisational code development: Focus group 3 & 4, Parents

<p>Research Question: "What conversations take place between HVs and parents in relation to infant weight in the delivery of the HCP?"</p> <p>Research Aims: 1. How and what public health communication occurs around infant weight between HVs and parents in HV practice? 2. What key factors, if any, need to be in place for public health communication regarding infant weight to occur? 3. How do key factors influence public health communication between HVs and parents in relation to infant weight?</p> <p>November 2018 FG3 & 4 Parents</p>	
<p>1 Conversations about weight only if there is an issue, Ask if it is normal, and what that looks like in terms of were infant is, Links conversations about weight and asking about weight as problem orientated, (missed opportunity for proactive contact)</p> <p>2. Difference between formulas fed and breast fed, weight increase noted by HV and HV indicted infant might be taking too much - when explained Bf on demand seems to be looked at differently depending on type of feeding (also noted in HV data where HV are surprised when they realised that this occurs and they respond different). SSI 6. Obese indicates that there is something wrong but you can't overfeed a Bf babies so I didn't realise you could categorise an exclusively Bf baby what you going to do put him on a diet-its shocking really</p> <p>3. Mums worry about weaning, what to give, and what not to give, (1st time mum). Parents actively thinking about weaning at 12 weeks and wanting to be prepared, concerned how often, how much, what to do, wondering when to start weaning, infant constantly hungry, "I am just stuck" (lack of timely or effective service provision) Mams worry that they aren't feeding their infants enough, focus on the weight increase, Confusion over weaning food and milk at the same time, SSI 5 when to put on second milk, SSI 5 "Weaning wasn't really in my head until I started weaning him" Thinks the onus is on her as a parent to ask questions about weaning and almost excuses the HV because she hasn't asked much as the reason why she didn't get much weaning information SSI 8 "Being a first time parent you haven't got a clue and you don't want to do anything wrong" SSI 8. Parent acknowledging the role of education and the responsibility of the parents to manage overweight and obesity- Self influence SSI 6 'I think he's hungry (parent already made up their minds?) a big lad so I will be weaning early, is weaning the same as Bf or Ff in that most parents have decided before HV can influence? Getting information far too soon since 3-4 month visit was stopped, a bit pointless mentioning it then. SSI 6. Want to know information before starts weaning but</p>	<ol style="list-style-type: none"> 1. No problem, no conversation (parent that ask parent that don't ask-categorising?) 2. Breastfeeding "V" Formula feeding 3. Weaning dilemmas

5.4.5. Stage 3: Reassembling data

Following this stage in the data analysis process, the data was re-assembled and relevant categories were created. At this stage in the thematic analysis, the creation of categories was done systematically. This process involved the development of a number of different linear matrix and concept maps where a clustering process of each separate category took place (Appendix 14-30). This enabled easier management of the data and provided a visual representation. Themes were then able to be created from organisational codes and categories that corresponded in some way or have similarities and potential meaning when grouped. This way, what was important about the data overall was captured in a recognisable pattern and the bigger picture was seen (Braun and Clarke 2006). Furthermore, each cluster was analysed for goodness of fit and then grouped within a single overall theme. Figure 11 demonstrates this activity as an example and is a consistent part of the audit of the data analysis process. Mapping each of the categories to develop themes and subthemes was a method of reassembling the data in a hierarchical way. Mapping categories to make themes required exploration of the extent of the theme to ensure that it is in fact a theme, rather than a category or subtheme (Castleberry and Nolen 2018). As a lone researcher, and in order to further determine the accuracy of the data analysis, validation is needed. The process for this was provided through supervision where category clustering through mapping were reviewed at each stage of the analysis. Additionally, initial categories and themes were shared with a small number of participants for further validation. This helped to define the accuracy of categories and themes.

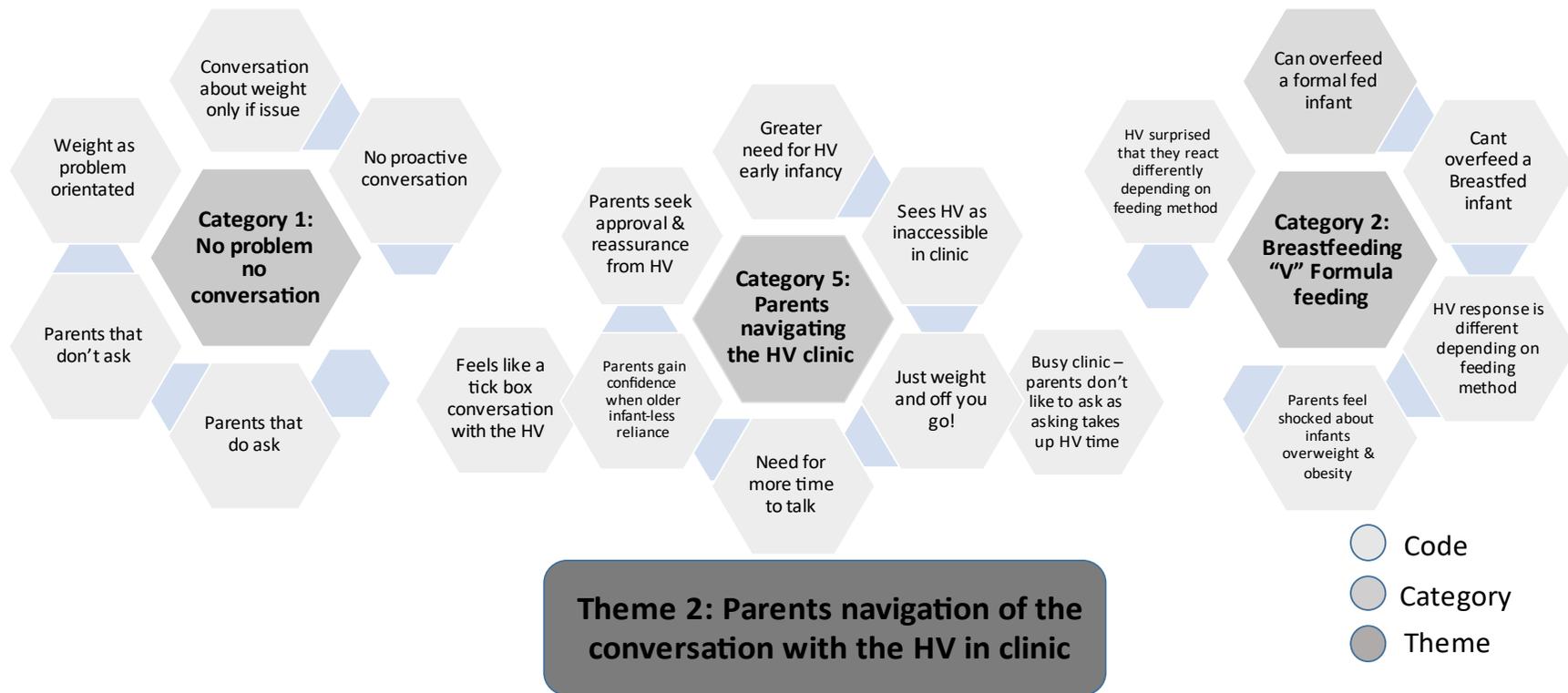


Diagram No. Parents data: Development of Categories 1, 2 & 5 into Theme 2—Parents navigation of the conversation with the HV in clinic

Figure 11: Parents data: Development of categories 1, 2 & 5 into theme 2 – Parents' navigation of the conversation with the HV in clinic

Codes, Categories and Themes: Parent data

CODING: Parent data

Weights problem orientated
Missed opportunity for praaction
Parents that ask & parents that don't ask
Overfeeding
Parents shocked if infants categorised as OW/O
HV responds differently if Bf or Ff
Parent surprised at different response
Weaning worry
Onus on parent to ask
Timing of weaning information
Being prepared
When 2nd milk
Weaning Information sources
HV seen as inaccessible in clinic
Younger infant greater need
Older infant less need
Weight and off vovo, weighing place
Need more time to talk
Seeking approval & reassurance
Tick box busy clinic, taking others time
Knowledge about centiles chart variable
HV presumes parent knows
Reassurance of infant gaining weight
Self blame, end of the world, fear, emotion, panic
Presume would be told if infant OW/O
Early weaning dilemmas/BLW
Changing recommendations/conflicting
Delivery of weaning courses
Not sleeping means infant not eating enough
Support dependent on caseload size
More likely if successful support in a crisis
Waiting to wean
Duty of care
Sense of loss at changing services
Starting fresh with new HV is hard
Less opportunity for socialising
Concern if weigh decrease not increase
Requires HV tact as early days sensitive time
Parents seek instant response

CATEGORIES: Parent data

1. No problem No conversation
2. Breast feeding "V" Formula feeding
3. Weaning Dilemmas
4. Where parents get their weaning information
5. Parents navigating the clinic
6. Parents navigating the centile chart
7. Health professional conflicting information
8. Parents reaction to infant overweight & obesity
9. Sense of loss
10. Parents perceptions of HV support

THEMES: Parent data

Theme 1: Parents weaning journey

Theme 2: Parents navigating the conversation with the HV in clinic

Theme 3: The centile chart as fundamental in understanding infant weight

Themes 4: The nature and impact of relationship support

Figure 12: Parents data: Overview of analysis.

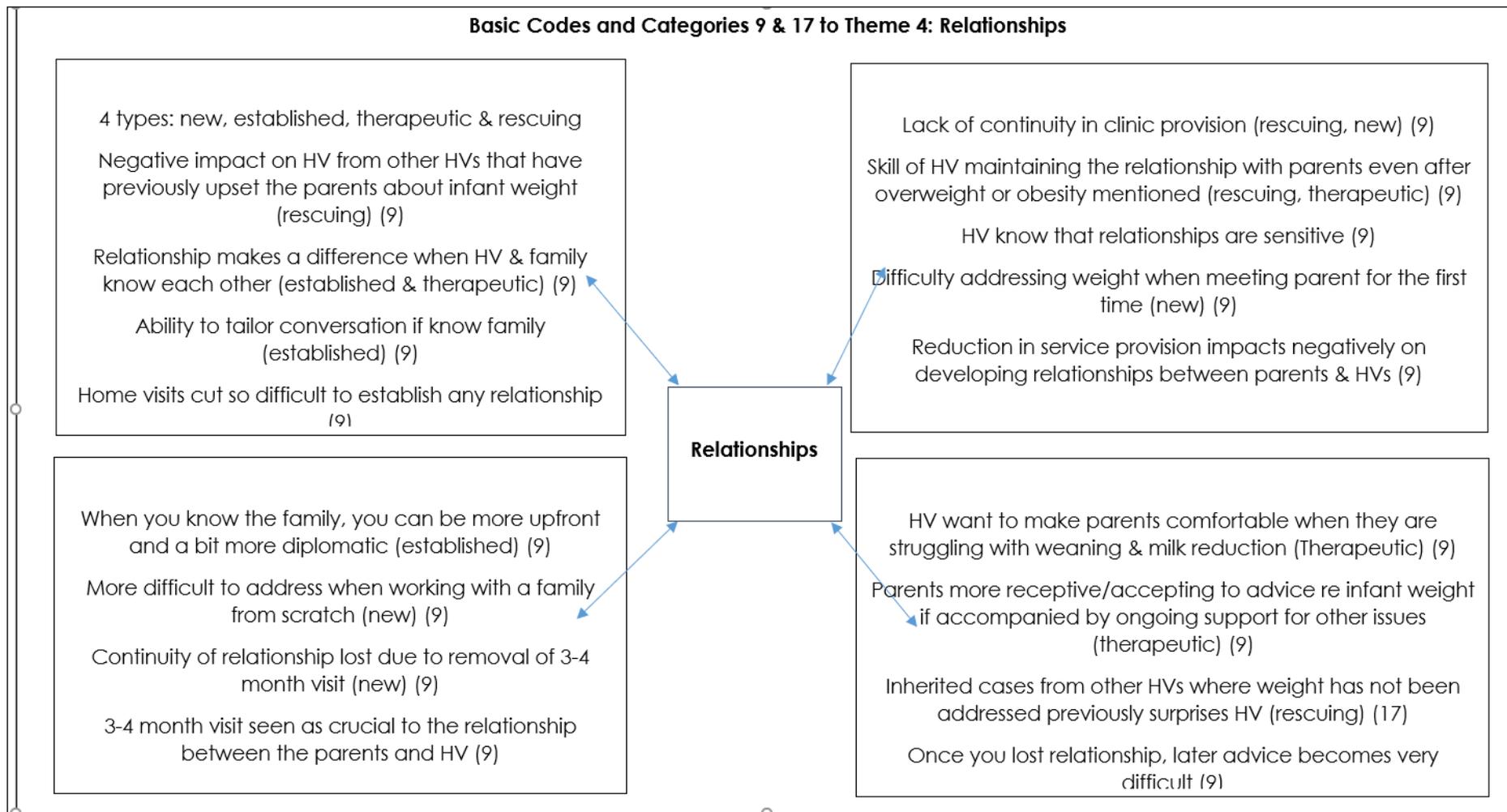


Figure 13: Theme 4 relationships

Figure 14: Overall Themes of Health Visiting Data

Original Categories (21)	Emerging themes
Category 5	1. Culture and Society
Categories 6, 8, 11, 12 and 16	2. Health Visitor Language and Strategy
Categories 7 and 13	3. The Impact of Organisational Change
Categories 9 and 17	4. Relationships
Category 15	5. Emotional Response of the Health Visitor
Category 1	6. Health Visitor Perceptions of Role in Infant weight and nutrition (1)
Categories 2, 18 and 21	7. Challenges
Categories 3, 4, 14, 17, 19 and 20	8. Health Visitors Perception of Infants and Parents
Category 10 Removed back to basic code	
Original Themes	Reordered for findings discussion
1. Culture and Society	1. Health Visitor Perceptions of Role in Infant weight and nutrition
2. Health Visitor Language and Strategy	2. Emotional Response of the Health Visitor
3. The impact of Organisational Change	3. Health Visitor Language and Strategy
4. Relationships	4. Relationships
5. Emotional Response of the Health Visitor	5. Challenges
6. Health Visitor Perceptions of Role in Infant weight and nutrition	6. Health Visitors Perception of Infants and Parents
7. Challenges	7. The Impact of Organisational Change
8. Health Visitors Perception of Infants and Parents	8. Culture and Society
Original Themes	Themes mapped to summary of significant findings
1. Health Visitor Perceptions of Role in Infant weight and nutrition	Health visitors found addressing infant overweight and obesity with parents emotionally challenging (2, 5)
2. Emotional Response of the Health Visitor	Choosing the words to use was difficult (2, 4, 5)
3. Health Visitor Language and Strategy	Health visitors perceived the 3-4 month visit as crucial to address infant weight (3, 4, 7)
4. Relationships	Several key factors influenced the conversation about infant weight between the health visitor and the parent (4, 6, 7, 8.)
5. Challenges	Health visitors viewed themselves as specialists in infant weight and nutrition (1)
6. Health Visitors Perception of Infants and Parents	
7. Organisational Change	
8. Culture and Society	

5.4.6. Stage 4: Interpreting data

Each theme was developed based on its importance to the research questions and aims. This was a crucial time in the data analysis process because it relied on the ability to make an accurate and trustworthy distinction between codes, categories and themes, and draw relevant and transparent conclusions from the data available (Castleberry and Nolen 2018). Throughout the data analysis process, data were interpreted, and the development of early broad and emergent themes was recorded. An example of this activity is demonstrated in Table 18. Although interpreting the data was a continuous process, being able to demonstrate several quality concepts about this process was important. Yin (2011) cited in Castleberry and Nolen (2018, Page 821) identified several quality markers of good practice for data analysis, and these were demonstrated. For example, a structured thematic data analysis process enables differentiation between initial, interim and final stages of analysis, so interpretation is transparent at each stage. Additionally, when comparing raw data within the transcripts at the disassembling stage, as demonstrated, similarities were apparent for data analysis in subsequent stages of reassembling and interpreting. This cohesion demonstrated that analysis was a true reflection of the way data was represented. From the data analysis process, subsequent findings also have something to offer existing empirical literature that is absent, adding further strength and making this a credible piece of research (Yin 2011, in Castleberry and Nolen (2018, Page 821)).

Table 18: Early data analysis findings – Health visiting

Emerging broad themes	Emerging sub themes
1. Multitude of emotional responses experienced by the health visitor when faced with overweight or obese infants	<ul style="list-style-type: none"> • Feelings of dread • Difficulties and challenges • Fighting a losing battle with overweight and obesity • Working in the face of adversity
2. Political context and political rhetoric	<ul style="list-style-type: none"> • Feelings of blame • Culture of blame • Public health policy • Poverty and deprivation • Marketing of formula and baby food • The disappearing HV
3. Impact of the changes to commissioning of HV services	<ul style="list-style-type: none"> • Reduction in contact with parents and infants • Removal of the 3-4 month weaning visit • Time to discuss weight and feeding with parents • Different service providers • Parental preference for getting information
4. Professional dilemmas	<ul style="list-style-type: none"> • Breastfed versus formula-fed infants • Inconsistency of information between health professionals

	<ul style="list-style-type: none"> • Medical model of reflux management
5. Health promotion and education	<ul style="list-style-type: none"> • Lack of parents understanding of the centile chart • Parental capacity to shop, cook and eat healthy "just make a quick rue sauce" • Delivery of public health messages "finding the right moment" • Differences between clinic and home
6. Choosing the words	<ul style="list-style-type: none"> • Reluctance to use the words overweight or obese • Strategies, user friendly messages and indirect approaches • Therapeutic relationship status

Table 19: Focus Group 4 Parents: First Impressions and initial analysis of data

<p>Focus Group:</p> <p>What kind of conversations do you/have you had with the health visitor? What do you say to them? What do they say to you?</p> <p>Lots of support in the early days given by the HV and HV team. Lots of phone contact many home visits (this baby had tongue-tie). Tongue tie, not picked up by midwife only past day 10 when HV team took over care. NN diagnosed TT within hours of first meeting baby. Baby referred to clinic. Subsequent support around re-establishing breastfeeding as tongue tie had resulted in some bottle feeding to prevent weight loss. HV team predominantly the NN went through whole plane to re-established bf with mum. Mum also had PND so extra support provided for that. Fair amount of support with weaning experienced. Went to weaning course/group. This was delivered by the HV team and quite clear what to look for; for example, low sugar, low salt foods was helpful to help mums decide which weaning foods to choose. Chart given with sugar and salt levels in some foods, and this was the best thing about the weaning group.</p> <p>What has been the most surprising information about feeding/weaning/weight?</p> <p>No real surprises in terms of feeding advice. Different advice on sleep for example, different approaches from attachment parenting and bf on demand to controlled crying methods. Mixed messages between HV and NNs in the teams. Told "if you don't do this the baby will never</p>	<p>Initial thoughts:</p> <p>Mum valued the HV team in expertise around bf and tongue tie. Support is time related and valued in a crisis around feeding. Weaning is something that parents require support for.</p> <p>Highlighted some mixed messages about bf advice and sleep between members of the HV team. Advice appears to be general rather than age</p>
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sleep" Information sent in the post about sleeping but this was inappropriate for baby's age and development. HV seemed reluctant to visits until mum has tried suggested strategies. Some mixed messages between HV and NN re sleep.

Did this cross over into feeding and weaning advice?

There was no mention of baby led weaning in the weaning course. No weaning visit available, but we can book into weaning course ran by HV and NN. Advice about puree foods but if not wanting to follow this way a case of going out and finding the information for themselves via other sources, do your own thing!

Where do you get most of your information from about weaning/feeding?

Social media, Play groups, soft play, other parents, schools, common sense. There is a lot of support, but you have to seek this yourself.

Do you understand the centiles?

Sort of understand the centiles, you are going into it blind at the beginning until someone explains it to you. More straight-forward if baby stays on same centile. (Mums discussed centiles in terms of lines). Recognise that all babies are different.

What's reassuring about the centiles? Following the line, if the HV happy mums are happy. Heard the term failure to thrive from other mums and this is worrying. **What about overweight or obese would you know if your baby was?** I know my baby is on the 91st centile so I presume someone would tell me if they were? I was told that my baby was overweight at months also got told older child was obese. When asked how she felt about this was "peed off" about how she was spoken too. You get some lovely ones and some that think children are textbooks. I was upset about the way I got told.

Is it the words that would upset you overweight or obese? The things that are said in the early weeks of having a baby, things play on your mind, people are walking on eggshells around new mums.

How do you think you would react?

I would blame myself; it would be the end of the world. I don't understand how you would have an obese baby, especially if breast fed. You do put away a lot of calories when breastfeeding. I

specific and perceived as didactic and paternalistic.

Highlights universal decommissioning of weaning visit age 3-4 months. Weaning course available for parents to self-refer into. Restricted in content to puree no mention of baby-led weaning although parents finding out the information elsewhere if wanting to approach weaning in this way. Recommended sources?

Multiple sources of information available, not necessarily evidenced based.

Re-occurring theme of parents not fully understanding the centile chart referring to "the line" in language used. Highlights some of the complexities if baby didn't stay on the line

Would expect HV to tell them if baby was overweight or obese. Highlights the sensitive nature of HV -parent communication.

As above linking by parents to having a new-born baby and all the difficulties this might present in relation to emotional and psychological experiences.

Mums recognise that they are different post-delivery in how they think about themselves and the language of others. An acknowledgement that they can be sensitive.

Mum appeared upset retrospectively about this situation noted by the tone

<p>was told I was overfeeding my bf baby at 6/12 and I asked how's that possible? But the baby had shot up from bottom line to top line. I was told I must be cluster feeding.</p> <p>What kinds of things do you ask the HV about weight?</p> <p>When the baby is weighed examples of what parents ask: "is that alright" "Is that enough" focus on the graph (centiles). Don't really ask about feeding if baby is healthy and feeding. They change the rules all the time about feeding when to et, what to eat When I was little you gave them what I had. Weaning was 4-8 weeks. Babies are ready to wean when they are ready. Bottle feeding and how you make up bottles has changed as well. This confuses parents.</p> <p>Why do you come to the clinic?</p> <p>When little I would come every week, then every 2 weeks to get the baby weighed. Then every month. Helps get into a routine coming out of the house helps me to check in with somebody and know I am doing the right thing. Reason to get out of the house, coming to the clinic was one of the only things I could do. Sometimes for social but the services provided have changes and got less and less. It's not a family centre as it was, there is only the odd groups now and again compared to before. The funding has gone even for toys provided these have to be washable now.</p> <p>How has that impacted on the HV service for you?</p> <p>Unless you attend clinic or ring the HV team you have to seek advice. (Highlighted certain visits such as 2 and 6 weeks). HV have a duty of care but seem to have a higher caseload with the NN doing some of the visits. In the early days I would call but now I use online so, I can get a quicker response. HVs can't be everywhere all of the time.</p> <p>Would want the expectations of the HV service more clearly set out at the beginning.</p>	<p>of voice and language used. "I was told"</p> <p>Emotional responses from parents linked to overfeeding, breast feeding and feeling guilty</p> <p>Concern about weight and wanting affirmation and reassurance at the same time as confusion about guidelines ?results in a disregard of these</p> <p>Many reasons for clinic attendance other than infant weight. Noted significant changes in the way HV service is provided, reminiscence!</p> <p>Appreciates the complexities of the HV service, funding and caseload management. Reduction in service provision noted around children's centres.</p>
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5.4.7. Stage 5: Concluding data

As part of TA, conclusions are drawn from the data. These are required to be interpreted accurately, although not required to be replicated (Castleberry and Nolen 2018). Although the results of the research are not generalisable in the same way as positivist research

findings are, this is not meant to be an outcome, although it is pertinent to acknowledge this within the conclusions (Castleberry and Nolan 2018). What is important is the ability of the research findings to be transferred to areas of public health practice inside and outside of public health, such as HV. This is known as analytical generalisations (Castleberry and Nolan 2018). In concluding the data analysis process, findings can be transferable to other areas of primary care, for example a GP practice or even secondary care such as the emergency department. These are areas within the NHS where parents and infants can present themselves for feeding advice and feeding issues, and therefore require public health advice about infant weight, formula feeding, breastfeeding or infant weaning.

5.4.8. Stage 6: Writing a transparent account of data analysis

Interpretative research means engaging in a rigorous and methodical approach to data analysis that demonstrates the process to others because it is well defined (Nowell et al. 2017). The analysis process of producing themes and superordinate themes from the data and from basic and organisational codes and categories is open for inspection. Using TA frameworks and thematic maps demonstrates that the overall themes are related to the research questions and aims by providing detail. Therefore, the overall research focus, results and purpose of analysis is met (Castleberry and Nolan 2018). For transparency, data analysis was approached methodically and referred to the process of reduction of raw data to workable data, and the development of data themes. In simple terms, data was analysed with the initial production of basic and organisational codes. Categories were then created. This led to the development of themes and superordinate themes. Transparency of how these themes are generated and established through TA is crucial to present research findings that are trustworthy and credible (Nowell et al. 2017).

It was also important that readers of the research can understand the data analysis process leading to the findings when disseminated or published, as this again provides indication of research richness and rigor (Moravcsik 2019). Furthermore, ethically, the aim of the analysis is to present the most accurate, honest and compelling data when findings of the research are shared (National Coordinating Centre for Public Engagement, Durham University 2012). Therefore, the research requires the process of writing the analysis to be transparent and convincing enough to *"tell the story of the research through the research themes"* (Braun and Clark 2006, Page 23). Providing transparency of data analysis and findings when sharing research is a concern for some interpretative researchers because of the risk of breaching confidentiality and the drive for increasing the transparency of interpretative data (Moravcsik 2019). However, no participants or Trust locations can be recognised within the write up of

these findings. Rather, the transparency of data analysis and findings when written mean greater demonstration of quality within the research (Moravcsik 2019).

5.5. DISSEMINATING THE RESEARCH

The plan for disseminating the research is to use multiple methods. As part of the recruitment process participants were asked if they want to be contacted about the results of the research, although they also had the opportunity to opt out of receiving this information. Participants will be offered a summary report suitable for their needs. Information about the research findings will be cascaded to the Trust involved by revisiting team meetings, informing leadership and HV teams. Additionally, during the research process, many conversations have been had with colleagues and peers about what the focus of the research is, how it has been approached and what the initial findings are. The research journey has been embedded in teaching as an example of research-rich learning, as the research came to life. Exposing the research design, practicalities, methodological underpinning, theories, reflections and methods has benefitted others that may be students on a similar journey or about to embark their PhD. As the research comes to its conclusion and the thesis is nearing completion it will be shared through conference presentations, in the classroom, during staff development events, to existing professional networks and in future journal publications. In doing so, the implications for both parents, HVs and infants can be shared.

As mentioned within previous chapters both parents and HVs have key roles to play in infant weight. Sharing the findings of this research highlights how infants are reliant on both parents and health professionals, for maintenance of healthy infant weight and healthy nutrition. Parents are identified as gate keepers to infant feeding (Gubbels et al. 2009, Mastroeni et al. 2017, CSJ 2017). and HVs have a defined role within the Healthy Child Programme (DH, DSCF 2009). The research identified the impact of the interaction between the participants as omitting to address infant weight issues in a cohesive and strategic way. Opportunities were missed for public health messages about infant weight between HVs and parents. Interaction between participants had complexity. The parents focused on infant weight gain, infant feeding and lacked detailed knowledge of when this was problematic. HVs avoided difficult interactions arising when infant weight was deemed difficult or challenging. Implications for infants resulted from the complexity, lack of cohesion and strategic approach. This caused a lack of focus on the infant and capacity to protect infants from any future short or long-term impact of childhood overweight or obesity, and potential for later adult overweight and obesity to occur.

5.6. CHAPTER CONCLUSION

The aim of this chapter was to explore the interpretative research design required for reliable and consistent research that is trustworthy through authentic data collection and analysis. The most significant thing about this chapter is that it demonstrates how the research is conceptualised. It begins by introducing the importance of ethics within research and identifies both procedural and in-practice ethics, perceived as ethics methodology. The key arguments made about ethics within this chapter are that they are embedded throughout the whole research process.

5.6.1. So what?

If research is completed ethically well, there is greater potential for making a positive difference, for reducing harm to the participants and for research to be robust and authentic. This maintains the reputation of the researcher, Trust organisation and participants. It also maintains the reputation of the university where the researcher studies. The sample size and sampling strategy were considered separately, and this enabled them to remain distinct for the purpose of understanding how each contributes to the value of the research. This defends the non-generalised concept as a distinct focus on the context of participants' lived experience. Research rigor was demonstrated within the data collection process because emphasis is on understanding and interpreting meaning ensured that participants' voices can be heard. This ensures that assumed understanding is not the focus. Establishing clear meaning of the data means that findings are attributable and co-constructed. Additionally, the aim of the data analysis process is to present the most accurate, honest and compelling data when findings of the research are shared within the development of the thesis and during dissemination.

5.6.2. What now?

Using a TA framework to manage the data and focus on each stage of data analysis individually makes the data analysis process transparent, i.e. demonstrating the way in which basic and organisational codes are developed into categories and themes allows the process to be scrutinised at a later date if necessary. Maintaining an audit of the data collection and analysis process also makes a distinction between doing it in a practical way and reflecting on how and why it is done. A distinction makes for relevant and transparent conclusions to be shared at a later date within the findings. This approach supports a move to a more accurate and trustworthy piece of research according to the literature. To

achieve this a reflexive approach to the research analysis was maintained, including excerpts from a reflective journal, comparison of initial findings with those established later in data corpus and discussion of the data analysis process. The way in which note taking helps recall of the analysis process links to Chapter 8 and demonstrates further reflexivity across the whole research process.

CHAPTER 6: REPORT OF FINDINGS

6.1. INTRODUCTION

This chapter presents the research findings. As previously demonstrated, research takes place in the context of NHS Child Health Clinics and the delivery of the Healthy Child Programme (DH, DCSF, 2009). It captures and interprets participants' data to understand the phenomenon of infant weight from a parent and HV perspective. Findings are determined by a thematic analysis of the data. Initial codes become categories, and themes are reviewed and defined to become three superordinate themes. The process of data collection and analysis is outlined in Chapter 5. Findings relate to both the research question and aims. They are presented as a discussion of key emergent themes with related subthemes and subheadings. Direct quotes within the text provide evidence to support the findings. Researcher questions are presented in normal text and labelled as such. Any participant verbatim quotes are highlighted in *italics* to demonstrate richness of the data, and are labelled by transcript location, and focus group or semi-structured interview data set. The emphasis of social construction, the interpretative methodology and associated methods provided the impetus for the way in which data is collected and research findings are also determined. A summary of the research questions is provided, followed by a discussion of the main findings and key concepts from the research. Findings are also summarised at the end of this chapter. A chapter conclusion draws together key areas discussed.

6.1.1. Research questions: Brief summary

The questions at the heart of this research focus on public health interaction between HVs and parents around infant weight in the context of overweight and obesity in childhood. They provide a focus for exploring the interaction, identify key concepts, and consider what is meaningful and influential about the interaction between participants. Findings, as written, reflect answers to the research questions to demonstrate confidence and trustworthiness in the data collection and analysis. Therefore, findings are contextually grounded in the data.

6.1.2. Research methodology, conceptual framing and findings considered

Social construction frames this research and, therefore, the focus is contextualised in the participants' socially-constructed world. This is the basis from which they processed daily interaction. All participants in the research study conducted themselves within their existing definition of the situation. Where no existing definition of the situation was available,

participants establish one prior to understanding and acting on what occurs. Research explores participants' perceptions of themselves and others during the process of interaction. The basic lack of understanding they both have that is never tackled in the communication processes they adopt with each other is exposed. This highlights significant symbols (micro non-symbolic or reflex actions and symbolic interactions or shared meanings), such as universal gestures, physical and social objects, acts, and language. Findings extend and capture the essence of parents' and HVs' role making and role taking, or generalised other. The thoughts, feelings, assumptions, and nuances that exist as participants engaged with each other in a social encounter were revealed. Interpreting interaction on an individual, and social, level enables meaning, meaning transformation, and meaning action to be known. This leads to understanding knowledge, reality, meaning and truth about parents' and HVs' everyday social encounters around infant weight in clinic using SI (Blumer 1969). Additionally, previous knowledge and experiences of participants as positionality is considered using the theory of hermeneutics and Dasein (fore-structure) (Heidegger 1962).

Several frequently asked questions (Table 20) are identified and provide insight into both HV and parent agendas. Questions highlight what participants want to know about infants. HVs questions to parents are focused on nutrition and feeding activity to understand infant feeding patterns and consumption. Parents' questions to HVs are focused more on feeding associated with weight and the transition to weaning. The dichotomy between the two sets of frequently asked questions is apparent. Parents' questions are more direct with HVs about infant weight gain and HVs omitted weight discussion altogether and focus only on infant nutrition and feeding patterns. Therefore, the links between feeding pattern, nutrition and weight are not transparent.

Table 20: Frequently asked questions

Health Visitor and Parent Frequently Asked Questions drawn from the findings	
Health Visitors to Parents	Parents to Health Visitors

Do they eat veg?	Are we feeding them too much?
What do you cook?	Has he put on too much weight?
How much milk is he/she having?	Is that too much for his size?
Is she having a lot of milk?	Do you think she will be obese when she is older?
What about portion sizes?	How do I get rid of bottles?
How is feeding going?	I think he is hungry, and I am thinking about starting him on baby rice. What do you think?
Is baby going to sleep with lots of "top ups"	
What does he/she eat?	Are they going to be obese?
What types of things are you feeding her/him?	Are they going to be heavy?
What is his/her activity like?	Can I cut down?
Does baby feed overnight?	

Three superordinate themes are articulated within these findings. The superordinate themes, subthemes and subheadings are identified in Table 20.

Table 21: Key Themes 1 with corresponding subthemes & subheadings

Theme 1: A CONVERSATION OF GESTURES
<i>Subtheme: Expectations and rules of engagement</i>
<i>Subheading: Infant weight. So many assumptions!</i>
<i>Subheading: The weight of emotions</i>

6.2. THEME 1: A CONVERSATION OF GESTURES

The interaction around infant weight is a complex phenomenon. There is a consistent theme for infant weight gain, rather than weight loss, that persists across the findings and is never really addressed. Rather this is accepted as a part of an existing social and cultural narrative. This opposes the current public health narrative around childhood overweight and obesity. The interaction around infant weight in the clinic is minimal, open to misinterpretation, presents opportunities for addressing the needs of participants and misses opportunities for the same. Overall, several components of the conversation are never addressed in earnest by either the HV or the parent. Instead, things are left unsaid based on participants' assumptions. That which is *unspoken* requires participants to interpret the interaction, fill in the

gaps and make sense of what occurs. Only then can they figure out what they perceive as meaningful and what action can follow.

6.2.1. Subtheme: Expectations and rules of engagement

Parents have specific wants and needs relating to infant weight and these are required to be met within the interaction. Although HVs identify with this, they often feel unable to meet them, firstly because of current service provision, secondly because of the way they perceive infant weight (not a priority) and thirdly because of the stages of the relationship in play. To investigate this further, participants' expectations, assumptions, and subsequent rules of engagement for managing infant weight are explored. This includes participant perception of infant weight, relevant symbols, language, emotions, gestures, motivations, perceived barriers, and challenges and actions. HVs feel that they have similar approaches in the way that they monitor infant weight and advise parents.

Researcher: "Do you think there is a standardised approach, do you do something similar or something different?"

"I think it is a variation or a theme, but I think we probably all do the same thing but in a slightly different way" (HV Focus Group 2: 199).

"I would like to think we have standardised information but maybe the style of how it is delivered may vary but we were all given the same training on understanding growth" (HV Focus Group 1: 32).

HVs base their interaction on a perceived understanding of parents' capacity to follow the information they provide, and they shape this information accordingly. This also relates to the way in which the HVs feel parents may react to the information given.

"When you are coming to this you have a fair idea of their (Parent) level of understanding and how to tailor that information so that they understand so you would tailor it in a different way for that person". (HV FG 2)

Infant weight is a symbolic metric for participants because it is universally recognised for infant thriving and traditionally determines attendance at clinic. Generally, parents attend clinic more regularly when infants are new-born and less regularly as the infant becomes older because they feel more confident in infant management. If infants are not gaining weight as quickly as parents anticipate, they attend clinic less, because frequent weighing with slow or no weight gain maintains feelings of parental panic and anxiety.

"I used to come every week when she was first born but I don't come as much now because they said they weren't seeing much of a difference in her weight, so I was

panicking even more but they (HV) said she was fine, so I come every month" (Parent Semi-structured Interview 8:10).

They also return to clinics to seek infant weight and nutritional benchmarks signposted by the HV during significant events (transitioning infants to weaning or breastfeeding for the first time), and this shifts the pattern of attendance once more, so parents can confirm they are experiencing normal parameters. Parents sought positive outcomes, reassurance, and approval from HVs because this is how they manage any parental anxiety and fearfulness about the infant's weight, health, and wellbeing.

"I haven't really had any problems...it is good to have the reassurance that everything is as it should be I suppose" (Parent Semi-structured Interview 6:49).

Simultaneously, HVs recognise themselves as specialists in infant growth monitoring and infant nutrition. With specialist communication skills HVs, viewed weighing infants as a key role.

"Going back to our skills that we were talking about...I enjoy talking about absolutely everything because this is our specialist role. When you go up to a client, what is the one thing we are here for and what is the one thing they are desperate to know...I go up to a client and I ask them how they are and that diffuses the situation immediately because they are either so desperate and say what is the baby weigh" (HV Focus Group 1: 330).

However, there was an expectation that to have a conversation with parents about problematic infant weight would be difficult. Both sets of participants expected that the appropriate words, environment, and time are part of the engagement. Both HVs and parents used specific communication strategies, language, and symbols with each other, so they feel as comfortable as possible during the interaction. The rules of engagement and expectations between participants, shared meaning, universal gestures acts, physical and social objects, role taking and role making were not always clearly established. Both sets of participants wanted to spend quality time with each other in clinic, yet navigating busy clinics makes this difficult. Because of time constraints, parents perceive the HV role as task orientated, i.e. "weight and go", and that neither party is allowed freedom to explore what they originally set out to, thus reducing the capacity for meaningful interactions particularly if accompanied by closed questions:

"Obviously when they say have you got any questions it would be nice to spend a little bit of time with the health visitor but literally all it is weigh and off you go" (Parent Focus Group 3:52).

HVs see themselves as influential professionals about infant weight. However, a lack of time, feeling pressure, the sensitive nature of the subject and fear of repercussion govern the way in which it is addressed. Also, there are issues of confidentiality in a crowded clinic that HVs seek to avoid. They did not want to be seen to take the parents aside because this makes the scenario even more tricky if perceived as a serious issue. Some HVs addressed infant

weight in clinic and others felt it should only be addressed at home. HVs demonstrated empathy for parents, acknowledging parents' agendas and when infants are gaining weight outside that of the normal limits for age and gender they were able to consider how this makes them feel. This leads to a cautious approach to addressing weight because what is said can cause offence. This leaves some parents potentially unaware that their infants are gaining weight inappropriately:

"You have to put yourself in their situation so if you had someone coming in telling you that your child was overweight or obese you wouldn't like it..."It's almost as if you don't want to upset them by saying that and you don't want people to be offended" (HV Semi-structured interview 1: 169).

6.2.2. Subheading: Infant weight - so many assumptions!

Conversely, parents worked on the assumption that HVs will mention infant weight that is lost or gained inappropriately, or exceeds recommendations. They trust that someone (the HV) will say something sooner rather than later if there are problems. This causes a level of uncertainty about whose responsibility it is to indicate infant weight issues. Earlier, HVs identified infant weight management as part of their specialist role. Parents assume that a conversation about infant weight will take place if there is an identified weight issue and or the HV is unhappy with the infant's weight gain. According to the parent, the onus is on the HV to explore weight loss or gain if problematic. When it is not explored, this signals to parents that there are no weight issues.

"He is already 21lbs so like nobody has mentioned anything when I have got him weighed..." (Parent Semi-structured Interview 7:78).

"I know that I have a baby that is on the 91st centile but he is not fat so I would assume that somebody would tell me" (Parent Focus Group 4:89).

Parents anticipated HVs to be consistent in their approach to addressing infant weight gain. They imagined HVs will establish feeding methods prior to initiating a conversation about this so they can differentiate between infant weight gain of exclusively breastfed infants in comparison to formula-fed infants before they give advice. When there are significant infant weight increases according to the centiles, HVs are making assumptions based on the belief that the infant is being overfed formula:

"I find there is a difference between bottle fed and breastfed as well. I breastfed and when I first brought him to be weighed, he had gained quite a lot of weight and had maintained his weight and his centile and they were like he might be taking a little bit too much and I was like he is breastfed so it is on demand and they said ah he breastfed so it seems to be looked on differently" (Parent Focus Group 3:44).

Researcher: Did that make you surprised?

“Yes” (Parent Focus Group 3:48).

Parents were surprised that they need to clarify and defend infant feeding methods, for example breastfeeding on demand, before HVs retract any weight concerns. There was a level of confusion surrounding weight gain and breastfeeding, and parents felt shocked that the weight of exclusively breastfed infants can indicate overfeeding, when breastfeeding is supposedly best for infants. A sense of morality was involved that exclusively breastfed infants cannot be categorised as overweight or obese, and that they are left untouched by this kind of labelling or approach:

“If they are exclusively breastfed and they are obese it tends to indicate that there is something wrong like they are eating too much but if they are exclusively breastfed, what are you going to do put him on a diet.....It's shocking really” (Parent Semi-structured Interview 6:91).

Parents perceived weight gain rather than weight loss as a universal gesture of HV preference, and this mirrored their own assumptions as parents and HVs perceived parents as celebratory when infants gain weight. They also perceived parents focusing on weight increase rather than the position of the infant on the centile chart. Equally, HVs did feel that parents were more concerned with weight loss than weight gain, although this is not always a consistent finding:

“They (parents) seem to be more concerned about them not putting weight on and not eating as well so fussy eaters” (HV Focus Group 2:192).

“Sometimes they will say has he put on too much, is that too much for his size so they will ask you questions about that but on the other hand if they go up a centile, they are when well done” (HV Focus Group 2:189).

Researcher: What kind of things did the health visitor say to you about her weight could you remember any of the conversations that you had?

“They just kinda said don't worry all babies are different and there is no right, or wrong answer and I think you found comfort in them that they (HV) were happy and they just kinda said everything I was doing was ok and she is putting on weight she is not losing weight, it is slow and gradual, but she might just be one of those babies...” (Parent Semi-structured Interview 8:23).

When it was suggested to parents that they are overfeeding infants, they reacted negatively because it challenges their assumptions of how they manage infant feeding. The manner with which the message was delivered was important to them and parents reacted accordingly if they were unhappy about this, particularly if infants are exclusively breastfed:

“I was told I was over feeding a solely breast-fed baby at 6 or 7 months old I got told I was over feeding....so how is that possible...he just shot up in size and weight for not being on a line and then suddenly being on the very top line...I did storm out in a

strop and said he will come back with his big mac next week” (Parent Focus Group 4: 111).

Parents were concerned by the thought that infants were labelled as either underweight, overweight, or obese. In accepting responsibility, they acknowledged that they would self-blame. Parents were horrified, mortified, and devastated at the thought of this being raised directly, particularly again if the infant is breastfeeding. Parents were clear about the enormity of how it feels to be in a position where infants are thought to be overweight or obese.

Researcher: If someone did mention overweight and obesity how would you feel about it?

“I would be horrified because of his situation (breastfeeder)...both parents are tall the connotation with saying that our baby is obese it sounds like there is something wrong and I would be mortified because there is nothing wrong with him” (Parent Semi-structured Interview 6:105).

Despite this, some parents in the research study wanted to know how to prevent any later childhood problems, although only if carefully managed and cautiously executed by the HV because of the sensitive nature of the experience and this negative connotations this is associated with:

“If you don't get told that your child is obese, and you don't think your child is obese then they are just going to get bigger and then problems occur but not as direct to the point where it is bad like nasty” (Parent Semi-structured Interview 7:142).

There are specific signs that signal a happy HV to parents and, on occasion, these involve no language. In fact quite the opposite, as this was termed “*no problem, no conversation*”. When the parent interpreted the HV as “*being happy*”, any previous parental concerns they may have about infant weight were quickly forgotten because reassurance and approval was evident. Alternatively, parents described HVs using brief age-related synonyms and adjectives in their language when referring to infant weight. Phrases included the aforementioned “*He is perfect for his age*” and others such as “*She is fine*” and “*His weight is following the curve*”. This generalised language is opposite to that commonly used within the empirical literature, media, and policy context (overweight or obese) and signalled to the parents that all was well with the weight of the infant. Parents connected with this descriptive and complimentary language because it has shared meaning for them, and this fits with the HVs' perception of what parents want. However, there was an assumption by the HV that parents understand intended meaning, for example “*One of those babies*” or “*His weight is following the curve*”. Potentially, the rationale for this approach was one of caution because HVs are very concerned about the language they use:

"You have to be really careful about the language that you use" (HV FG 1)

"It is about using user friendly words and statements" (HV Focus Group 1:88).

Conversely, HVs perceived parents as not asking many questions when their infant had been weighed, unless the HV indicated an issue:

"Like I said before they like the fact that the baby is putting weight on, so they don't really ask many questions unless you point out that they are above the centile. They don't really realise that the baby is overweight." (HV Focus Group 1:102).

6.2.3. Subheading: The *weight* of emotions

All parents in the research study needed to be recognised as good parents. The idea that parents are doing a good job managing infant weight and growth is of paramount importance, as is hearing positive feedback from the HV about infant weight. Overweight or obese infants contradicted parents' internal perception, so when infants are weighed HVs use expressions to reinforce good parenting. Parents then repeat this to reinforce this concept and explain infant growth to others, for example *"perfect for his age"*.

Researcher: How does that make you feel when the HV says this?

"Good because then I know I am doing a good job" (Parent Semi-structured Interview 7: 42).

When explored with parents, the thought that infants can be overweight or obese generated a strong emotional response and this was not a surprise to the researcher:

"I think it would be the end of the world...I would assume that I would blame myself because I am in charge of feeding my baby and I wouldn't understand how I could have an obese baby really" (Parent Focus Group 4: 108).

HVs also experience and express a range of emotions, from surprise to dread, nervousness, fear, and worry, when managing and monitoring infant weight. They know that busy clinics mean less time for meaningful contact with parents, however they understand this to be their role. Furthermore, HVs are often meeting parents for the first time under corporate service delivery. Despite acknowledging themselves as having specialist communication skills, this did not negate the impact of the emotional response they feel. HVs faced with the prospect of addressing overweight and obesity in infants feel challenged, more so when parents are accompanied to clinic. This further heightens the emotional experience for HVs because of the way they perceive parents and grandparents as potentially reacting negatively to the narrative they choose to use if they have to address infant overweight or obesity with them:

"For me it is something that I always dread when I weight them (refers to the infant) and you think Oh My God, how am I going to address this especially in a really busy clinic when you don't know them"

Researcher: Can you tell me a bit more about your feelings?

"How I feel...I dread it because it is almost as if I feel that I have to challenge parents..."
(HV Semi-structured Interview 2:12).

In clinic, HVs' emotional response develops in stages. Early triggers occur on visual assessment as the parents and infants approach the scales and before the weight of the infant is established. This is further compounded when the HV did not recognise or have any previous established relationship with the parents. The thought that they are expected to challenge infant weigh in this scenario makes the HVs' heart sink:

"Sometimes when you are in the clinic and you have never met the family before and the mam approaches the scales with the baby and you can see that the baby is overweight before you have even weighed that baby and your heart sinks a little bit because you know you are going to have this difficult conversation with this parent and it is difficult to approach that for the very first time."(HV Focus Group 2: 54).

"It's worse if there are more than just the mam there so whether it's the dad or the partner or a friend or nana because you don't want to sound as though you are being cheeky.....it is really like walking on thin ice, so I dread it, I hate it if I'm honest." (HV Semi-structured Interview 2: 16).

The strength of the emotional response in HVs was a surprise to the researcher. In fact, addressing infant overweight and obesity with parents was thought so difficult for some HVs it is compared with communicating and managing families with safeguarding concerns about infants and children. HVs appeared to have a sudden realisation during the research. They recognised their lack of confidence about managing infant weight and the way in which they do this because, unlike safeguarding, there is no apparent structure or guidelines articulated for HVs to follow. The only the notion is that "something needed to be done" and there was a level of discomfort about that:

"I personally out of everything I do in this job I find discussing your child's weight if they are overweight very difficult" (HV Semi-structured Interview 4: 94).

Researcher: Do you find it more difficult than raising safeguarding?

"Yes, I really do" (HV Semi-structured Interview 4: 96).

Researcher: Does that surprise you?

"When I say it out loud yes it really does because I am confident enough to say to a family, I am not happy with this and I am referring you to Children's Services and explaining my reasons why however when it comes to saying your child is overweight

and there is something that needs to be done about it, I find it quite uncomfortable” (HV Semi-structured Interview 4:98).

Conversely, when infants are underweight or maintaining a steady weight gain according to the centile chart, the emotional response of the HV is different. There was no early emotional trigger response noted or feelings of dread about the conversation about to take place, and the HV was able to comfortably carry out their public health role of monitoring infant weight and providing advice about healthy infant nutrition:

“If they are underweight or bang on you have no qualms at all its just if they are going up and up and up...” (HV Semi-structured Interview 2: 18).

This demonstrates that how the HV responds to the parent depends on the circumstances in which they find themselves, how they feel, and what information they can ascertain to create a picture of what is happening with infant weight. There are also several circumstances that need to be in place for them to feel comfortable. These include the environment and timing of the interaction, previous knowledge and / or relationship stage with the family and the ability to identify if infant weight increase is recent or regular. HVs have a variety of strategies to address infant weight increases in a clinic scenario, such as identifying and referring parents back to their own HV or other health professionals, providing first-line advice (although it is unclear what constitutes first-line advice), and establishing if weight increase has been raised with parents previously or any intervention has been suggested. There are preferences for addressing this at home later, although there are some exceptions and conditions to this, such as where risk assessments indicate high risk to lone workers. HVs will inevitably address this by taking another member of the team with them. Alternatively, if the scenario is not about infant weight, overweight or obesity and just simply safeguarding, some HVs feel comfortable about addressing this at home alone:

Researcher: Would the same apply if it were a safeguarding issue?

“If there was no obesity or overweight and it was just about safeguarding no I would probably address that myself and it sounds absolutely crazy, doesn't it...I think weight is just such a sensitive subject.” (HV Semi-structured Interview 4: 116).

There appeared to be a point at which HVs feel they are justified in addressing infant weight suggested as the 98th centile:

“I think if it was the first time that this little one was brought to clinic where there was an identified issue so especially if it starts by heading up to the 98th or above if that was the first time then I don't think there is anything that would stop me from addressing it” (HV Semi-structured Interview 2: 26).

However, this is contradicted if the HV feels it is inappropriate to address infant weight with parents no matter how pressing this may seem. In clinic, HVs have to quickly weigh up the

pros and cons of the situation before deciding what to do or say and how to manage it. They make on-the-spot decisions on when, why, and how they have conversations with parents based on how they present and the circumstances they are in:

“For one reason or another you just might not get to it so I have had mums who have been tearful because they are really low so you are not going to start addressing the child's weight you would arrange to go back, and you would want to support them through that before you maybe that could just be the straw that breaks the camel's back. There would be times, but I wouldn't say I would ever leave it in any situation, but it might not be the right time, but I would always try to get back to that as an issue” (HV Semi-structured Interview 3: 132).

6.3 THEME 2: Gaps between the actual and the ideal

Table 22: Key Theme 2 with corresponding subthemes & subheadings

Theme 2: GAPS BETWEEN the ACTUAL and the IDEAL
<i>Subtheme: Perceived service erosion</i>
<i>Subtheme: The therapeutic relationship around infant weight</i>
<i>Subheading: Avoiding the weight of blame</i>

Parents perceived the HV service in a specific way and having as a specific function. Over the years that specific function has been shaped and altered due to changes in service provision and ways of working. The service that was on offer around infant weight was not necessarily the service that parents wanted or delivered in the way that parents felt is for the greater good of the community. They perceived the HV service as functionally changed, which has altered the process of their interaction.

6.3.1. Perceived service erosion

Several changes in service provision have altered HV child health clinics. These have been re-organised, which has eroded the existence of a family-centred approach and replaced this with a more superficial, “in-an-out” or “conveyer-belt” approach. This was put into context by a parent who has several children of various ages and reminisced about the good old days. A gradual service erosion in the functions of local clinics and the role of the HV as perceived by the parents resulted in a reduction in social opportunities, and perhaps reduced opportunity for building community capacity, or building relationships. The outcome of this was that parents perceive the HV’s role in infant weight management as a “tick-box conversation”.

"It feels like they (HV) are doing less and less of that (weaning)..." (Parent Focus Group 3:150)

"It's like a ticky box really" (Parent Focus Group 3:152).

The rationale and motivations for attending clinics has shifted because service provision has reduced, and as a result the impetus for parents attending has also changed:

"It is just to get them weighed now which is why I come or if you have a question...because this was like a family or a community until they changed it slowly bit by bit over the years...At one time you could come here and the kids could play and they would enjoy themselves and you would both meet people and sit and have your dinner here and there was lots of different groups on ...it's all disappeared...It's not the same its meant to be the children's centre but it's not the family centre that it was years ago...now it's just somewhere to get your baby weighed see the health visitor and then in and out" (Parent Focus Group 4: 155).

HVs clearly recognise that service provision overall has reduced due to a lack of available resources, and they also reminisced about how it used to be. They were sure that services around healthy infant weight and particularly nutrition are limited and have resulted in a more reactive, rather than proactive, HV workforce model that did not always meet the needs of parents. HVs wanted to make parents feel comfortable when experiencing infant feeding difficulties with weaning or milk reduction, and suggested that decreases in home visiting and HV service cuts make this more challenging. It also impacted on the ability to build the established and therapeutic relationships seemingly required to address infant weight gain:

"When we were first health visiting, we were talking about feeding throughout we set up weaning courses and set up breastfeeding support and that has been taken off us and it was all linked in with things because it helped address the anxieties that parents feel" (HV Focus Group 1: 266).

Ideally, parents want consistency of information, a mechanism for understanding the interaction that occurs between themselves and the HV around infant weight, and the opportunity to have someone to develop a relationship with.

"I think the resources at our disposal are changing...we have been asked to direct them (parents) to children's centres who have been already identified as giving inaccurate or incomplete information to parents so the resources at our disposal are becoming much more limited" (HV Focus Group 1: 234).

6.3.2. Subtheme: The therapeutic relationship around infant weight

Parents were able to identify what HV support means for them. This involved the support received by parents around infant weight, and what and how parents value this. Support was symbolic to parents and helped to define the HV role to them, particularly around infant

weight and infant feeding. Where parents indicated that they had not received any support around infant weight or infant feeding, they quickly established that the HV is not at fault.

Researcher: What kind of support do you think you have had from the health visitor around infant weight?

"I haven't had any support but equally I haven't needed any and I haven't asked for it so that is not a criticism" (Parent Focus Group 3:62).

HVs are more likely to address infant weight with parents if there is an established relationship, they know the family well, and are able to tailor the conversation or use humour for example. When the relationship is new, or they are meeting parents for the first time, they feel that infant weight increases are *"hard to tackle"*. Moving from a new relationship to a therapeutic one between parents and HVs is more likely when they have responded appropriately to parents that encounter early feeding difficulties, i.e. within the postnatal period. This is particularly when early crisis intervention has not been addressed well by other health professionals and HVs proactively manage both physical and emotional needs of parents and their infants. HVs are also conscious of parents' experiences of other HVs who may have upset them because of the way in which infant weight gain has been addressed before. Therefore, they are reticent about making the same mistake and feel responsible for rescuing the situation.

Changes to HV service provision mentioned previously also impacted negatively on the continuity of contact between parents and HVs. Parents empathised with each other in this scenario and recognised that frequent changes to allocation of HVs are difficult to manage for some, because of the need to keep re-establishing the relationship. Importantly, HVs acknowledged that once the relationship with parents is lost, providing advice that is accepted by parents further down the line becomes very difficult:

"So, you have to start afresh with a new health visitor which is hard going on some people" (Parent Focus Group 4: 190).

"...My regular health visitor was in a meeting the very first time so I had a lady who was just about to go on maternity leave so I can't remember anyone's name so she came first of all and introduced the system and whatever and that was fine then I got who I believed was my regular health visitor XXXX she came along after he was born for 2 visits and I haven't seen her since...there was another lady who came the last time as XXXX was again otherwise occupied so I have seen 3 different people as well as a midwife..." (Parent Semi-structured Interview 6:8).

A key component of the relationship is HV expertise around infant feeding as perceived and experienced by parents. Breastfeeding support is highly valued by parents. If a supportive and successful relationship is established early, this continues past the crisis point, having a positive impact on the longevity of the relationship between the parent and the HV. Support

and intervention around infant weight are best placed to be fruitful if they are tenable, i.e. measurable for parents, have beneficial outcomes, and are timely. This presents an opportunity for appropriate public health messages to be delivered. A parent recounted when her infant was having difficulty breastfeeding, had not gained sufficient weight and breastfeeding was a painful experience. She described that within hours of a home visit from the HV (10 days post-delivery) the infant was diagnosed with tongue-tie. Significant feeding support provided in a crisis was described as “amazing”:

“I ended up giving him formula just to keep him alive really and it wasn't until about 10 days or so we were signed over to the health visitor and my health visitor actually said XXXX who is the nursery nurse can spot a tongue-tie from a mile away and she came round within hours and she said yes and we got a referral but in the interim I didn't kind of want to go straight from bottle to breastfeeding because I knew it wouldn't work I wouldn't have enough milk so XXXX was amazing at supporting me cutting down the bottle” (Parent Focus Group 4: 16).

Depending on the circumstances, some HVs simply chose not to address infant weight with parents because they favoured the relationship and wanted to avoid impacting this negatively by what they say, where and how they say it. They did not want to use language or gestures when referring to infant weight that will upset parents to avoid being perceived as blaming them.

P: Sometimes you start off that relationship on the back foot and you are trying to claw back some of that misinformation to try to get to a good starting point and that is quite a challenge straightaway because they don't know who to believe because they get a lot of conflicting information. (HV Focus Group 1: 348)

6.3.2. Subheading: Avoiding the weight of blame

HVs wanted to avoid any parental complaints being made about them or the service relating to infant weight, so they developed a communication strategy to minimise this risk. They used a range of phrases when they were concerned about infant weight and rapid infant weight gain to raise this with parents. When asked directly about language used, HVs are able to give clear examples. These range from descriptive words, such as *heavier*, *big*, or *unhealthy weight*, and general comparisons such as *heavier than the rest of the population* (further and similar phrases are included within table 20. Most HVs demonstrated that they did not use the words *overweight* or *obesity* in conversations with parents for fear of recrimination, and they regarded this as an insult to parents:

“We don't use the words overweight or obesity because I am frightened that people get frightened about that and I don't want people complaining because I know I would never insult anybody, but it is about the words that you use I think if you said your baby is overweight or actually obese, I wouldn't use those words” (HV Semi-structured Interview 2: 75).

Researcher: What words would you use?

"I would use things like heavier than the rest of the general population or they are a little bit heavier than we would like." (HV Semi-structured Interview 2: 79).

"I just try and say to them that baby is not where we would like them to be, and they are not a healthy weight" (HV Semi-structured Interview 4: 75).

Although HVs expressed a desire to protect the feelings of parents from what they perceived to be the delivery of upsetting public health messages about infant weight, they also felt that some parents are irresponsible. They based this assumption on the weight of the infant. HVs questioned parents' honesty about what infants are being fed. This impacts on the way in which HVs regarded parents:

"What I find hard is when they say they are just having milk like a 4 or 5 month old and you can just see them going up and up on the centile and you are asking parents about it and they are saying no they are just having milk so then I have to ask how much are they having and if it looks like an ordinary amount they are like so how are they going up on the centiles and I am like I don't know are they telling me the truth" (HV Semi-structured Interview 2: 20).

Table 22: "A Play on Words" Examples of HV phrases to describe infant weight to parents:

"A Play on Words"	
HV phrases for describing infant weight above the centile	HV phrases for describing infant weight on the centile
<i>"Heavier than the rest of the general population"</i>	<i>"His weight is following the curve"</i>
<i>"A little bit heavier than we would like"</i>	<i>"He is perfect for his age"</i>
<i>"They are not a healthy weight"</i>	<i>"She is fine"</i>
<i>"They are heading up a little"</i>	<i>"She is keeping in the line lovely"</i>
<i>"Once they get on their feet and start crawling, they will come down"</i>	<i>"Might just be one of those babies"</i>
<i>"Don't want them to lose but don't want them to gain anymore"</i>	<i>"Staying on the same line"</i>
<i>"Way off the centile"</i>	<i>"Growing correctly"</i>
<i>"Do you think she looks a bit heavier?"</i>	
<i>"Creeping up the chart a little bit too quickly"</i>	
<i>"Jumping up the chart a little too quickly"</i>	

<p><i>"Baby is not where we would like them to be"</i></p>	
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6.4 THEME 3: Meaning, understanding and impact of complexities

Table 23: Key Themes 3 with corresponding subthemes & subheadings

<p>Theme 3: MEANING, UNDERSTANDING and IMPACT of COMPLEXITIES</p>
<p><i>Subtheme: Understanding infant weight</i></p> <p><i>Subtheme: The importance of weaning and weaning advice on weight</i></p> <p><i>Subheading: Parents fears of choking infants determined action</i></p> <p><i>Subheading: "Nana-isms". A cultural challenge</i></p> <p><i>Subheading: Theory versus practice</i></p> <p><i>Subheading: Impact of the 3–4-month development visit</i></p>

There are several complexities about the weight of infants that might be perceived as overweight or obese and impact on both the capacity of parents to understand this in earnest and the ability of the HV to feel comfortable addressing it. HVs are clear that they have a specific role. However, they did not always feel equipped to manage this in the way they want because of service provision. The common processes that are developed to address infant weight currently available, such as child health clinics, weaning sessions, the child health record, NHS and community services, media and social media, appear to be at odds with each other. This limited understanding of infant weight gain, weaning processes and infant feeding by some parents, and caused them to experience much anxiety.

6.4.1. Subtheme: Understanding infant weight

The child health record is created for, and meant to be understood by, parents as keepers of the information. However, there is inconsistency in the way that the child health record, or "red book", is used by HVs in the management and monitoring of infant weight. Both the child health record and the centile chart within are universal objects widely associated with attending the child health clinic and recognised by participants as central to monitoring infant growth (weight, length, and head circumference). There are different levels of parental understanding of the centile chart; full, partial and no understanding. This

subsequently impacts on the way in which infant weight is understood and regarded by parents, and how they engage with the centile, so they understand infant growth more fully. Parents and HVs refer to the centile in several different ways; the “line”, “curve”, “graph” or “chart”. This helps parents understand infant weight, although they often rely on HVs to confirm that infant weight and growth is appropriate for gestational age and gender. However, the extent of how and if HVs explain this to parents is variable. HVs assume that parents understand the centile chart, and when this assumption is made no explanation is offered. Parents who have no understanding of the centile chart did not appear to admit this, or ask HVs about its significance, and therefore remain unsure about its relevance and role in monitoring and recording infant weight:

Researcher: I am just thinking about what you understand about the centiles?

“I don't understand the centiles at all I just know that it's some kind of chart, but I don't understand the whole thing to be honest” (Parent Semi-structured Interview 8:68).

Researcher: Has someone explained that to you?

“No. I think they just presume that you know, it would have been more helpful if it had been fully explained...again they just presume...” (Parent Semi-structured Interview 8: 70).

Parents know that the centile chart is the way HVs keep an eye on the infant's weight to see if it is appropriate, by “*staying on the same line*” or “*growing correctly*”. Although parents have supposed ownership of the child health record, they rely on HVs' interpretation of weight and identification of appropriate infant growth. Only one parent was able to articulate what she thinks indicates infants are overweight, citing above the 91st centile and understanding that, because her infant was on the 98th centile, only two percent of infants were generally bigger. This breastfeeding parent referred to her infant as thriving, and thriving is equated with weight gain.

“He started on the 75th centile and he has gone up to the 98th so he has grown slightly so I know they are meant to follow the curve well that's is what I have been told that they are meant to follow the curve but he has skipped up a few but I think the concern would be if he dropped rather than if he put on that is my impression of it so I am not particularly worried about him because he is obviously thriving” (Parent Semi-structured Interview 6: 31).

Furthermore, understanding was limited in relation to the general population of infants of the same age and gender in comparison to their own:

Researcher: So, if you think about where he is on the centile in comparison to other babies of the same age and the same gender or sex you would understand what it meant for him to be on the 75th centile?

“No not really, I would just say the one underneath or the one above I wouldn't know which ones but every time I have got him weighed, they have always said he is perfect for his age” (Parent Semi-structured Interview 7: 39).

6.4.2. Subtheme: The importance of weaning and timely weaning advice for healthy infant weight

Weaning is common language, symbolic to participants and high on parents' agenda, and parents paid attention to it. For both sets of participants it is a key milestone in the development of the infant. Although all parents are familiar with the term weaning as common language, and aware of the need to wean, there are distinct differences in knowledge and understanding of weaning process between first-time parents and other parents. The “how to and what of weaning” is more significant to parents than “when to wean”. At the time of data collection, parents and infants were at different stages in the weaning process, as some parents had experienced weaning, and some had not. In preparation for weaning, parents stressed they want to know when to start, and how much and how often to feed infants. Parents introduced weaning foods because of how infants presented, their weight and behaviour. For example, if they seemed hungry, the rationale for this is not about the physical capacity of the infant but if they are bigger than other infants. Bigger infants require earlier weaning on the proviso that they are hungrier earlier:

“I think because he is a big lad, I will be doing it (weaning) sooner rather than later because I think he is hungry so I think he will be curious to start earlier...” (Parent Participant Semi-structured Interview 6:58).

Despite having weaning worries, conflicts, and dilemmas, parents felt responsible for their lack of knowledge about the weaning process and consciously or unconsciously removed the responsibility of this from the HV. This is consistent with findings in theme 2, where parents felt it was their responsibility to ask for HVs support. Parents acknowledged the role and responsibility they have for influencing and managing infant nutrition, stating that some parents are less responsible than others because convenience foods are used to wean (use of ready-made, purchased weaning foods, rather than healthy homemade, freshly prepared weaning foods).

“...it comes down to education doesn't it and I think the parents have a massive responsibility and some are just not that bothered really. People have things that are

convenient for them, and they probably know deep down that that they could do a bit better..." (Parent Participant Semi-structured Interview 8:151).

There was a level of inconsistency in the service offered to parents around weaning in relation to the provision of group weaning sessions, offered as an alternative and replacement for the 3–4-month visit. Content, delivery, and evidence base was dependent on the provider and did not always appear to meet the individual needs of the parents. Parents were often unsure who led the session, and they identified that it is more about the familiar method of WS. This left some parents who attended weaning sessions still worried and unsure about the process of weaning and they wanted to know more detail to fully feel prepared. First-time parents in this study had less understanding, knowledge, and confidence about weaning than parents who have weaned before. There was a sense of intrigue about the mysteries of weaning for first-time parents; they pondered how they were going to wean their infants, having never done it before. They were uncertain and less self-assured about what weaning foods to include or exclude once weaning commenced. Parents who had no prior experience of weaning expressed their main worry being about process, particularly that they were worried about doing it wrong:

"Being a first-time parent, you haven't got a clue and you don't want to do anything wrong" (Parent Semi-structured Interview 8: 49).

Researcher: What worries you the most?

"I don't know just everything really I don't know where to start. I came to the course last week and they advised me what things I would need to make and stuff but I am worried what I need to do and how much I need and how often do I have to give him it" (Parent Focus Group 3: 20).

6.4.3. Parents' fear of infants choking determined action

All parents in the research were familiar with two weaning methods; weaning by spoon (WS) and baby-led weaning (BLW). Although they were more acquainted with WS than BLW in language and meaning, parents still worried about the processes of both. BLW was less accepted and a more elusive weaning method to parents and, because of this, they were not confident about doing it. BLW was even more of an enigma to parents, and they struggled to understand it and felt more concerned about feeding infants this way. Parents were somewhat conflicted and, although some parents recognised that infants consume less quantities of food using BLW and perceived it as a healthier option, it was associated with parental feelings of panic and fear of infant choking. Despite being curious and interested in BLW, parents generally viewed it as unsafe. It is not as well understood by parents, memorable or perhaps promoted in the same way as WS. The fear of infant choking was the

main parental concern, and this fear superseded any notable benefits. Having a preterm infant was felt to be more problematic because of the perception of an increased risk of infant choking:

"Then there is that baby led weaning thing. I know my health visitor and she was quite keen and said have you thought about weaning and do you know much about it, and I was well I know a little bit about it, but this baby led weaning thing I'm going to look into it because I'm not totally confident if I'm honest about it..." (Parent Focus Group 3: 123).

Parents wanted to know more about BLW because they didn't understand the process. They were curious about how this was defined and how it was different to WS. They wanted to know the practicalities of this weaning method:

"What actually is baby led weaning?" (Parent Focus Group 3: 126).

"It's just giving them like finger foods and letting them do it." (Parent Focus Group 3: 127).

"So, you don't puree?" (Parent Focus Group 3: 128).

"So, what about choking?" (Parent Focus Group 3: 129).

A consensus was developed between parents that the thought of BLW frightened them to the extent that they opt for WS. WS is an approach that involves offering parental control of feeding infants puree rather than larger or firmer pieces of food that infants can hold in their hands, having control over. They acknowledged that BLW is a healthy option because it reduces the amount of food consumed. The indicators were that when parents commence weaning early infants struggling to eat what is offered during BLW because of their age and stage of development, and thus parents commencing weaning early generally resorted to WS because of the fear factor:

"That's why I didn't do it I did a bit of a mixture so at first, I pureed and then once she could eat, to be fair she prefers lumps of fruit rather than fruit puree and obviously it will be better for her as she will not be consuming as much..." (Parent Focus Group 3: 130).

"I have done the odd little bit with her but again I am frightened" (Parent Semi-structured Interview 8: 54).

6.4.4. Subheading: Nana-isms - a cultural influence of older generations

Parents want instantaneous information. In their quest for this, all parents in the study had received inconsistent and mixed messages about weaning from both professional (HV teams, group weaning sessions, hospital, and community staff) and nonprofessional sources (internet, social media, friends, family and peers). Mixed messages affect the parent's

capacity to source public health advice that feels straightforward, easy to understand and practical to apply. As a result, they often revert to seeking advice and information from family or friends, rather than the HV. HVs refer to this type of information and practice around weaning as “Nana-isms”. It is viewed by HVs as untrustworthy, lacking in evidence base or based in practice that is outdated and not currently recommended for healthy infant weight and nutrition during weaning.

“Sometimes you start off on the back foot and you are trying to claw back some of that misinformation to try to get to a good starting point and that is quite a challenge straightaway because they don't know who to believe because they get a lot of conflicting information” (HV Focus Group 1: 328).

The desire to commence weaning is triggered and governed by infant behaviour, as well as infants appearing “big”, as identified earlier, and reaching a specific weight. If infants appear hungry or present as difficult to settle, this is also a parental cue, perhaps to initiate a conversation with available nanas in anticipation of commencing weaning in a more historical and cultural way:

“My mam said that she brought me up it was all rusks and porridge and things like that” (Parent Focus Group 3:23).

This participant went onto say how her infant seemed ready to wean.

“She said she gave me rusks and porridge and I think he isn't exactly small he is like 15lbs 9ozs so I am wondering can I start and give him porridge and I am just stuck I need something to just settle him because he is constantly hungry” (Parent Focus Group 3:26).

A popular source of information for weaning is Facebook, as parents seek other parents' views and advice relating to infant feeding and weaning, because advice is instantaneous and often more accessible than the HVs' advice. Facebook is useful for gathering other parent's views and / or experiences of infant weaning. However, it is negatively influencing weaning process because of its content. Some parents expressed a level of caution about the information from online sources. They chose to focus on other parents' specific experiences of weaning that are considered relevant to their current situation and to sort through the information provided to establish what is most beneficial. However, Facebook also contains posts that contradict current recommendations for weaning, for example poor practice of adding solid food to formula milk to prolong introduction of weaning. This demonstrates the ease of available and inappropriate information immediately and widely accessible. Facebook often contains second-hand accounts of parents' perceptions of what HVs have said to them:

“When you look at social media (Facebook) you read ...my health visitor is telling me to give them a little bit of this and some will say at 12 weeks give them a little bit of this in their bottle and see if they will settle” (Parent Focus Group 3:110).

“There is the internet as well, but I am dubious about what information to take from that...[pause]...I think it's more people's experiences that I get from that rather than any specific information... (Parent Semi-structured Interview 6:83).

As well as social media containing potential poor practice, there was also an apparent lack of consistent information and professional consensus between NHS staff within community and acute services about infant feeding, particularly overfeeding. Conflicting information regularly occurs, and this has impacted negatively on parents. Conflicting information further causes parents distress and fear, and they are at a loss as to which way to progress with healthy infant feeding and nutrition. Feeling scared has left them unsure how to manage infant feeding and, therefore, infant weight:

“It is scary really getting conflicting information all the time, so you don't know what to do” (Parent Focus Group 3: 207).

6.4.5. Subheading: Theory versus practice

Conflicting sources of feeding and weaning advice create recognition in HVs and parents that key public health messaging is not always transparent. However, this is not just the advice itself, it is the timing of the delivery of the advice. There is a discrepancy between the timing of weaning advice delivered at 6-8 weeks and recommendation for weaning to commence when the infant is 6 months old. This impacts on parents' understanding of the weaning process of “how to wean” and “when to wean” for healthy infant weight gain. It also dominates their actions and decision making, leaving HVs less likely to be able to influence infant weaning because weaning information and advice from HVs to parents is provided too early to be useful. Parents want weaning information when it is right for them, which is prior to, although not too far in advance of, commencing infant weaning. As advice is offered too early, parents are not receptive to it. Being receptive is linked to being timely, and occurs at the time they start to action weaning. This is another driver for seeking and acting on alternative advice from family and friends:

“You can tell them and give them all the leaflets under the sun but what you have told them has probably gone right out of their head as their baby is only 6 weeks old and the last thing on their mind is introducing solid food and then they get to 4 months and then mam says you want to be giving them some porridges now and they go yes” (HV Semi-structured Interview 4: 152).

“To be honest it was far too early for me to be thinking about things like that...so I just thought it was a bit pointless mentioning it then” (Parent Participant Semi-structured Interview 6: 78).

The impact of early weaning advice at 6-8 weeks means parents struggle to remember or apply the information and advice given. They perceive timing of information as too soon to be useful or have a positive effect on their actions. The agendas of the HVs and the parents differ, and this impact is detrimental. Weaning is introduced to parents at 6-8 weeks because this is on the HV's agenda as part of service delivery. However, it is simply not on parents' agendas, particularly when parents have waited until the infant is aged 6 months, as recommended:

"It must have been 6-8 weeks so she (health visitor) left me with a load of leaflets and told me there were sure start sessions to go to so I am going to go to that because to be honest I cannot get my head around it (weaning)...how I am going to do it..." (Parent Participant Semi-structured Interview 6:66).

"I saw her (HV) quite a while ago, but it is only recently that he has just been eating more because I obviously waited until he was six months to eat properly so it wasn't really in my head until I actually started weaning him" (Parent Participant Semi-structured Interview 5:99).

6.4.6. Subheading: The impact of removal of the 3–4-month development visit

Two out of three research areas do not provide a 3-4 month contact as this is no longer mandated and available to clients at level 1 (universal). HVs expressed a sense of loss because this contact enabled them to do a home visit in preparation for the weaning period. In fact, it is traditionally known amongst HVs as the weaning visit. Its absence is reducing capacity to address unhealthy infant weight and support parents in weaning. In some cases, it was plausible for parents to not have any contact with a HV at a home visit at all between 6-8 weeks and 9-12 months. Significant gaps in contact between parents and HVs caused HVs concern:

"The last time I will have been out would be the 6-to-8-week check and if they don't attend the regular clinic then you don't see them again till 9-12-month check so you cannot see a pattern and you just see it jump and you don't know how gradual that jump has been" (HV Semi-structured Interview 4: 144).

"We are now not doing the in some areas the 3-to-4-month visit the last information a parent will have will be at 6 weeks baby is brand new and mams head is in the shed sometimes and I had a situation and I didn't even know the family and I went out to the 9-month check and the baby was over the 98th centile and I was meeting mother for the first time so it was very difficult to tackle that one" (HV Focus Group 2: 15).

The HV went onto say:

"We had to make a referral to the dietician as the baby was the weight of a 4-year-old and you couldn't even plot this child because the child was way off the centiles,

and I had to go back more regularly so I think the 3 to 4 month visit is crucial" (HV Focus Group 2: 19).

HVs follow the National Health Visiting Service Specification (NHS England 2014) that determines universal HV service provision. Knowing that families at level 1 do not receive a 3-4-month visit, they make the autonomous decision to provide targeted support and include a 3-4-month visit or extra support visits for parents because they feel it is their duty of care as a health professional. They know that clients in deprived areas, offered weaning classes at level 1 rather than a 3-4-month visit, are less likely to attend. They justify this by recording families at level 2 because they believe that following local policy is undermining their specialist role and not meeting the needs of the client groups:

"They are the ones that don't attend the groups they are the ones that won't come to the clinics sometimes and that is the problem when you live in an area of deprivation" (HV Focus Group 1: 214).

Researcher: It isn't a mandatory visit now the 3-4-month visit so how do you get around that

"If we have targeted the families, we will say we will come and do a support visit and we will take them out of the universal service and put them onto an additional" (HV Focus Group 1: 218).

This is a strategy developed by HVs to address the needs of parents and subvert the commissioning process. **Diagrams are included alongside key words and findings for both parents and HVs as tabled and the most significant findings summarised (Table 24). This is followed by the frequently asked questions (Table 25) and a chapter conclusion.**

Overall, the findings report several complexities surrounding the interaction for both sets of participants. The key concepts from parents and HV findings are demonstrated by 4 figures below (figures 15-18). These figures overall, highlight the predominant elements of the interaction from either the parents or the HVs perspective. Figure 15, Page 165 demonstrates how symbolic infant weight is to parents and links this to successful infant feeding. As highlighted earlier within the chapter, parents emotions are reliant on all being well with the infants weight and this manifests itself as a result of the response from the HV. Parents

emotions are reliant on the outcome of the interaction, rather than the interaction itself.

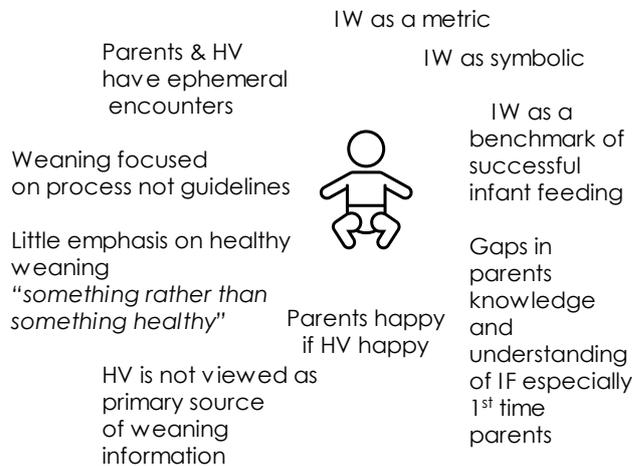


Figure 15: Key concepts from parent's findings IW=Infant Weight IF=Infant Feeding

Figure 16 demonstrates how parents view the role of the HV which differs from how HVs view their own role. As highlighted earlier within the chapter, the role of the HV is perceived as being tokenistic by parents. However, parents continue to access clinic and HV services for support and advice, particularly with new experiences of infant feeding. There is a clear demonstration of this activity being age and event critical. Figure 17 demonstrates that HVs understand what parents want and their value. However, it also highlights some of the barriers and challenges HV face and the negative impact this has on how the service is perceived. It emphasise the importance of HV parent relationships. Figure 18 further highlights the complexity of the interaction from a HV perspective, demonstrating the assumptions, emotions, language and strategies that are apparent within the data.

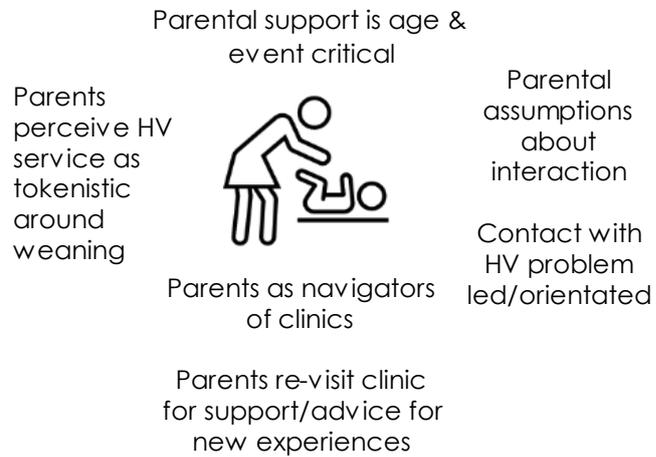


Figure 16: Key concepts from parent's findings: Support & perceptions

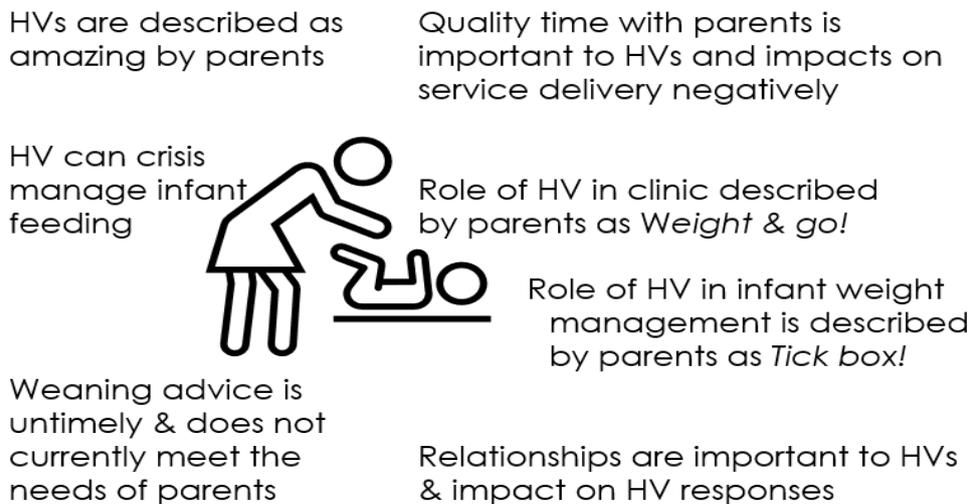
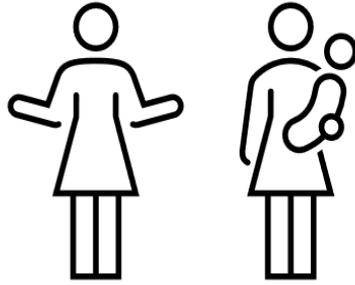


Figure 17: Key concepts from health visitor findings: Roles and relationships

Interaction around infant weighing is ephemeral

Assumptions are made & never addressed



HVs have a phrase bank of terms used to describe IW to parents
"A play on words"

Both HVs & parents demonstrate intense emotions and feelings

HVs perceive they have a standard approach to monitoring IW & advising parents

Circumstance need to feel right for HVs to address IW

Environment, time & language are influential

Figure 18: Emotions and assumptions

Table 24: Key words from parent participants

Key words from parent's findings	
Complexity	Harmony
Disharmony	Self-blame
Humility	Timing
Approval	Reassurance
Accessibility	Empathy

Table 25: Summary of findings from parent participants

- Parents valued positive HV feedback and support around infant weight and nutrition and as such their relationships with HVs. Early crisis intervention was particularly valued	- Weaning was high on parents' agenda and there was a knowledge gap between first-time parents and non-first-time parents. First-time parents required the most advice about infant weaning, formula and or breast feeding although "new events" in non-first-time parents also stimulated contact between parents and HVs
- Infant weight was a key priority for parents although communication about infant weight was perceived by parents	- Weaning advice was gathered from several sources other than the HV and the speed by which information and

as being problem orientated towards infant weight loss rather than infant weight gain	advice was obtained could determine the source
- Parents perceived infant weight and consistent infant growth as a sign of good parenting and infant weight was an emotive issue	- There was a lack of transparency, health professional consensus, clear and timely advice from health professionals including HV about weaning methods (when, how and what of weaning)
- Parents attended HV clinics for several different reasons other than to have their infants weighed	- Contradictory information led to parental confusion and fear
- Positive outcomes were important to parents following infant weighing.	Parents interpreted non symbolic and symbolic interactions in several different ways.
- Several key factors influenced public health interactions between parents and HVs around infant weight: parent-HV relationships, parental assumptions, values, and beliefs, developed response to HV behaviour and communication strategies, parent's navigation of the clinic, understanding of the infant's centile chart, age of the infant and occurrence of new parenting experience as events	

Table 26: Summary of findings from HV participants

- HVs viewed themselves as specialists in infant weight and infant nutrition	- HVs found addressing infant overweight or obesity with parents emotionally challenging. They compared the process of this as difficult if not more difficult than raising safeguarding with parents
- HVs had adopted and developed specific communication strategies to address infant weight so as not to upset parents	- HVs relied on timing, knowledge and information in the moment of the situation to decide if and when to address infant weight
- The 3–4-month visit was viewed as crucial to addressing infant weight and weaning and its absence provoked a sense of loss in HVs	They considered parental presentation and assessed the level of risk of complaints against themselves and the service based on previous negative experience when

	parents had been challenged about infant weight and made a complaint
-	Several key factors influenced public health interactions between HVs and parents around infant weight. HVs wanted conditions to be just right so they could address this comfortably. This was impacted by service delivery and workforce capacity, the extent of parent and HV relationships, HV emotional responses, assumptions, values, and beliefs

6.5. CHAPTER CONCLUSION

Infant weight is a complex phenomenon and a symbolic metric for indicating how well infants are doing. It is a historical and traditional reason why parents attend clinic. They require reassurance, approval, and positive reinforcement from the HV as an outcome of the clinic visit, particularly about weight. When infants are new-born, parents are more likely to lack confidence in their weight management and, because parents lack appropriate knowledge and information to identify expected weight gain, they assume the HV will alert them if there is an issue or problem. Parents and HVs describe the conversation about infant weight as ephemeral, consisting of age-related synonyms and adjective language. This HV communication strategy is sufficient to provide reassurance about infant weight to parents because it is perceived as a positive response, i.e. “no problem, no conversation”. However, it is not always sufficient to address issues.

6.5.1. So what?

Over the years, service provision has altered, and this has been noticed by both parents and HVs. As a result, parents describe weaning as a “tick-box approach” and weight monitoring as a “weight-and-go” approach. Where clinics are busy, they are less easily navigated for meaningful conversations with HVs, because parents infer a reluctance to take up too much of the HV’s time. However, HVs do not seem to be aware that parents are conscious of the wants and needs of the other parents waiting. Parents are demonstrating empathy for other parents, and therefore not imposing on the HV during clinics. Overall, parents are positive about HV and HV services and value the time spent with them. However, they did not always view HVs as a primary source of information or knowledge about healthy infant weight, or healthy nutrition, mainly because they prefer information that is more immediately accessible. This also relates to information about weaning. The weaning process itself presents a series of dilemmas, anxieties, and conflicts for parents, because weaning is complex and often an unknown entity. Timing of HV infant weaning advice and information

at 6-8 weeks has little impact on later weaning behaviour of parents and is not attuned with their wants and needs. There is also a gap in the knowledge and understanding of weaning processes between first-time parents and other parents, which is compounded by a lack of professional consensus. Therefore, parents introduce weaning based on perceived infant cues (age, size, and behaviour) rather than government recommendations or HV advice. They listen to and rely on other sources, such as family, friends, and social media because this is more immediately obtained.

However, if questioned about feeding and infant weight, parents respond emotionally. They are shocked and there is a strong sense of morality if this occurs. Suggesting to the parent that the infant might be underweight, overweight, or obese produces an overwhelming notion of being a poor parent and they self-blame. They are horrified, mortified and indignant, particularly when breastfeeding. HVs also have emotional triggers required to address infant weight and they need to recognise and address these as they impact on the way they respond to parents. Several key factors influence the interaction around infant weight between the parent and the HV.

Despite this, if the HV is happy with infant weight, the parents are happy because this gives them a strong sense of doing a good job.

6.5.2. What now?

The desire for healthy infant weight and healthy nutrition for long-term health is somehow lost as the parent focuses only on the weaning process. They are in the moment, and preoccupied with when and how to wean appropriately, rather than what to wean for long-term healthy weight gain. Furthermore, there is discrepancy between the knowledge and understanding of weaning methods (WS and BLW). Although there is evidence that BLW reduces risk of over feeding, parental fear of infant choking supersedes any benefit this method of infant weaning has. This should feature to a greater extent in weaning sessions and be prioritised by HVs whenever possible. The discrepancy between timing of weaning information delivered and recommendations for commencing weaning has left both HVs and parents at odds with each other, and this should be addressed by listening to the voices of HVs who feel strongly that the 3–4-month visit is crucial in addressing weaning for healthy infant weight. In the absence of this they have adopted strategies to deal with perceived gaps in the service by placing parents in receipt of universal services to alternative levels. Perhaps further research can be completed with parents to identify the benefits of a universal 3-4-month visit as was delivered previously.

One of the influences on the interaction of infant weight is the desire of the HV to have established relationships to feel comfortable about addressing this issue. HVs worry about complaints being made against them and the HV service. They want an environment that affords them the time to meet the needs of parents and do not always feel that this is available. Changes to service provision seemingly eroding HV capacity to address infant weight have also been accompanied by a perceived sense of loss. This requires acknowledgment because relationships between HVs and parents are critical to public health practice.

Chapter 7 is the discussion chapter. It explores and analyses reported findings in Chapter 6 by drawing together the research aims and questions, empirical literature and theoretical perspectives. It then considers research impact and implications.

CHAPTER 7: DISCUSSION

7.1. INTRODUCTION

This chapter presents a critical discussion from the interpretation and analysis of research findings (Chapter 6). It evaluates and discusses the relevance of findings to contemporary literature available in Chapter 2. A summary of important aspects of the introduction, literature review and methodology provide a reminder of what is important about the research and re-establishes the original research questions and aims as significant. The chapter considers what emerges from the research as distinct from that already known in the literature. It considers both micro and macro theoretical perspectives, providing a logical argument for the research outcomes by making these explicit in the discussion. The research aims to contribute to existing knowledge or add new knowledge about the focus, therefore making an original research contribution. Theoretical application in the discussion includes the process of meaning modification and meaning attribution within SI (Blumer 1969) and Dasein or fore-structure (fore-sight, fore-having and fore-conception) in the hermeneutic circle and development of hermeneutic commentary (Heidegger 1962). Implications for potential transferability to other areas of public health practice are considered, alongside research limitations and recommendations from the research which are situated within the conclusion (Chapter 9).

Furthermore, themes relevant for inclusion within the chapter pertain to new or emerging knowledge in the context of the literature as a result of completing the research. A process of comparison between findings, empirical literature (theory) and policy identifies similarities and / or differences (Thompson 2013). It enables a distinct focus on the most relevant findings for inclusion in the chapter. The process of developing key discussion themes is demonstrated in Table 27 (Page 193) at the end of this chapter. Discussion of themes also considers affinity with the research aims and questions. A logical structure for discussion then applies to the chapter overall. The process of comparison enables three foci to emerge and establish a robust argument for the research. Firstly, a distinction is made between emotions, knowledge and reasoning using the wheel of emotion (Plutchik 1980). This shows a difference between emotions and feelings as characterised. Secondly, there were beliefs held by participants without confirmation (idle suppositions), in other words neither parents nor HVs knew if these were true, and when HVs used specific phrases to describe infant weight to parents, structural presuppositions existed. Thirdly, is impact the diminution of HV service provision is having on both HV and parents. Additionally, determining if the research addresses its questions and aims optimally is also a key focus to demonstrate research success and achievement. Discussion is also cohesive between the three key foci outlined, theory and policy. This occurs through analysis and synthesis of findings. As previously highlighted, key

discussion foci are generated using a process of comparison between findings, empirical literature (theory) and policy (Thompson 2013). Therefore, rather than using the research aims and questions as a direct focus, i.e. as key discussion points within the chapter, research aims and questions are carefully mapped to the discussion in a matrix. The matrix is located at the end of the chapter.

Research aims and questions are presented below:

Research aims and questions:

Aims:

- 1. To interpret the interaction between health visitors and parents during the act of infant weighing and around infant weight, illuminating meaning, outcome and or actions*
- 2. To uncover and understand influential and contextual public health factors regarding infant weight to generate knowledge and understanding of these from both macro and micro perspectives*
- 3. To identify potential implications and recommendations for public health workforce development and / or transferability to other contexts*

Questions:

- 1. How and what public health interaction occurs around infant weight between HVs and parents in HV practice?*
- 2. What key factors, if any, need to be in place for public health interaction regarding infant weight to occur?*
- 3. How do key factors influence public health interaction between HVs and parents in relation to infant weight?*

7.1.1. Revisiting important aspects of the introduction (Chapter 1)

The research focus was to describe and interpret the research phenomenon of infant weight through the lenses of parents and HVs by revealing and understanding the interaction that occurs between them. The context was the NHS and in the delivery of the HCP (DH, DCSF 2009). The introduction to this research highlighted why it matters, as a strong rationale for its conception in the first instance. Why it matters is intrinsic to the researcher as a motivator for completion of long-term academic goals and passion for public health, particularly public health of infants and children. There is professional curiosity of existing assumptions, i.e. positionality and its impact on the researcher role and the research. Extrinsic motivators include the policy context, because children deserve the best start in life for successful and healthy progress across the lifespan (PHE 2021c). However, poor socio-economic health outcomes exist and impact detrimentally on many children, particularly in areas of

deprivation (PHE 2021b). Considering the contextual factors of the research is important to understand the impact of current public health policy and sociocultural and economic factors on the weight of infants and children. The HCP (DH, DCSF 2009) impacts as it is the medium and environment for the research participants to connect. It is a mechanism for discovery as the context of the research. HVs and parents meet in clinic and interact around infant weight. This interaction lacks exploration from an interpretative research perspective. The interaction is not a new occurrence, and neither is infant or childhood overweight and obesity. Exploring the interaction is a new occurrence as a piece of research. Therefore, it is critical that research and research design is able to solicit and examine the voice of all participants, so interpretation is clear and understanding reveals participant voices in earnest. Thus, by allowing discovery of dual perspectives for analysis, it is the most applicable way to highlight effective development and any contribution this interpretative research makes.

7.1.2. Revisiting important aspects of the literature (Chapter 2)

Globally, obesity is a severe public health challenge (WHO 2017b). Empirical literature highlights a plethora of research with a focus on childhood overweight and obesity. However, it is also a body of literature where less research is available relating to infants, than older children, adolescents or adults. Potential gaps in research literature, via critique and analysis of contemporary and relevant research, discovers less research exists involving both parents and HVs from an interpretative paradigm. This is a clear example of the research importance and why it matters. Furthermore, existing research does not apply SI and HP theory simultaneously within research design, or with the two groups of participants. Broadly speaking, a perspective of global, national and local data of overweight and obesity across the lifespan is helpful to understand overweight and obesity in context, and alludes to it as a complex phenomenon, and the literature reflects this. Several interrelating factors separate modifiable and non-modifiable risks (Chi and Luu et al. 2017), either increasing or decreasing the occurrence of infant and childhood overweight and obesity. Briefly, girls are at greater risk than boys (Wang and Beydoun 2007) and, if obese as children, it is five times more likely that obesity occurs in adulthood (Simmons, Llewellyn and Owen 2016). Children in areas of deprivation are likely to experience greater overweight and obesity, and this rises if they are also from ethnic backgrounds in comparison to white children living in deprivation (The Institute of Health Equity 2020). This highlights social inequalities across UK populations and the increasing incidence of ill health burdens almost tripling in the poorest areas (Baker 2021).

However, funding of public health services, such as HV, is significantly reducing, and less money is available for obesity services (UK Government and Parliament 2021). Adequate

investment is beneficial in the long term. Investing in child health at the earliest possible moment in time provides the highest rate of return on investment (Garcia and Heckman et al. 2017). Additionally, children and families in England receive fewer mandated contacts in the delivery of the HCP (DH, DCSF 2009) in comparison to other areas of the UK. This demonstrates inequity of HV service provision. As a region, prevalence of childhood obesity in the Northeast is 11.6 percent for boys and 10 percent for girls on entry to school reception (PHE 2019a). This is higher than that in the Southeast by approximately 3 percent and almost doubling between the most affluent and most deprived areas children live in (PHE 2019a). Breastfeeding is a key protective factor influencing the development of obesity, however breastfeeding prevalence in the Northeast is also lower than in England, with 24.5 percent of infants exclusively breastfeeding in comparison to 32 percent in the rest of the country (PHE 2019a). This highlights the relevance of breast-feeding incidence, deprivation indices and a local research focus.

Essentially, roles and responsibilities of HVs and parents relating to infant weight are important to the research overall. A parent is a gatekeeper to infant feeding (Gubbels et al. 2009, Mastroeni et al. 2017, CSJ 2017) and a HVs is responsible for managing healthy weight and healthy nutrition between the antenatal period to school entry (Nicholson 2021). Therefore, the empirical literature supports both as research participants and potentially fruitful sources of new information and understanding.

7.1.3. Revisiting the conceptual framing to re-evaluate worth (Chapter 3)

A conceptual framework of social construction centres the research as a superstructure, allowing a focus on the lived experience of participants. Chapter 3 employs a framework by Ravitch and Riggan (2017) in reducing risk of "methodological haziness". The key concepts of social construction, reality, knowledge and truth allow participants to construct meaning from the perceptions they have, i.e. individual realities, knowledge and truth as they see it. Perceptions, if socially embedded, become typifications, meaning they are collective in nature and reflect common-sense understanding of society (Knoblauch and Wilke 2016). Accepting that each participant has individual reality, knowledge and truth is fundamental to research success and recognises claims about truth, knowledge and reality as contextual interpretations specific to the research. Participants' reality, knowledge and truth specifically relates to a version they create (Beaumie 2001) and are individual to each participant. This means there is no expectation of generalisation or reproduction of similar findings in the future if research is repeated with a different set of participants. On this occasion, research is specific to participants, location and the individual environment.

Social construction is cohesive to both methodology and research design, as discussed in Chapters 4 and 5. It is fundamental that a conceptual framework acknowledges positionality, and exploring positionality enables understanding of existing ontological and epistemological perspectives influential on the research. Discussion here reaffirms a researcher ontological position of relativism and an epistemological position of subjectivism. Table 8 Page 71) depicts harmony of axiology, ontology and epistemology and is an overview of the interpretative paradigm, ontological commitments and epistemological commitments of the researcher to the research, leading to a concept of self as an insider/outsider (Bourke 2014). Overall, the conceptual framing demonstrates synergy between paradigm theory and ensuring the voice of participants is heard.

7.1.4. Revisiting methodology to re-evaluate worth (Chapter 4)

Chapter 4 presents the research methodology as phenomenological. It offers theoretical perspectives as SI (Blumer 1969) and HP (1962), and methods as semi-structured interviews and focus groups. As these align, the research is highly contextual (Gray 2009). Heidegger's (1962) concept of Dasein is a continual focus throughout the research. As is the development of hermeneutic commentary. Blumer's (1969) concepts of meaning modification and meaning attribution according to SI is fundamental to exploring any research assumptions participants make. This interpretivist research uncovers rich and relevant data, particularly as research participants include both parents and HVs, providing an emic perspective of their lifeworld (Glaser and Strauss 1967; Strauss and Corbin 1990). Similarly, two theoretical perspectives, two methods and recruiting participants from three different localities, albeit in one location, allows triangulation (Mackey and Gass 2015). Presenting a strong argument makes justification for two theoretical approaches. Two theoretical approaches is conducive to illuminating macro and micro perspectives for consideration. Researcher reflexivity also features as a quality factor, and is critical to both theoretical perspectives in place, and as a means of bias and risk reduction. Chapter 8 is dedicated to reflectivity for this very reason. Interpretivist research produces powerful and transferable findings and legitimately relates to discovering participant realities. It enables engagement of smaller numbers of participants without the confines of generalisation (Mackey and Gass 2015). Applying attention to detail around participants' real-time experiences in great detail is a key concept of the research. These features can demonstrate trustworthiness, consistency, confirmability, and applicability in the research (Anderson 2010, Noble and Smith 2015).

7.1.5. Brief and informative summary of research findings

Research is able to illicit numerous reasons why interaction between HVs and parents transpires as it does, including relevant, respective and influential factors. Three overall themes highlight the interaction between HVs and parents around infant weight as complex, and perception varies between participants. Perception involves several assumptions, requiring addressing, although assumptions are not necessarily given attention. Research findings, in Chapter 6, include three overall themes, and four subthemes. A summary of the major issues presented in these themes provides an overview of reported findings in the research, offering clarity and further signposting. Also, it acts as a brief reminder to the reader.

Theme 1: A conversation of gestures identifies several expectations and rules of engagement between HVs and parents. Parents' wants and needs are specific, and relate to infant weight. Parents' perceptions are that wants and needs are not always met by HVs. Although, HVs identify with parents' wants and needs, they often feel unable to meet them, because of service delivery, their own perceptions of infant weight and a desire to place the relationship with parents above all else. There are many assumptions at play within the interaction, leaving gaps in the process. HVs make assumptions about parents and parents make assumptions about HVs because of the *unspoken* word. There is an emphasis on infant weight gain rather than weight loss, and this has impact on the interaction that occurs and is determined by social and cultural norms. There is also a clear emotional impact on both parents and HVs when infant weight requires addressing, is perceived as an issue or is addressed in a way that parents perceive is upsetting to them.

Theme 2: Gaps between the actual and the ideal demonstrates how change to service delivery is perceived and impacts negatively on both participants. Parents and HVs feel that the HV service has been eroded and is focused only on "*tasks and tick boxes*". Parents describe the HV service as superficial, an "*in-and-out*" or "*conveyer-belt*" approach and they express a "*sense of loss*" as a result of these changes. Similarly, HVs also express this sense of loss. A theme of professional support and maintaining therapeutic relationships with parents around infant weight shows several stages of the relationship between parents and HVs (none, new, established, therapeutic and rescuing (Cahill et al. 2008). HVs are more inclined to address increases of infant weight with parents if a relationship is already established. There is a strong desire not to be seen to blame parents for increases in infant weight and various strategies are in place to actively avoid upsetting parents if and when weight issues are raised. HVs consider the language they use because they recognise that specific language is upsetting for parents, and this is a perception from previous experience of parental complaints to the provider organisation that "*the HV says their infant is fat*". This is

closely linked to a desire to maintain a therapeutic relationship with parents, first and foremost.

Theme 3: Meaning, understanding and impact of complexities establishes the complexity of the interaction that takes place between parents and HVs relating to infant weight. Complexities interrelate and are bound by several prerequisites, for example how infant weight is understood by parents, how comfortable HVs feel about raising this with them and the myriad of available information for parents, often superseding HV advice, about infant feeding, particularly during weaning. Weaning is high on parents' agendas and something they feel anxious about. It is the great unknown, especially for first-time parents. However, the delivery of weaning information from the HV service is not meeting parents' agendas, it is not delivered in a timely fashion and therefore it is at odds with what is required for impact. Poor timing also encourages cultural influences of family members that share outdated feeding practices. A lack of understanding of weaning processes potentially leads to rapid weight gain. Using BLW is a strategy to prevent this, however it is ineffective because it scares parents. They do not have sufficient information about it to put it into practice. Instead, they perceive this as a method of weaning likely to have potential risks, such as infant choking, and are therefore more reluctant to try it. Parents also feel that BLW is not high on HV agendas either, with weaning sessions generally promoting WS.

7.2. THEORY CONCEPTUALISED

Several key factors impact on the interaction between parents and HVs around infant weight, influencing the interaction at various stages. Conceptualising and exploring influential factors requires returning to the theoretical perspectives of Dasein (Heidegger 1962) (use of knowledge and reasoning) and Blumer's (1969) SI process of meaning modification and meaning attribution, the three basic premises and the use of language and symbols. Theory illuminates participants' interactions with each other, role taking, role making, and common lines of understanding (Blumer 1969) as an explicit part of the discussion, making it clear what the research means for participants in terms of outcomes and actions.

7.2.1. Dasein

The circumstances of "*Being and World*" (Heidegger 1962) determine HVs' and parents' positionality, similarly to researcher positionality, as discussed in Chapter 3. HVs' positionality is seemingly inseparable from their professional role (Heidegger 1962). HVs' "*Being*" is their

clinical role, responsibility and personal and professional experience. HVs' and parents' "World" is the environment where they coexist and interact with others, in this case the clinic. Conceivably, HVs are subject to social and cultural norms of society, which requires professional knowledge and expertise to manage. Similarly, parents' "Being" is their mothering role, with specific and identifiable responsibilities of being good parents. Mothers have multiple roles as caregivers, educators and protectors as their "World" (Sethi 2019). Dasein (Heidegger 1962) applies to both parents and HVs. HVs' previous knowledge and experience of HV practice and dealing with sensitive issues is fore-sight. Fore-having is the influence and awareness of the causes and impact of infant and childhood obesity for HVs (Heidegger 1962), which is arguably different to parents' fore-having as that is potentially reliant on generational parenting experiences. Additionally, time or "Temporality", i.e. past, present and future, impacts on the interaction around infant weight and is one of the key factors. Meanwhile, space, or "spatiality" (Heidegger 1962), is the mechanism that places HVs and parents as individuals together in the clinic environment.

7.2.2. Role making and role taking as part of interpretation

Exploring role taking and role making in the process of meaning modification and meaning attribution (Blumer 1969) perceives HVs as specialists in infant weight and healthy nutrition. This perception reflects existing empirical literature and government policy (DH, DCSF, 2009, Public Health England 2021c). Searching for health needs is a dictate in the founding Principles of Health Visiting (CETHV 1977). The HV is a professional and provides information, guidance, support and evidence base for practice and the parent is a recipient in this. This suggests that HVs have overall power. However, with regard to infant weight this is not always what transpires because of role ambiguity. Both parents and HVs assume power in various ways. Both parents and HVs have various internal and external interactions to manage and interpret, and there is potential for parents' and HVs' values and beliefs to differ in their respective roles. This results in a mismatch in common lines of understanding.

7.2.3. Common lines of understanding

Common lines of understanding exist between HVs and parents, and misinterpreting these is a risk to understanding and addressing any barriers or challenges to conveyance of public health messages. Common lines of understanding focus on the "generalised other" (Heidegger 1962), i.e. subsequent role expectations and behaviours, structures and pattern recognition. However, role expectation and pattern recognition is not always clear, and this impacts on the interaction taking place between parents and HVs in real time. Additionally,

from a macro perspective, the role of the HV is changing due changes in government policy and commissioning of services. This is a perception that both parents and HVs recognise as having a negative impact on each other and the HV service overall. If HV keeps changing and diminishing due to policy and commissioning of services, common lines of understanding can shift and no longer apply because the service that was delivered is not the service that is currently delivered. This is emphasised further in Section 7.5 in relation to the impact of a diminution in HV services overall.

7.3. A DISTINCTION BETWEEN EMOTIONS, KNOWLEDGE AND REASONING

Primary emotions are *joy, trust, fear* and *surprise*, with counterparts of *sadness, disgust, anger* and *anticipation* (Plutchik 1980). When behaving emotionally, individual realities exist, and emotions are hard to distinguish between (Gomes 2017). Literature previously identified states that infant weight is a sensitive issue to address (Willis 2012). Within the findings in Chapter 6 a notable emotional response from both HVs and parents around infant weight was evident. As humans we have a specific repertoire of emotions requiring management (Gomes 2017), yet emotions are not considered as a significant factor in previous research of this kind. Therefore, exploring emotion and its impact on the actions of parents and HVs is new, and was accessed by using phenomenological interpretivist, methodological theories and approaches. From the perspective of HVs, emotion is associated with infant weight gain. From the perspective of parents, it is associated with both infant weight gain and infant weight loss (an infant that is underweight or not thriving) and infant feeding. According to Plutchik (1980) both HVs and parents experience a range of basic and primary emotions, and these have a clear association with feelings. Table 26 demonstrates this according to Plutchik's Wheel of Emotions (Plutchik 1980).

Emotional Axis	Emotion	Associated Feelings of HVs and Parents
Axis 2	Trust	Submission
Axis 2	Acceptance	Submission
Axis 3	Fear	Guilt, Anxiety, Submission
Axis 3	Apprehension	Guilt, Anxiety, Submission
Axis 3	Anger	Aggression
Axis 4	Surprise	Shock
Axis 4	Anticipation	Aggression

Table 27: A combination of emotions & feelings Adapted from Plutchik (1980) Wheel of Emotions

7.3.1. HVs' emotional realities

HVs are experts with knowledge of infant growth patterns and infant weight, which are unique to each infant (DH, DCSF, 2009, Public Health England 2021c). However, they have demonstrated in this research that do not always use this knowledge and expertise to benefit infants, because of their emotions. The emotional intensity some HVs feel is a complete surprise to the researcher, mainly because it is perceived as a significant part of the role and responsibility of HVs as outlined in the HCP (DH, DCSF, 2009) and High Impact Areas (Public Health England 2021c) and the three interrelated activities of, forming relationships, needs assessment and home visiting (Cowley et al. 2018). Alternatively, HVs demonstrate that they care about parents' feelings and seem to struggle if not addressing infant weight, because this opposes their professional role and responsibility as public health practitioners. This is an example of cognitive dissonance as they struggle with their emotional response to the situation. As the emotional response by some HVs is intense, arguably, it nullifies their knowledge of child development and propensity for reasoning, i.e. decision making, which is a crucial part of the HV role. It is also a surprise to some HV participants when they suddenly realise how they feel about the extent and impact of their emotions. This suggests HVs have not processed basic emotions or how they felt about addressing infant weight with parents before, or addressed it on a subconscious level (Plutchik 1980). Similarly, they may not have considered its potential impact on their actions. This is explained by the way in which they make meaning from the situation.

Meaning modification and meaning attribution (Blumer 1969) explain the complexity of emotional response in HVs. Perhaps this is a result of knowing little about the infant and parent, or infant metrics (birth weight, infant length or head circumference). The early and subjective emotional response of some HVs is triggered by symbols (Blumer 1969). This means that during clinic, as parents and infants approach the scales, HVs' visual assessment prior to weighing represents an overweight infant. A culmination of an absence of previous knowledge, ongoing relationship and a visual assessment, impacts on the HVs' internal, self-interaction (Blumer 1969). This triggers emotional thoughts of dread, nervousness, fear, and apprehension in the knowledge and anticipation of a requirement to challenge parents in a sensitive manner, without upsetting them. HVs' subsequent feelings appear magnified if parents are accompanied by grandparents, as possibly explaining how an infant's weight is above what is expected to different generations is more anxiety provoking. HVs then feel the need to submit to parents by not proactively raising infant weight on every occasion. During the interaction, HVs are in a constant state of processing action and reaction of parents (Redmond 2015), and this in turn modifies their developing response and meaning action. HVs respond to parents' cues insightfully to detect their current emotional state, quickly judging if infant weight is addressable or not. Theoretically, HVs' judgement uses Dasein as

fore-structure, as this includes knowledge of the evidence base for infant weight, rapid weight gain and understanding the impact of overweight or obesity on outcomes in child and adulthood (Ong and Loos 2006; Ekelund and Ong et al. 2006; Hui et al. 2008; Druet et al. 2012; Denney-Wilson 2015; Simmons 2008, in Fildes et al. 2015; Zeng et al. 2018). Because the relationship with parents is key within the role of the HV and brings them a sense of satisfaction (Cowley et al. 2018) HVs are reluctant to damage this. However, HVs' fore-structure is also superseded by the parents' cues, their own emotions and feelings and subsequent feelings, and this results in not addressing infant weight appropriately.

7.3.2. Do HVs emotions prevent whole family approaches?

Although this research is primarily about infants and the interaction between parents and HVs around infant weight, overweight and obesity, HVs do not raise overweight or obesity with parents. Perhaps, this is because they do not see this as their role or responsibility, or it is part and parcel of the reluctance to damage the relationship as highlighted above. This is supported by the finding that interaction between HVs and parents omits any mention of parents' weight apart from the fact that it appears to illicit similar emotional responses. Focus remains on the infant, however the literature clearly indicates that children of obese parents have higher risk of becoming obese (WHO 2020), suggesting correlation between mothers' weight and infants' and children's weight (Ardic 2019). Addressing the weight of whole families is an activity that is necessary because an increasing number of women of reproductive age are either overweight or obese themselves (between 37 and 61 percent of 16–44-year-olds) (Sibson and Crawley 2021). Additionally, HVs do not consider the macro factors that impact on obesity, for example deprivation and the wider determinants of health, maternal education level, paternal employment or parents' weight. They focus only on the activity of weighing infants and therefore function at reactive, micro levels in practice. Addressing the weight of families may not be a recognisable role or responsibility of HV practice due to a rhetoric of being 0-5 practitioners, because of HV service delivery, due to a lack of consistency in developing relationships with parents coming to clinic, or simply because they lack sufficient time, motivation, knowledge, information or guidance. It may solely occur this way because of the impact of HVs' emotions and feelings. Alternatively, if it were not considered an activity that was valued by managers in the same way as safeguarding, or relevant within a large and demanding corporate caseloads HV could feel devalued, particularly if this was suggestive of a new activity or role that was suddenly expected of them on top of everything else (Bidmead et al. 2016 a). In reality it is most likely a combination of factors, that made addressing difficult topics such as infant weight either possible or less possible. Making this more possible could be increased if alternative

approaches to service delivery were developed, such as increases in HV recruitment and retention.

On occasion, the strength of the emotional response that some HVs feel is compared with that of safeguarding infants and children. This supports the earlier comments made around the impact of emotions on HVs overall. However, it really did come as a surprise to the researcher because it demonstrates the strength of the emotional feelings HVs experience and deal with in order to prioritise and / or address excess infant weight.

7.3.3. A comparison of emotional response to safeguarding

It transpires that having a safeguarding or child protection conversation with parents is less emotionally fraught for some HVs than raising issues of excess infant weight. The rationale for this is an association with a lack of professional guidance, i.e. common lines of understanding for safeguarding exist, are tangible and are put into practice by HVs. Safeguarding is an expectation of the role and behaviour of HVs and includes risk assessment, and referral to child protection services to shield infants, children and families as appropriate (Powell 2017). However, there is no apparent professional guidance in place for HVs to proactively address infant weight in place, making common lines of understanding elusive. Additionally, from a professional perspective Dobson (2017) asserts that HVs “*walk a tight rope of safeguarding*” that presents a tension between relationship building, developing and maintaining trust and actioning surveillance as part of safeguarding. Similarly, HVs in this research appear to prioritise relationships with parents rather than address infant weight. Perhaps, because they perceive addressing and managing infant overweight or obesity as an additional surveillance activity. Excess infant weight is not a HV priority in comparison to safeguarding, it is not considered a safeguarding issue. HVs address safeguarding as appropriate because it is a unique part of their professional role, and a core value (Powell 2017). There is a recognisable strategy for managing it. To a greater extent, safeguarding within society is acceptable and wanting to care for and safeguard infants and children is a cultural norm. This presents a further tension for HVs when faced with the decision to raise the issue of excess infant weight with parents and therefore, unlike safeguarding they are preserving the relationship over this significant public health issue. However, it is a complex phenomenon from a professional perspective as highlighted below.

Although HV findings establish HVs as recognising excess weight in infants, how to address it is less apparent in the absence of guidance for robust pattern recognition. Lack of pattern recognition, results in disrupted action. Although HVs stipulate addressing safeguarding is a challenge, they do so without fear of repercussion and, yet a fear of repercussion can prevent them from addressing infant weight, perhaps in the manner they want to. HVs did

not view excess infant weight as an immediate priority, and yet it has lasting repercussions for child health. In comparison, safeguarding is a timely and formal mechanism for early help and support (Peckover and Appleton 2019). Unless excess weight in infants is afforded the same principles of timely support and early help as a core value, it will continue exponentially. If a HV service is unable to address infant weight proactively, who is going to take responsibility at grassroots level? HVs need to shift away from the perception that they only need to address infant weight if it is an issue, and focus on proactively addressing infant weight with all families regardless of status. This could remove the tension between relationships maintenance and development of trust between HVs and parents and the element of surveillance. Therefore, shifting their own and the parents' 'internal and external interaction, leading to a different interpretation, developed response and meaning action (Blumer 1969), positively impacting on infants. Theoretically, this could then alter HVs' developed concepts of fore-structure and impact on fore-sight, fore-having and fore-conception (Heidegger 1962) helping them to manage the relationship with parents whilst addressing infant weight as part of service provision.

7.3.4. Parents' emotional realities

Parenting is something that is under intense scrutiny (Valentine et al. 2018). A parent is a gatekeeper to infants, as they are reliant on them for nutritional needs, and therefore parents are responsible for making decisions on their behalf about feeding (Gubbels et al. 2009, Mastroeni et al. 2017, CSJ 2017). Parents require ability to support healthy nutrition for themselves as well as their infants, thus feeling empowerment for making healthy decisions (CSJ 2017). Parents also determine individual weaning practice (Elfzani et al. 2016). However, it is clear that some parents are unable to do this (Sibson and Crawley 2021). Parenthood is an ongoing challenge, involving new emotional experiences, and is something that raises parents' anxiety levels (Valentine et al. 2018). Parents feel anxious about infant weight in general, and specifically want to know if infants are gaining weight appropriately. Although HVs recognise parents' emotional cues, parents do not recognise the intensity of some HVs' emotional responses, probably because emotion is difficult to detect, and emotional behaviour and associated feelings are different for every individual (Gomes 2017). Parents' reality of emotions focusses on the response from the HV because infant weight strongly correlates with good parenting (Valentine 2018 et al.). Therefore, when HVs challenge parents about infant weight, they consider this a challenge to their parenting. It is a challenge to their morality. Good parenting and thriving infants protect their moral reputation with the HV and within society. This equates with good health of the infant because it is the right moral stance. The perception of being good and responsible parents makes them worthy of respect from others. It also adds a further complexity in the

relationship between the HV and the parent because HVs qualities and skills include encouragement, following parental lead, the ability to stay silent, demonstrate respect empathy and understanding (Bidmead et al. 2016 b). Addressing infant weight with parents could change this perception.

The notions of good, worthy and responsible parenting explain why parents feel so upset at the thought of their infants being either underweight or overweight. The realisation that their infant's growth is problematic negatively reflects on their fundamental role of being a parent. Being a 21st-century parent is a high stakes role because of public expectations on parents to be good at what they do, to have certain skills and be able to do what is right for their infants (Valentine et al. 2018). This is the parent's internal interaction, via the thoughts and conversations with self and externally with others in society, including peers, family and HVs (Blumer 1969). Having an infant that is underweight or overweight contradicts expectations of what being a good parent is. Conversely, even though emotional triggers exist for parents around infant weight, weight gain or weight loss, parents did express a desire to know in the research. This juxtaposes with society's infant weight preferences for infants that are "chubby", "chunky", or "bruisers" (a sign of higher economic status in some cultures), and the overall assertion of weight gain as successful parenting (Redsell 2013). However, parents want HVs to choose their language carefully if problematic infant weight is an issue. They acknowledge that although this is an upsetting thought, carefully chosen language lessens the blow, and therefore the emotional response. Thus, parents' internal self-interaction and external interaction with others, and beliefs and values surrounding good parenting, are able to continue (Blumer 1969). This is probably something the HV is not aware of because the HV perceives parents as "generalised other" (Heidegger 1962) who desires chubby babies first and foremost. This results in an idle supposition as they wrongly interpret the situation because of role expectation (Blumer 1969).

7.4. IDLE SUPPOSITION OR STRUCTURAL PRESUPPOSITION?

The assumption is that parents understand the significance of the centile chart. Given the global scale of childhood overweight and obesity (WHO 2014; 2016; UNICEF 2018; WHO 2018; World Bank 2018) perhaps a further assumption is that public health advice has positive influences. Albeit this is the literary assumption drawing on the roles and responsibilities of HVs in the HCP (DH and DSCF 2009), Standards of Proficiency for Specialist Community Public Health (Nursing and Midwifery Council 2021 (Draft) and Principles of Health Visiting (CETHV 1977). It is also public health practice in Making Every Contact Count (PHE, NHS England and Health Education England 2016). Where parents and HVs come together opportunity

presents itself for meaningful interaction around infant weight. However, existing assumptions impact on the interaction between participants in a variety of ways and are never fully addressed. Rather, assumptions are established and become existing common lines of understanding. Arguably, they become idle suppositions (Green 2000), which are less useful and a further complexity that requires addressing. As several assumptions are in play, often unacknowledged by either sets of participants, and these negatively impact on developing responses and the meaning attributed to them (Blumer 1969).

7.4.1. Parents' assumptions

Parents' assumptions focus on role taking and role making, and common lines of understanding remain unclear. The initial assumption made by parents is of HVs only initiating a conversation with them if issues with infant weight are uncovered. They carry this assumption into the clinic with them. When HVs give ephemeral responses about infant weight, possibly in a quest not to upset them, this is interpreted as meaning infant weight is fine, suggesting a positive outcome of the interaction. No indication is given in the findings as to why or how this assumption exists. However, it is an experience of parents which has become a normal occurrence of the interaction and therefore is considered as part of parents' fore-conception of the situation (Heidegger 1962). Ephemeral interactions employ language that is easily understood by parents, and HVs have developed a repertoire of phrases for this purpose. This repertoire avoids all terminology that suggests that the infant is gaining too much weight. The repertoire of HV responses to parents is outlined in Chapter 6, Table 20, Page 178). Although parents attribute ephemeral responses by HVs as a positive outcome from weighting, this assumption is not always correct. Parents assume ephemeral responses indicate no issues with infant weight, when possibly HVs simply decide not to address it. Understandably, the desire to protect parents' feelings and prioritise other public health issues, emotions and feelings leads to this decision.

7.4.2. HVs assumptions

HVs assume that they all do similar things in addressing infant weight and healthy infant nutrition in practice, and articulated specific infant feeding guidelines around breastfeeding and weaning during data collection. This demonstrates a level of expertise and consistency in the evidence base. It is the HV's choice to address issues of weight based on their assumptions of parent reactions. Consequently, interaction is open to interpretation or misinterpretation by parents. HVs also assume parents are happy with the interaction, further establishing this mode of communication as a common line of understanding. Similar to

elsewhere, this becomes an idle supposition (Green 2000), again less useful to either set of participants, because this is a static developed response and subsequent meaning attribution (Blumer 1969). Professional curiosity should determine HV responses, however HVs remain cautious about labelling infants as being above expected centiles because the assumption is that parents respond with emotion and feelings of anger and upset. Potentially, this leads to parents making a complaint to the organisation about HV practice. They also assume that parents are only interested in infant weight gain in line with societal and cultural preference for chubby babies as healthy babies, and the onus is on the parent to ask if they have concerns relating to infant weight. Finally, HVs make assumptions about infant feeding methods before clarifying these with parents, particularly when they are unable to recognise a pattern that matches the parent's narrative.

This leaves each party with secondary assumptions, i.e. who is responsible for informing the other if infant weight issues are present. So, not only is the onus on the HV to interact with parents if there are issues, the HV believes the parents will ask if they have concerns. Therefore, they rely on each other to initiate conversation. It appears that neither the parent nor the HV assumes total responsibility, although it is never really clear whose responsibility this is. The lack of clarity about who is responsible for what within the interaction is a potential reason why HVs take parents by surprise if infant weight suddenly becomes a concern. This is particularly the case if it has never been aforementioned, and the parent is attending clinic on a regular basis. This further indicates that not all HVs raise the issue of excess weight or rapid infant weight gain with parents. In fact, the knowledge of the implications of rapid infant weight gain should be something that is commonplace in both parents' and HVs' understanding of infant weight because of its association with later obesity. This is highlighted in Chapter 2, as rapid weight gain in infants before age 2 creates increased risk of developing obesity at ages 3, 5 and 8 years (Li et al. 2020).

Additionally, as HVs do not appear to clarify parents' understanding of the child health record and the infant's centile chart, this leaves parents without the necessary information, i.e. fore-sight (Heidegger 1962), to make informed decisions about infant feeding.

7.4.3. The impact of disharmonious assumptions on HVs

Feasibly, HVs assume that “a perfect” infant weight is symbolic to parents, and this impacts on their developed response or, in other words, how they make meaning from the situation (Blumer 1969). Meaning is the result of the anticipation of a negative parental response if weight is problematic. For HVs to action meaning, they must move from developing responses to meaning attribution and meaning action (Blumer 1969). Subsequently, meaning

attributed to the situation within the interaction develops a response in some HVs that results in either no or postponing action, or action that causes parents emotional upset because of perceived language used. This may be a transient reaction on the part of the HV, because of associated emotions known to dictate behaviour (Gomes 2017). It does, however, illuminate how HVs take the standpoint of parents (Stryker 1980, 2002). It is also a complexity of the internal and external interaction that occurs during that point in time (Blumer 1969). Many HVs want to protect parents from experiencing negative emotions about their parenting in relation to the suggestion that their infant is either losing or gaining weight inappropriately. Therefore, fore-conception (Heidegger 1962) is responsible for not addressing infant weight on these occasions. Parental complaints to the provider organisation where the research takes place focus on the choice of language HVs adopt when raising infant weight. Therefore, this impacts on the HVs' propensity to address it. The desire to know if infants are gaining too much weight is in opposition to the HVs' developed response and meaning attribution (Blumer 1969) based on their experience of a minority of parents who complain. Additionally, a dichotomy exists between "healthy babies are the chubbiest babies" (Wu, et al. 2021) and socio-political and economic drivers for reducing the prevalence of childhood overweight and obesity, and later associated disease (WHO 2018). A rise in childhood obesity across the globe is unprecedented (WHO 2014; WHO 2016; UNICEF 2018; WHO 2018; World Bank 2018), however socio-cultural norms of healthy infants as chubby infants is not experiencing a shift large enough to initiate a change in socio-cultural perspectives across populations.

The likelihood of infant weight being addressed in clinic at that moment in time is variable and depends on several impact factors; the HV's assessment of the emotional state of the parent, if parents are alone or have company such as the infant's Grandma, if relationships are established, i.e. parents on the HV's caseload, timeliness and, finally, if the HV believes the current environment is suitable. HVs' perceptions of clinics are that they are somewhat unsuitable environments for raising sensitive issues of infant weight with parents. The requirement for maintaining confidentiality in busy clinics, as HVs are overheard discussing weight, is exposing HVs and parents to unnecessary vulnerability. HVs do not want to feel this vulnerability and neither do they want to subject the parents to this feeling unnecessarily. They wish to continue subjectively coexisting and interacting with parents in this interrelated "World" where they both exist (Mackey 2005). This "Spatiality" within the concept of Dasein (Heidegger 1962) is important to HVs' role and responsibility as public health practitioners, and seems to govern their practice. However, this is demonstrable of a lack of consistency in HV approach if some HVs did address this in the clinic and others did not feel able to because of either emotions, breaches in professional confidentiality or feelings of vulnerability. Until the perception is removed that addressing infant weight is a sensitive issue,

it will continue to be so. This can only be combatted by HVs addressing infant weigh in a more proactive way and not feeling the need to single out specific parents.

7.4.4. Health visitors' pattern recognition and parents' narratives

HVs' assumptions demonstrate a level of mistrust if infants gain weight without a distinct explanation, and this is a further idle assumption. It is particularly noticeable when infants below 6 months of age present at clinic as consistently gaining weight above the centile, and parents report that they are not yet weaning. The infant's intake of either breastmilk or formula milk is not enough to provide an explanation for the weight increase, particularly when the HV does not recognise a pattern that matches the parent's narrative. This causes confusion about the parameters of normal weight gain, feeding methods and the approach of the HV, particularly when infants are exclusively breastfeeding. Breastfeeding parents believe and assume they are doing the right thing in breastfeeding. There is a self-perception and sense of emotional virtue for breastfeeding parents, whose portrayal is as "guardians of morality" (Hays 1996, in Valentine et al. 2018 page 2). Breastfeeding parents provide protection for infants against potential risk from outside sources, such as infection (Scientific Advisory Committee on Nutrition 2018). Parents express shock that HVs associate increases in infant weight of exclusive and responsive breastfeeding infants as overfeeding. Parents' internal interaction and interpretation (Blumer 1969) of breastfeeding is that it symbolises "best feeding". The shock that infants are overweight contravenes what breastfeeding means to them as a symbol. From their perspective as parents, despite successfully breastfeeding infants, they are still subjected to besmirching by HVs about overweight and obesity, and no infant seems untouchable.

Unlike breastfeeding, overweight and obesity has no association with good parenting. Furthermore, HVs are making assumptions here about feeding methods before establishing this from parents. They are then having to retract their concerns as a result of mis-interpretating or establishing feeding methods in advance of the interaction. Questioning of breastfeeding parents about infant weight by HVs is not giving parents what they want. They do not gain the reassurance and approval they feel they deserve. Questioning is an unexpected response from the HV. It alters parents' internal and external interaction and interpretation of the situation, and the developing response is one of shock and confusion (Blumer 1969). If HVs work on assumptions that parents are overfeeding formula milk or commencing weaning earlier than recommended, and thus resorting to recognised patterns of weight gain, they are relating this to a pattern they identify in formula-fed infants at risk of overfeeding (Baur 2005; Denney-Wilson 2015). This then impacts negatively on the

relationship between the HV and the parent because the parent interprets this as an inconsistent and upsetting approach. It is, therefore, a further idle supposition.

7.4.5. Impact of parent and HV assumptions on the phenomenon known as weaning

As previously highlighted in Chapter 2, early feeding practice affects later growth and childhood obesity, with a rapid period of growth in formula-fed infants presenting a greater predisposed risk (Moschonis et al. 2017) necessary to avoid (Sibson and Crawley 2021). With lack of transparency around weaning, first-time parents are potentially increasing intake of both formula milk feeds and weaning foods sequentially. Parents' confusion is apparent, and this confusion prevents key public health messages being understood. For parents, two public health expectations exist here. Firstly, there is an expectation that all parents, including first-time parents, have basic knowledge to implement weaning in advance of doing so. Secondly, there is also an expectation that they are able to implement this healthily. Perhaps the withdrawal of the 3-4-month HV contact as no longer universally mandated across all localities in England assumes otherwise. However, findings here report a "disharmony of weaning" that has three elements. These are a difference in knowledge and understanding of weaning process between first-time parents and other parents; timing of the introduction of weaning foods, often not in alignment with public health policy by parents; and timing of weaning introduction as less significant to parents than weaning process and practical application. As parents process the weaning phenomenon, their activity focuses on "how to wean" based on infants' presentation and cues, rather than "when to wean" and correctly interpreting infant cues. Furthermore, "when to wean" seems more significant to HVs than "how to wean healthily". This results in a level of confusion about weaning information, and again there is an assumption that parents already know what to do because weaning sessions are available in place of the 3-4-month visit. Although available, and attended by some parents in the research, it is unclear how what the outcomes and impacts are. Even though some parents in the study did attend, they remain uncertain about what process to follow, because content of sessions is variable and the main focus is weaning by spoon, rather than baby-led weaning.

7.4.6. Is health visiting practice responsive?

It is clear in the frequently asked questions at the end of Chapter 6 (Reported Findings) that HVs and parents are asking different questions about infant weight and infant nutrition. HVs are asking parents general questions about dietary habits such as "*How is feeding going?*" or "*What is her activity like?*". This is neither reactive nor proactive. There is no obvious

correlation between infant weight, HVs' questions and the infant's centile chart. As previous, this means that if HVs raise infant weight during a subsequent contact with parents, feelings of shock, surprise, guilt or aggression are increasingly likely. In contrast, parents ask direct questions such as "Can I cut down?" or "Has he put on too much weight?". Although these are closed questions, they demand a straight response from HVs and relate clearly to infant weight from the parents' perspective. Questions like these are parents' cues and direct opportunities for HVs to make every contact count (Public Health England, NHS England and Health Education England 2016). Addressing cues from parents about infant weight, even if weight is not exceeding the centile, is proactive public health practice. Although continuous weight gain of infants at clinic is the universal gesture between HVs and parents that symbolises good parenting and healthy infants, this line of questioning by parents contradicts the assumption that parents' only concern is weight gain per se, and not weight gain that exceeds their infant's centile. It is also suggestive of parents' views of overweight and obesity changing in response to political rhetoric and social norms. Parents want to know, however knowing is on their terms. This contrasts with earlier findings where parents place the onus on the role of the HV to explore weight loss or gain if problematic. Some parents are happy to mention infant weight based on their current situation, wants, and needs, and others not. This impacts on their developed response by maintaining a line of questioning, ephemeral and general approaches to interactions with parents. Furthermore, because HVs often did not know the parents well they have little historical knowledge of individual feeding practice or parenting values or beliefs, and thus raising excess weight is considered a risk. This contradicts their foresight or public health knowhow and advancing knowledge or fore-having (Heidegger 1962).

7.5. DIMUNITION OF HEALTH VISITING SERVICE PROVISION

The HV service is facing significant change, however as key public health providers the expectation is that HVs still meet the needs of local populations adequately. Furthermore, the way services are delivered within HV as a result of changing to corporate caseloads has reduced continuity of care and appears to have affected how realistic health needs assessment can be (Whittaker et al. 2021). The development of relationships should continue. However, this is not always the case. Within the research localities corporate case-loads are the preferred service provision and only one location out of three engages in the provision of the 3-4-month visit. This change accompanies the restructure of weaning services and result in inequity of weaning services for parents in the local area. The link between the organisation and delivery of HV services and outcomes is a possibility, although further research was required to support this (Bidmead et al. 2016 b). Within this thesis, findings

demonstrate that whilst HV are maintaining relationships with parents they are not addressing infant weight due to the way HV services are organised and delivered. Furthermore, the way service were organised and delivered required parents to navigate clinics, and with less HV staff present, this was sometimes difficult for them.

7.5.1. Navigating the clinic

Navigating the clinic should not be difficult for parents, and yet it is because of changes in HV service provision. Several clinics are no longer available, leaving less provision per population. This means that some clinics are very busy and HVs do not have sufficient time to address infant weight effectively, resulting in infants needs not being met. Longer waiting times, high attendee numbers and less staff result in insufficient time per parent. Time is a key factor in limiting the interaction between participants, because it signals imposition and both parties are cognisant of time for different reasons. Parents worry that other parents are “*waiting for weight*”. Parents waiting is a symbol of social order. As the clinic environment appears busy and HVs are otherwise engaged with other parents, many parents made a conscious decision to limit the interaction because of a desire to meet the needs of others. As a result, they aimed to not impose and to remain within social boundaries. Parents display helper qualities in clinics, and this is suggested as being part of a theoretical relationship model between HV and parents, akin to a Family Nurse Partnership Model (Bidmead et al. 2015). Helper qualities of parents are respect, empathy and humility. However, this means that they do not always get their needs met although HVs’ fore-conception (Heidegger 1962) is responsible for caring about parents’ feelings and wishing to maintain fruitful relationships, this is superseded at times by the environment.

Within the findings, parents and HVs describe changes to service provision as a “*sense of loss*”. As a gradual occurrence over several preceding years, this significantly alters parental engagement with the clinic environment. Clinic provision is reducing and, consequently, so is the role of the HV for infant weight management and infant nutrition. This is still an expected role and responsibility, however the circumstances of current provision make infant weight and nutrition more difficult to prioritise in comparison to maternal mental health, for example. Thus, if parents present with possible post-natal depression, excess infant weight is not mentioned. Certainly, HVs are prioritising maternal mental health, and this is deserving. Disputably, they are not appearing to adopt a macro approach to family health and wellbeing. For example, there is positive correlation between increasing levels of exercise and improved mental health and wellbeing (Rahimi and Peeri et.al. 2020). Similarly, a healthy, well-balanced diet improves health and can reduce weight (WHO 2020). However, investment is required for available services that HVs can then refer into.

7.5.2. Diminution of relationships

Earlier research (Bidmead et al. 2015) explored parent and health visitor relationships and the suitability of a specific relationship tool to measure this. Their study found the ability of parents and HVs to establish early meaningful relationships was impacted by current service provision. This draws the discussion back to Chapter 2 (2.7.2.) and the importance of relationships, where partnership working and common lines of understanding are required to be established for therapeutic relationships to prosper, and time for developed and sustained contact is required (Bidmead et al. 2015). Bidmead et al. (2016 b) explored effective relationships between HVs and parents focusing on cognition i.e., what HVs and parents were thinking about during their interaction. Findings included the identification of five qualities that parents have, labelled as internal resources. These were friendliness, trust, openness and honesty, interest in the HV service and respect. The greater the presence of these five qualities in parents, the greater the propensity for establishing a relationship between the parent and the HV and, the extent of the HV helping the parent (Bidmead et al. 2016). Parents also needed to trust the HV for the development of a positive relationship (Bidmead et al. 2016 b). However, as indicated in the findings chapter of this thesis there were several factors that hindered the relationship.

An established relationship provides further opportunities for public health messages about infant weight to be delivered if the right circumstances allow. Where organisational factors impacted such as busy clinics, lack of continuity and caseload size, the early stages of relationship building between HV, and parents was prevented (Bidmead et al. 2016 b). In the findings of this research, parents did not see the same HV consistently. Seeing several HVs in the early, important developmental stages of the infant's life resulted in a disjoint in the relationship between the HV and the parent. As a consequence, infant growth and healthy weight management was at risk of not being addressed in a timely way because a relationship was not established, due to inconsistent personnel. The importance of relationships is highlighted throughout this thesis, particularly in the findings. It is clear that establishing relationships is important.

In the context of this research, temporality (Heidegger 1962) requires HVs and parents to develop and maintain relationships with each other before the clinic interaction takes place. However, a reduction in home visiting and corporate case loading prevents this. Therefore, initial clinic interactions and any future clinic contacts between the HV and the parent were already in deficit. Additionally, current service provision has made this notion of temporality more improbable and the impact of this shows in participant responses. Both HVs and parents recognise the impact of this, and it can be difficult for parents to keep re-establishing

relationships with a number of different HVs in clinic and in the delivery of the HCP (DH, DSCF 2009). HVs rely on relationships as their fore-structure (Heidegger 1967) because this is where HV knowledge and experience of the families sits, for example their parenting style, history of infant development, awareness of socio-economic circumstances, values, beliefs and influences. What they miss without an established and early relationship is all of the above. When it comes to addressing infant weight, this impacts on HVs' decision making because it is a missing part of information they require to make informative clinical decisions when interacting with parents. Therefore, this impacts on the infant. Needs assessment and clinical decision making is part of the professional role and responsibility of the HV (Cowley et al. 2018). Where this is lacking, parents resorting to other sources of information because a level of trust was not established between the HV and the parent sufficiently enough to immediately address the needs of the infants with reference to weight.

7.6. IMPLICATIONS FOR PRACTICE

Consideration of the dichotomy between the professionalism of the HV's practice and their capacity to address the needs of the infant who maybe overweight and exceeding their growth centile is required. Several implications for practice emerged from this research and impact on both HVs , parents and infants. Implications for HVs are a result of both policy and practice. Implications include a lack of investment and resourcing for HVs to enable them to address infant weight appropriately because of the environment and circumstances currently defining service provision. Furthermore, due to these impact factors, HVs and HV services find themselves moving much more closely to a reactive, rather a proactive, public health position. Despite having knowledge, skills and qualities as outlined by Bidmead et al (2016 b), HVs lacked the ability to use these within the HV process. A key part of the HV process was exploring health needs (Bidmead et al. 2016 b). As suggested earlier, although HVs could do this where safeguarding was concerned, they omitted to include the health need of infants related to weight.

7.6.1. HV lacks resourcing!

From a macro perspective, this research outlines areas where resourcing impacts negatively on HV service provision in relation to infant weight. Resourcing HV services is the responsibility LAs who commission the service from public health funds available from the UK government. LAs make decisions about how to spend this funding. A recent petition launched in August 2021 to the UK government aimed to prevent further cuts to HV funding. After a 6-month period the petition raised just 11,528 signatures, insufficient to make a significant difference.

The UK government identifies that HVs are valuable and industrious, however in monetary terms only a 1 percent increase in LA funding occurred in 2021 (UK Government and Parliament 2021). In terms of delivery, HV requires funding to ensure that child health clinics continue to meet the needs of local populations and deliver a service that is unique to children and families. The number of HV in the workforce should enable this. Government rhetoric appears to value the role of the HV, however it needs to underpin HV service provision in such a way that it maintains its proactive public health identity. Managing whole family weight is a HV responsibility, and it is part of government policy. Earlier, literature in Chapter 2 pointed out that infant feeding, and therefore infant weight, is influenced by many factors including the family environment and feeding patterns (WHO 2020, Heller et al. 2020, Porter and Tindal 2018). HV delivery models are inclusive of families (PHE 2021c), and yet this family-based concept is not transferring to addressing infant weight in whole families.

Programmes that are found to make a difference to weight management, such as the aforementioned HENRY, are unlikely to be regularly available because of costs. This makes the role of the HV even more important as a practitioner of public health because the requirement to address infant weight to safeguard future child health remains. It is clear from the existing literature that childhood overweight and obesity is a genuine issue, and that early intervention is crucial for infants. Despite this rhetoric, a gap in service delivery remains and HV practice is not able to fill this because of resourcing and, to some extent, knowledge, expertise and training. Furthermore, the interaction between parents and HVs around infant weight has reduced to a seemingly bare minimum, due to time constraints. Because of this, parents' perception is of HV as purely task-orientated, particularly for weaning, weight monitoring and weight management. They understand the role of HVs focuses only on the practical component of weighing their infants, rather than as outlined in underpinning public health policy context. Parents are potentially left with this perception of HVs' actual practice around infant weight as problem oriented, therefore reactive. In the findings, HVs' practice around infant weight is interpreted by parents as "tick box" and "conveyor belt". In their quest to protect the feelings of parents and avoid any potential complaints to the organisation, and as a result of busy clinics, this reactive practice is now totally established.

7.6.2. Defensive practice

A lack of resources also appears to result in HV practice as defensive. Both parents and HVs appear to act defensively when infant weight is addressed. Maintaining professional integrity and professional curiosity requires HVs to consider shifting their defensive position towards a more curious one that is proactive in managing infant weight. Government policy also

requires this shift to support activity across the whole family, for the reasons outlined above (WHO 2020, Heller et al. 2020, Porter and Tindal 2018). Furthermore, a lack of understanding amongst parents of the process of weaning results in a lack of adherence to HV advice and guidance. A plethora of weaning information is available, and parents are required to grapple with this. As parents resort to finding weaning information from a number of other sources such as social media, in effect available 24 hours a day, this leaves HVs in a further defensive position as they are required to compete with a plethora of available information that does not always have a substantive evidence base.

Additionally, empirical research identifies that infants have periods of rapid weight gain (Li et al. 2020), which may lead to excessive weight increase. However, this does not a feature in HV practice other than to acknowledge its existence. Instead, HVs refer to a general practitioner, growth clinic or community nursery nurse (Redsell et al. 2013). Therefore, further training and education is justified in order for HVs to feel more confident to prioritise infant weight in the same way, alongside other public health issues.

7.6.3. Losing the 3–4-month visit

NICE (2015), in their quality standard (QS98), advocate that HVs should involve parents and or carers by introducing weaning at the 6-8-week visit in order to prepare them for weaning at a later stage. They suggest that this is the reason why timeliness of the introduction of weaning is so important, so infant feeding (either breast or formula) is to the maximum length of time rather than introducing solid food before this is recommended. Currently, five mandated visits offered by HVs in England result in some families not having contact with a HV from the age of 6-8 weeks until 9-12 months. Losing the 3–4-month contact has repercussions on infant weight because, at 9-12 months, weaning is already established. If a 3–4-month visit is not provided and parents are not attending clinic regularly for infant weight monitoring, a gap in the history of infant weight gain leaves the HV unable to detect the speed or propensity of weight gain. Also, no 3-4-month visit removes conscious communication opportunities for weaning guidance and causes a misalignment between the timing of weaning and the support and guidance parents require to do this healthily, within existing guidelines. It is the depth and breadth of information that parents indicate is lacking around weaning. Healthy infant feeding and healthy weight were seemingly not prioritised. Again, this is in contrast to political rhetoric associated with childhood overweight and obesity, particularly in relation to the defined high impact areas of supporting breastfeeding and healthy weight and nutrition (PHE 2021a) and the HCP (DH, DCSF 2009). Without depth and breadth of information targeted appropriately, parental understanding appears to have suffered and, hypothetically, risk to infants for later overweight and/or

obesity is more likely. Although there is much weaning information, there is a lack of literature on the timing of the introduction of weaning in formula-fed infants (Moore 2012). Although research is somewhat dated, it still supports the need for a 3-4-month visit by its focus on timing, and is relevant in the context of the research findings.

Overall findings highlight several areas that are likely to have a negative impact on how infant weight is managed. They also highlight how the interaction between HVs and parents relating to infant weight is a process that requires a fresh perspective. This is further explored in the conclusion.

Table 28: The process of developing key discussion themes

New information	Connections to existing literature	Theory or Policy connections
Strong emotional responses from HVs and parents	<ul style="list-style-type: none"> • Weight requires sensitive communication approaches to parents (HM Government 2016) • HVs feel undermined if parents do not accept public health messages (Redsell et al. 2013) 	<ul style="list-style-type: none"> • Wheel of emotions (Plutchik 1980) • Cornwell's (1983) work explores morality, health, and illness • Dasein (Heidegger 1962) • Symbolic Interactionism (Blumer 1969)
The balance between maintaining a relationship with parents and public health messaging	<ul style="list-style-type: none"> • Collaborative relationships key to addressing weight in preschool children (Willis et al. 2012) • If poor infant feeding practice is raised HVs perceive that trust is lost (Redsell et al. 2013). 	<ul style="list-style-type: none"> • Models of therapeutic relationships in health visiting: Family partnerships model (Davis and Day 20120) • Establishing, developing, maintaining relationships (Cahill et al. 2008) • Healthy Child Programme (DH, DCSF 2009) • The Principles of Health Visiting (CETHV 1977)
Transition and changes to HV role and practice based on commissioning models has led to inequitable service provision	<ul style="list-style-type: none"> • HV policy invaluable services to all children and families across the UK (Public Policy Exchange 2017) • HV as a "Child Public Health Force Field" (Bennett 2017) • Universalism (Cowley et al. 2018) • LA commissions HV in 2015, revision to England's HCP (DH, DSCF 2009) • Core mandated visits based on individual need described as the spine of the HCP (iHV 2018) 	<ul style="list-style-type: none"> • Healthy Child Programme • The Principles of Health Visiting (CETHV) 1977 • Position statement worrying cuts to health visiting services across England (iHV 2019)
Expectations and rules of engagement surrounding public health interaction	<ul style="list-style-type: none"> • Core mandated visits based on individual need described as the spine of the HCP (iHV 2018) 	<ul style="list-style-type: none"> • Healthy Child Programme • The Principles of Health Visiting (CETHV1977) • Symbolic Interactionism (Blumer 1969)

Existing assumptions, developed response and meaning actions		
Parents' understanding of infant weight according to the centiles is variable	<ul style="list-style-type: none"> • Growth patterns of infants UK 90 measurements • Period of rapid weight gain in infants predisposes at risk of infant and childhood obesity (Moschonis et al. 2017) 	<ul style="list-style-type: none"> • Healthy Child Programme • Removal of 3-4-month mandated visit in parts of England based on commissioning • The Principles of Health Visiting (CETHV 1977)
The basic lack of understanding between HVs and parents existed, never tackled in the interaction process	<ul style="list-style-type: none"> • A lack of self-efficacy in health professionals to act on infant weight presents barriers to initiating conversations with parents in overweight or obesity (Hessler 2015) 	<ul style="list-style-type: none"> • Symbolic interactionism (Blumer 1969)
Consistent focus on infant weight gain, rather than weight loss	<ul style="list-style-type: none"> • Culture of "Chubby baby is healthy baby" preference for "chubby" is a sign of higher economic status in some cultures and good parenting (Wu, et al. 2021). 	<ul style="list-style-type: none"> • Healthy Child Programme • The Principles of Health Visiting (CETHV 1977)
Risk factors not often considered	<ul style="list-style-type: none"> • HVs have difficulty expressing risk factors for infant obesity (Redsell 2013, 2021) • Conceptual models for identifying common risk factors for childhood obesity in under 12s (Chi and Luu et al. 2017) • Childhood obesity – as a worldwide issue impacts on 41 million preschool children (Redsell 2021) 	<ul style="list-style-type: none"> • Department of Health (2016, 2018) <i>Childhood obesity: A plan for action</i> • Heckman principle (Continued investment in child health at the earliest possible moment in time provides the highest rate of return on investment) (Garcia and Heckman et al. 2017)

Evidence matrix: Mapping research aims, questions and corresponding themes to discussion points

Research Aim	Research Question	Corresponding discussion point
<p>1. To interpret the interaction between health visitors and parents during the act of infant weighing and around infant weight, illuminating meaning, outcome and or actions</p> <p>7.2.1., 7.2.2., 7.2.3., 7.3.1., 7.3.2., 7.3.3., 7.3.4., 7.4.1., 7.4.2., 7.4.3., 7.4.4., 7.4.5., 7.4.6., 7.5.1., 7.5.3., 7.6.1., 7.6.2., 7.6.3.</p>	<p>1. How and what public health interaction occurs around infant weight between HVs and parents in HV practice?</p> <p>7.2.1., 7.4.1., 7.4.2., 7.4.3., 7.4.6.</p>	<p>Theme 1: A conversation of gestures</p> <p>Theme 3: Meaning, understanding and impact of complexities</p>
<p>2. To uncover and understand influential and contextual public health factors regarding infant weight to generate knowledge and understanding of these from both macro and micro perspectives</p> <p>7.2.1., 7.2.2., 7.2.3., 7.3.1., 7.3.2., 7.3.3.</p>	<p>2. What key factors, if any, need to be in place for public health interaction regarding infant weight to occur?</p> <p>7.1.3., 7.2.2., 7.2.3., 7.4.3., 7.4.4., 7.4.5., 7.5.2., 7.6.1., 7.6.2.</p>	<p>Theme 2: Gaps between the actual and the ideal</p> <p>Theme 3: Meaning, understanding and impact of complexities</p>
<p>3. To identify potential implications and recommendations for public health workforce development and or transferability to other contexts</p> <p>7.4.1., 7.5.1., 7.5.2., 7.6.1., 7.6.2., 7.6.3.</p>	<p>3. How do key factors influence public health interaction between HVs and parents in relation to infant weight?</p> <p>7.2.1., 7.1.2., 7.3.1., 7.3.2., 7.3.3., 7.3.4., 7.4.1., 7.4.2., 7.4.3., 7.4.4., 7.5.1., 7.5.2., 7.6.2., 7.6.3.</p>	<p>Theme 2: Gaps between the actual and the ideal</p> <p>Theme 3: Meaning, understanding and impact of complexities</p>

7.7. CHAPTER CONCLUSION

This chapter focuses on a critical discussion of the interpretation and analysis of research findings in Chapter 6. It uses the empirical literature from Chapter 2 to merge findings, literature, policy and methodological theories together. It provides a synergy of the important factors in the research within the discussion. Finally, it incorporates the research questions and research aims in order to demonstrate cohesion across the entire research process. The areas of focus are the emotional responses of the participants, the impact of assumptions on the interactions that occur between them and the influence of the diminution of HV service provision across the local area.

7.7.1. So what?

HVs are unable to deliver the service they aspire to and one that is policy driven. Having said that, policy drivers are responsible for some of the barriers and challenges HV face in addressing infant weight, such as the environment, space and time or spatiality and temporality. Additionally, and locally, there is a lack of opportunity to engage with parents on a regular basis because of corporate approaches at staff clinics, impacting on parent-HV relationships. It is clear that assumptions exist for sets of both participants in the interaction occurring between them around infant weight. Neither the parent nor the HV addresses these assumptions during the interaction. This is possibly because they are actively unaware that they exist and what occurs currently is part of normal practice. The roles, actions and assumptions of HVs and parents are embedded. However, they are embedded differently for parents as they are for HVs. Both HVs and parents do recognise changes to service provision occurring over time, and these changes are currently having a negative impact on them both. What HVs do not realise, that parents do, is that their practice is static and, as the parents point out, task-orientated and tick box in approach to infant weight. This approach is described within the findings and discussion as reactive, rather than proactive, by the researcher.

HVs are looking through the lens of the parents when they make decisions about infant weight and, although this is commendable, sometimes that decision is to do nothing. Decisions that HVs make do meet the immediate needs of parents, arguably, also meet the needs of the HVs and the organisation by attempting to avoid parental complaints or because of emotional challenges both sets of participants face. However, this does not meet the immediate needs of infants. It is clear within Chapter 2, and again in this chapter, that early intervention of whole families is key to reducing later detrimental health needs of children into adolescence and adulthood.

This impacts on the interpretation of the interaction that occurs between participants, the developed response, the meaning attribution and the meaning action.

7.7.2. What now?

The purpose of the research is to describe and interpret the research phenomenon of infant weight through the lens of parents and HVs by revealing and understanding the interaction occurring between them. What the research captures is the detail in the interaction, the unseen nuances, the impact factors (assumptions, emotions, relationships and service delivery) leading to developed response and the meaning attribution of participants. It is feasible that learning resulting from this specific contextual research is transferable to other elements of HV practice, not just the area of infant weight. Once exposed, theoretical perspectives allow HVs to understand in greater detail the way in which they interact with parents during clinic. Overall, a perspective transformation is required of HVs, HV services, commissioners and, to some extent, the UK government to be able to shift from what is a reactive HV service to a proactive one. To be a proactive public health service, adequate funding is required. Guiding HVs with local policy is a priority in relation to infant weight to enable them to consider this in the context of early help and support as a core offer. This includes a whole-family approach, aiming to reveal infant weight and how this is managed in a more tangible, tenable and long-term way.

It seems that infant weight and weight of whole families is not a HV priority, although it is featured in the HV high impact areas alongside breastfeeding. Rapid weight gain and parents' understanding of the centiles within the child health record are also areas that, through interactive changes in the conversation, can be illuminated for a great impact, i.e. contextualising individual infants across local populations. Some of the reasoning for the approach to infant weight are highlighted in this thesis. However, further information and research is required to unpick exactly what is being prioritised if it is not overweight and obesity, given the research area has high levels of deprivation, lower breastfeeding rates and obesogenic environments. Additionally, simple and small changes to how HVs approach infant weight and infant feeding may also reduce emotional responses of parents, for example' identifying feeding methods prior to questioning parents about weight gain.

Finally, from a wider perspective, it is worth reiterating why all infants, children and families are not routinely appraised of overweight and obesity as part of normal HV practice and, even further, all health professional practice. This may address any stigma and reduce propensity for emotional responses that seem to be impacting on participants' interactions. It

could become a normal part of public health practice. As identified in the findings, parents want to know if infants are overweight. Weight is a symbol to parents and therefore already on their agenda, as is weaning. Parents are engaging in these two important factors in earnest and frequently attend HV clinics with management in mind. This is an excellent opportunity to engage in meaningful dialogue with parents who are actively seeking information, guidance and support from the HV service. If not, forthcoming parents will undoubtedly seek information elsewhere.

CHAPTER 8: REFLEXIVITY: SEEING THE PERSONAL INTO PRAXIS

8.1 INTRODUCTION

This chapter explores reflexivity. It highlights the reflexive process adopted during the research and it is written in the first person and past tense for that reason. It theoretically defines reflexivity, highlights why it was a necessary part of the research, and how it was approached in relation to the research process. Section (8.1.1) is supported by appropriate references because it requires theoretical definitions of reflexivity. Strategies used to embed reflexivity were based on self-scrutiny, self-examination, and exploration of positionality. Evidence of reflexivity includes sharing excerpts of note taking, journaling, peer discussion and supervision. This revealed the personal learning journey and demonstrated reflexive development in real time and during the stages of the research. As the research was interpretative, a theoretical component of hermeneutic phenomenology (HP) referred to earlier in Chapter 4 as Dasein, was used to explore the use of fore-having, fore-sight and fore-conception. Symbolic Interactionism (SI) was also used to understand how meaning was made from the researcher role, how my responses developed and what meaning action ensued. Meaning action in the sense of Blumer's (1969) theory was acting on my own developed response for meaningful and positive action – taking ownership and becoming empowered within the research and managing a strategy for developing and disseminating it. How I perceived myself and others, and what symbols, language, thoughts and actions occurred as I gained understanding of myself as a researcher, my research and PhD studentship is included. Additionally, from a personal perspective, getting to grips with the imposter phenomenon that had seemingly been a barrier for most of my career. A framework was used to explore researcher positionality (Corlett and Mavin 2018) (Figure 17).

8.1.1. Theoretical definitions of reflexivity

Making sense of the research necessitated unification of beliefs to provide an umbrella, or overarching concept that enabled full understanding of the research process, and that's where Crotty's (1998) framework was useful. It enabled a structure and a visual perspective of the research in its entirety. Understanding how my perspective of the world impacted on the *here-and-now* of the research helped comprehension and development of the research as it shifted and shaped, to be underpinned by a persuasive and situated argument. This brought clarity to the research design and moved the research and the thesis forward step by step. Clarity about the meaning of reflection and reflexivity is required to demonstrate understanding of the differences between them. Although reflection and reflexivity sound similar, they are not the same. Reflection is an element of reflexive research however, it is more introspective i.e., thinking about ourselves, rather than outward impact. Reflexivity is

more than methodological adherence, it is being able to understand that reflexivity underpins how the research is reported overall (Whitaker and Atkinson 2019).

“Research that turns back upon and takes account of itself” (Alvesson et al. 2008)
Cited in: Knaggård and Harnesk (2018) Page 20.

OR *“Where researchers turn a critical gaze upon themselves” (Finlay 2003)* Cited in:
Knaggård and Harnesk (2018) Page 20.

Theoretically, reflexivity had its roots in social science, although there is no distinct definition of it (Whitaker and Atkinson 2019). According to Bourdieu (1990) it involved the intellectual field, namely intellectual unconscious practice, collective rather than individual consciousness, and enrichment. Reflexivity is introspective, however, it is more than personal reflection or an account of the research process (Whitaker and Atkinson 2019). As a typology reflexivity includes several theoretical components. Although reflexivity can stem from personal experience it is also functional (Knaggård and Harnesk 2018). Functional reflexivity is an act of examining the research process in the context of positionality (Bourke 2014 page 1). Additionally, disciplinary reflexivity centres in this case within public health nursing and health visiting, existing disciplines that made the research possible in the first instance (Whitaker and Atkinson 2019). Therefore, focusing on being reflexive denotes a propensity for exploring researcher thoughts and beliefs (Knaggård and Harnesk 2018). From a theoretical perspective, personal reflection includes researcher values, interests and life experiences past and future, i.e., what past learning experiences impacted and what learning experiences are ahead, as a result of completing the research (Knaggård and Harnesk 2018). Reflexivity should take place from the beginning to the end of the research as it involves being aware of the relationship between the researcher to the research process (Whitaker and Atkinson 2019).

The intellectual field of the research determines how the research questions are developed, therefore, how the research is designed to answer those questions (Davies 2008). For interpretative research, its significance is the way these relationships are intertwined (Davies 2008 Cited in Whitaker and Atkinson 2019). Consequently, making reflexivity in interpretative research essential. In fact, there was a perception in the literature that reflexivity and research methods were the framework for research foci i.e. the phenomenon to be explored, in this research, it was the interaction between parents and health visitors (HVs) around infant weight. It makes sense therefore to identify how research methods frame the research focus.

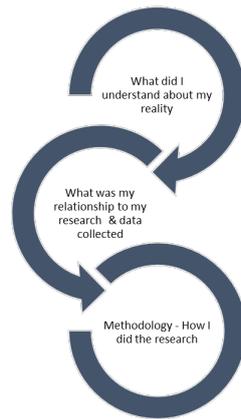


Figure 19: Reflective Framework: Research reflexivity and positionality on three levels (Corlett and Mavin 2018).

8.1.2. Reflexivity: demonstrating the links between theory and practice

Dasein (Fore-having, Fore-structure and Fore-conception) was the structure of understanding in hermeneutic terms. It led to greater personal insight, and development of new perspectives. I wanted to illuminate how HVs, and parents interacted and bring this to the fore front of my research, however, I required ownership of the research first. Feeling as though I owned the research seemed to take the longest time and even during my final supervision sessions, I was still a little hesitant about being directly expressive i.e., shouting about my research from the rooftops. Not related to the outcomes of the research, because I was confident that the way the research was designed enabled the findings to be illuminated as they grew from the data corpus. Ownership came from embracing activities such as supervision, thinking, reading, writing, discussion with peers and journaling. These gave opportunities to figure out how I could gain depth rather than superficial understanding of my research, data and findings, whilst I maintained research integrity and relayed that understanding to others. This active reflexivity was a continuous loop, feeding backwards and forwards through the stages of the research, described in Hermeneutic terms as a cyclic process. What I came to understand as *Fore-structure* was my pre-understanding or *Fore-having*. Pre-understanding was used as an advantage and being-in-the-world was my researcher position. It was my awareness and interpretation of pre-existing political and socio economic impact factors and empirical research literature of childhood overweight and obesity. As well as fore-having, *fore-sight* was my existing nursing knowhow and my professional values and beliefs of how nurses should be. Being able to direct energy on interpreting what influenced the interaction between parents and HVs was my *fore-conception*. This *fore-conception* was where energy was spent interpreting the findings to identify what factors influenced the interaction between parents and HVs. I wanted to find the truth, be authentic, and remain focused through robust and rigorous research. My

situatedness, derived from Heidegger's theoretical concepts of temporality or time and spatiality or space. This required a familiarity with the phenomenon in focus, therefore situatedness and interpretation were perceived as a strength in the research. Figure 18 demonstrates the elements in the application of Heidegger's (1962) concept of Dasein.

8.1.3. Reflexivity: how research methods framed the research focus

Reflexivity enabled me to appreciate and understand positionality in relation to my research on three levels using Corlett and Mavins framework (2018). Firstly, questioning my own understanding of what I knew about my research focus, what my reality was, secondly, questioning the nature of relationships (researcher and research context, health visiting, NHS, research participants, data collection and analysis) and thirdly, questioning and reflecting on the thought processes and design within the research. These components are discussed not necessarily in the same order as depicted in the framework in figure 17.

There was a plethora of empirical literature available about phenomenological research and different perspectives presented as to how it should be managed for methodological adherence for interpretative researchers. Heidegger's hermeneutic phenomenology (HP) and Husserl's transcendental phenomenology were considered relevant to the research from a literary perspective. Both of these theoretical perspectives appealed initially and were discussed in some depth in Chapter 4. One of the main concerns about Husserl's transcendental phenomenology was the requirement for bracketing, or attentively setting aside any previous knowledge and experience I had. From Heidegger's theoretical perspective, my own belief was similar in that as a researcher, registered health professional and educationalist truly detaching myself from my research focus would be a challenge. This meant that I needed to be able to understand how I could use my positionality advantageously within the research. In essence my research focus was my "*Being in the world*" according to Heidegger, having existed in the world of public health. I could not envisage separating the way I thought about my research whilst I was interpreting it. This also meant making a conscious decision to utilise my previous knowledge and experience of HV, rather than bracketing this by attempting to completely set it aside, necessary, had I opted for Husserl's transcendental phenomenology. I did not perceive myself to be a distanced observer, and this was instrumental in the draw to HP. Understanding the theory of HP involved developing a deeper understanding. Firstly, grasping that "*understanding is interpreting*" everyday experiences and that acknowledging and understanding the impact of my previous experience, knowledge and world view was crucial for research rigor to be demonstrated. Secondly, acknowledging that completing the research effectively meant being in tune with and exposing my own assumptions, potential biases and propensity for

understanding myself and others. Something that I had not actively done to the extent it was required within the research.

From a theoretical perspective, I was drawn to SI despite this being described in the empirical literature as a difficult theory to comprehend for novice researchers. Through wide reading I developed a deeper understanding of SI, its meaning and interpretation. This enabled me to understand how valuable it was to interpreting participants data and how HP and SI could be complimentary. I found myself being drawn to SI throughout my research journey, probably in the same way as HP allowed me not to be a distanced observer, SI recognised how we interacted as individuals in social settings, how we interacted internally with ourselves, and what symbols were important and meaningful to us. As a theory SI enabled an interpretation of the development of our responses, and how we create meaningful interaction with others. I had developed knowledge of the theory behind the "conversation of gestures" and use of "significant symbols and language". Using diagrams helped to visualise the whole SI process. I now understood that as a theory SI impacted on the research participants behaviour and my own behaviour. This was exactly the type of knowledge and understanding I was able to illuminate within the research findings. i.e., the emotional response of the HV and parents during the interaction around infant weight. It was also illuminating to acknowledge through theoretical exploration, that our daily interactions in whatever environment we find ourselves in occur in such a way that our thought processes, developed responses and subsequent actions are shaped, and yet we never acknowledge this as part of our interactions. Mainly because we do not understand the process that has occurred. In reality, SI was a plausible mechanism for describing and interpreting the interaction between parents and HVs and also for interacting outside of the research. This was when a conscious decision was made to investigate including SI within the Specialist Community Public Health curriculum. Returning back to my research, understanding meaning modification and meaning action of participants was a critical research outcome and using SI and HP, I was able to demonstrate the interaction between participants was complex, required consideration of impact and produced knowledge that was not present in the empirical literature before.

Nevertheless, the decision to utilise two theoretical perspectives within this interpretative research caused constant internal dialogue just like that described by Blumer. Having theoretical understanding of HP and SI as praxis was also something that I was able to develop a suitable response too, make meaning from and meaning action:

Excerpts from reflective journal related to theoretical perspectives:

"I have two theoretical perspectives, I want to keep them both... granted I understand one better than the other right now and would feel bereft at the thought

of losing SI...I know they can work together somehow....I just have to figure out how!!!!". (October 2017).

"Woke up this morning and I have had a sudden realisation of a way to make HP and SI transparent each having their own valuable role at the same time as being independent of each other.....! It's a micro/macro mix up.....Good job as supervision in 2 days' time" (December 2017).

8.1.4. Reflexivity and positionality in context

As a registered HV, albeit immersed in academia, and in keeping with my professional background, the goal was a research focus within clinical practice, rather than education. As a registered nurse, HV and academic several factors and philosophical perspectives influenced my positionality. I had been socialised into the nursing profession early in my career where I was interpreting the needs of patients and clients through my interactions, through listening and reflection. With a professional background and experience in public health, children's nursing and HV, I had maintained a passionate interest in child health, particularly public health of children 0-5 years. As an academic I taught, supported and supervised HV students undertaking postgraduate programmes and those returning to the professional register as children's nurses and HVs. Despite being a HV for several years and now an academic, responsible for learning and teaching of student HVs, I did not have clarity of how HVs managed children's weight, particularly in the 0-2 age range, during the time that the infant was weighed. I knew in theory the parameters of assessment during weight monitoring and the pragmatics of delivering a clinic, record keeping, good practice, safety, risk and communication. I had existing concepts, assumptions and beliefs about this, particularly that it was an opportunity for discussion about infant weight and healthy nutrition. According to the empirical literature in Chapter 2, HVs were key health professionals with a recognised role and responsibility for infant weight and healthy nutrition.

Exploring and addressed my assumptions was a way to be effective in the research process by helping me to see what was really going on in the findings of my research, in other words, "praxis". Bringing together positionality, philosophical beliefs and values as assumptions, theory as influential in how the research process was managed and action when I recognised that my positionality could be a disadvantage, if it was limited, untrue or open to misinterpretation. This could have impacted and influenced my interpretation of the research. Therefore, understanding positionality was key to understanding the first step on the research journey. Understanding the key concepts of ontology (definition of truth and reality) epistemology (knowing how truth and reality were formed) and methodology (theoretical perspectives) were actual definitions and representations of how I viewed the world was something I had never considered before in any great depth. Understanding that

positionality was underpinned by underlying assumptions, purpose, and goals of the research and provided answers to the *why, what, and how* of it required making sense of. Many hours were invested in unpicking this from a theoretical perspective to understand its implications for the research process.

8.1.5. My reflexive reality

As I progressed and became more familiar with my world view, positionality and bringing the research to life, with a little confidence boosting and success I found my thinking was clearer. I can only describe this as reaching higher ground after an arduous climb and being able to view a horizon that is recognisable and clear. The components of Dasein and the application of SI were key to being explicit and how the reflexive process was demonstrated. Having explored positionality, reality and truth was constructed on my professional and personal knowledge. This was developed and influenced by a number of different socially constructed concepts that I had been exposed to in a similar way to my research participants. Influenced by academia, research, social science, politics, innate life experience, my education and upbringing. These defined the researcher role and required acknowledgement as influences. They reflected my own learning journey on this path to successfully gaining a PhD. It was crucial that my research focused on the perspectives of both HVs and parents to explore the phenomenon of infant weight. As an academic, I understood and appreciated the relevance of empirical research, public health theory and practice. I had also worked in partnership with parents as a HV. Therefore, it was relevant to be mindful of how I could influence the research process. Acknowledging my own role in the research demonstrated self-awareness, and was a reflexive act.

8.1.6. Using positionality in different ways in relation to the research

During recruitment and data collection I chose to use positionality positively by drawing on my insider status more with HV participants and my outsider status more with parent participants. I questioned if I was actually, as first imagined, an insider rather than an insider/outsider. Perhaps the insider perspective I was recognised for backfired on occasions when participant HVs assumed they didn't need to explore some areas in full during data collection. This was demonstrated during a semi structured interview I did with a HV:

"Had a little enlightenment today when a health visiting participant said during a semi-structured interview...you know what I mean Maggie I don't need to tell you...the conversation had turned to breastfeeding and I think she viewed me as more expert than her because I spent many hours teaching breast feeding, and she knew this..." (Excerpt from reflective journal, March 2018).

I had a positive perspective of HV based on my own experiences. Granted these were not recent and it was clear that the role of the HV had changed over the years. Despite wanting to stay positive, what I found myself doing was questioning my own assumptions about the

basic principles of HV. I wondered how this impacted on my research findings, although having this awareness was a bridge to maintaining objectivity.

The following excerpt from reflective journal related to first impressions of data collected:

“Two of the principles of the health visiting include searching for health needs and stimulation of an awareness of health enhancing activities. These “principles” have been widely critiqued and well established within health visiting since 1977. How are HVs demonstrating these principles in relation to infant weight? Again, trying to take a positive lens although more negativity is coming through in my thought processes. I am beginning to question the very principles of which HV, the essence of HV practice in relation to infant weight. Is the leadership role of the HV to delegate weight issues to others, such as nursery nurses?” If so why is this.....?(September 2018).

Interestingly, these two HV principles were revisited during the discussion in Chapter 7 because they are still relevant to current HV practice, despite being produced several decades ago.

Being reflexive was a strategy determined by the research design and one which enabled me to recognise any potential preconceptions I held. I wanted to take the time to understand the research from beginning to end including, data corpus and findings. Therefore, reflexivity was a constant activity throughout the research. Understanding what positionality was and how it impacted was new knowledge that was put to good use. Positionality provided a mechanism for me to view the research through a different lens. This lens give rise to a level of objectivity that would be less so without positional reflexivity. Although, learning to acknowledge, understand and apply positionality felt like a steep learning curve at the time, it looks so much clearer now on the other side of the research journey. This indicates that praxis has occurred as a result of doing the research, otherwise I would never have been able to make this statement because I wouldn't have known it was important. During the earlier stages of the research, it was less clear and more abstract as the quote below from my journal highlights:

*“I need to capture how **me** as a researcher may inform both data collection and analysis, really good questioning by Tina today made me think about my thinking to make my thinking clearer” (May 2018).*

In order to find a suitable and appealing data analysis process that I could use I returned to the empirical research literature and completed a further search focused on analysing interpretative data. Thematic analysis (TA) was selected because it was straightforward, structured and illuminated the data analysis process. TA would bridge the gap between theory and practice because it enabled conceptualisation of the data analysis process in taking raw data from basic and organisational codes to categories, themes and superordinate themes – again an example of praxis; meaningful themes that actually

reflected the raw data that participants had provided. Using TA was a flexible method of analysing the data and according to the literature, suited my researcher status. The process of analysis was a lengthy one most likely because I was learning how to analyse data whilst consecutively analysing it. However, data analysis was perceived as an important stage in the research process. Therefore, understanding its distinct stages meant setting the time aside and not moving forward too fast without understanding or revisiting the analysis process, as described in Chapter 5. Linking back to the research question and aims was a way of keeping these in focus as I interpreted the data. I frequently surveyed the data and asked questions to maintain an interpretative approach *"How will data be analysed, what approach and why?" "How can I emphasise the human experience?"*. Being reflexive involved ascertaining how I could move forward as the person responsible for doing the research, collecting the data and completing the data analysis at the same time as it was taking place. I considered, *"How could unstructured interpretative data become something meaningful?"*

The following excerpt from the reflective journal relates to how HVs behaved:

"There is a difference in the way that HVs address overweight and obesity they often take a skirting around approach. Newly qualified especially ? Novice to expert. Requires a structured approach, HV can assess infants and pin point weight issues, however, what they do next is not clear cut or obvious, HV may not all be doing the same in relation to the way infant weight is managed, discussed, or outcome measured" (March 2018).

Meanwhile, this excerpt from the reflective journal related to how HVs and parents act and interact:

"One of the major influences seems to be the relationship status between the HV and the parent. If this is therapeutic and established, managing and even mentioning infant weight is easier, the response from the parent is different in that it appears to be less defensive. The HV feels safer to address weight issues where there is an established relationship. Due to organisational change, HV clinic attendees may not be known to the HV and there is no established relationship in place"(March 2018).

"The clinic setting also presents a barriers in that doesn't feel as confidential a setting as a home visit, taking parents aside in the clinic makes it a "serious issue". This perception differs from my perception because it is a serious issue.... Is there an in balance between being proactive and reactive because of the barriers or challenges faced by the HVs or are they just not linking theory to practice" (March 2018).

During the data analysis stage, understanding what was happening in the data involved making time to consider how, why and what analysis revealed. Above, I described HV behaviour and below I linked this to participants perceptions as rituals, assumptions or unspoken rules. For example, in clinic when infants were weighed and HVs used ephemeral responses with parents, parents assumed infant weight was fine, however, in reality the HV was not addressing infant weight at that moment in time. This was a lightbulb moment:

The following excerpt from my reflective journal is focused on research goals:

"I need to go beyond description to generate knowledge – meaning making systems (not sure what this means yet). Note values, attitudes, paradigms, rituals. Look for assumptions, vagueness, contradiction overt rules "V" unspoken rules" (January 2018).

Initially, I was unsure of how to manage the data efficiently although I had clarity about adopting manual analysis and auditing the process for transparency. Early data was coded for initial impressions soon after collection as alluded to in Chapter 5 and by returning to this initial activity, I was able to recode and find the same level of consistency in the data. This was reassuring. This was something suggested by the literature particularly for lone researchers and this reflexive approach helped me to defend the data analysis process and subsequent findings. There was time of course when I doubted myself and this was related to both analysis of the data and writing up the findings and it is demonstrated in the quotes below:

Excerpts of journal following PhD supervision:

*"Spoken to P and T today during PhD supervision because I am not sure if my findings are any good, substantial enough or if it's more about the way I have analysed them I need to get to the place where I can see what they are really telling me....not just what "**I think**" they are telling me!!" See through and beyond was the phrase in my head when I woke up this morning, so I jotted it down....not sure why yet (June 2018).*

"What are the strengths and weaknesses of my research? I need to reflect on how me - the researcher may have informed both the data collection and analysis. How I see the world with me in it" (July 2018).

This research journey enabled me to explore why I felt like an imposter at times. In fact it was never something I had conceptualised on a deep, meaningful or personal level before. I had never associated perceptions or internal and external interaction impacted in this way. This further highlighting, personal learning development, praxis and reflexivity.

8.1.7. Contextualising imposter phenomenon

"A high achieving woman who has previously considered herself an impostor begins to allow herself to state and feel, "I am intelligent. I have learned and achieved a tremendous amount. It is all right for me to believe in my own intellectual abilities and strengths." (Clance and Imes 1978 Page 246).

Imposter phenomenon impacted on my confidence and how I felt during the research. The empirical literature reflected imposter syndrome as something known to impact on both career prospects and individual wellbeing, particularly for those of female gender, however, it was not something I had ever considered as an issue that was mine to own. Although, I

recognised a personality trait in myself that resulted in a negative self-perception, I did not conceptually link this with imposter syndrome. Undoubtedly, from a phenomenological perspective, it was related to my lived experience. Furthermore, several life changing and meaningful life events had occurred since commencing my PhD and these had impacted on my self-perception of success and at times de-prioritised my studies. Imposter phenomenon was muted in academic circles, and I had been exposed to this however, I had not associated myself as experiencing it. Returning to my initial discussions within Chapter 1, why this research mattered, the reader was guided to my rationale for doing this research in the first instance. This focused on an academic desire to achieve my long-term intellectual goals as the first family member to attend university. Therefore, potentially attributing imposter phenomenon as internal in origin, and external as based on past and present social and educational experiences.

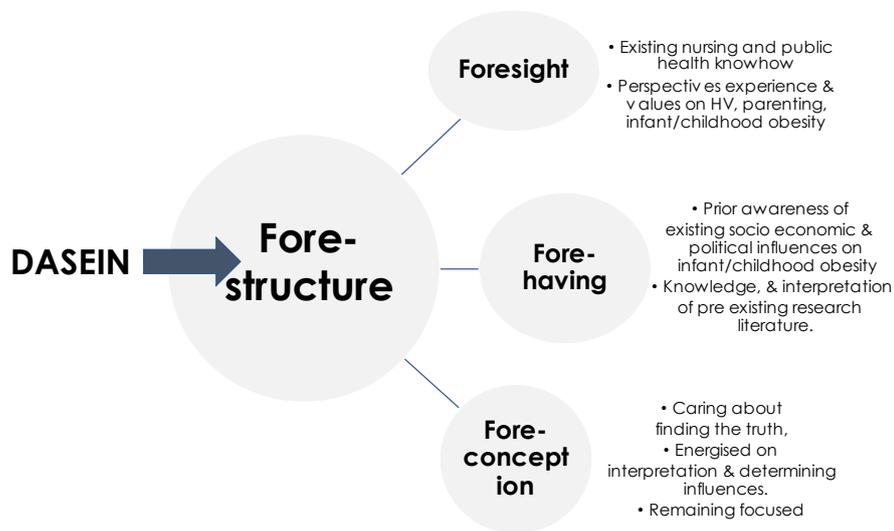
When compared to positionally outlined in Chapter 3, I was an academic in a large, predominantly research and teaching institution with organisational and academic hierarchy, which appeared to value a PhD qualification and research status highly. However, what the social cues and context of the organisation were valuing, I had not achieved. Arguably, my imposter phenomenon was context dependent. In order to combat this, and as part of my internal and external dialogue, I had many interactions with myself and others, with peers and through supervision. The interpretation of myself, based on internal dialogue was not always completed with self-compassion related to my capacity to be successful in this PhD. I did not see myself as achieving the PhD on many occasions, and this was reflected in the language used about myself to others, particularly peers and through supervision. Initially, meaning making from this was focused on the obstacles, barriers and challenges about doing this research created by a lack of understanding of the research process, new concepts related to academic language and theory, and work-life balance. I had placed the needs of others before my own success. As a result, barriers and challenges caused slow progress at times. However, as the research progressed I had become increasingly knowledgeable and more confident in the research I produced, managed and led. I was viewing myself differently as a result of external interaction as positive feedback about my research. Additionally, the internal narrative I was having with myself had shifted to one of being capable and worthy of success.

"Speaking to a colleague today who is about a year into her PhD journey and is doing Interpretative Phenomenological AnalysisThink I should have been in sales as I might have converted her into symbolic interactionist already!"

Once my internal narrative responded to the external narrative and I was able to internalise and interpret this. The developed response was gaining confidence. I developed, a more

meaningful and positive internal response by taking ownership of the research. Taking ownership was empowering and insightful. Meaning action followed, this developed response and increased my confidence as a researcher. Although this was not always a consistent feature, any self-doubt became less of an issue. The process of meaning modification and meaning attribution, related to imposter syndrome as I experienced it is outlined in Figure 19:

Figure 20: Application of Heidegger's theoretical concept of hermeneutic circle - Dasein



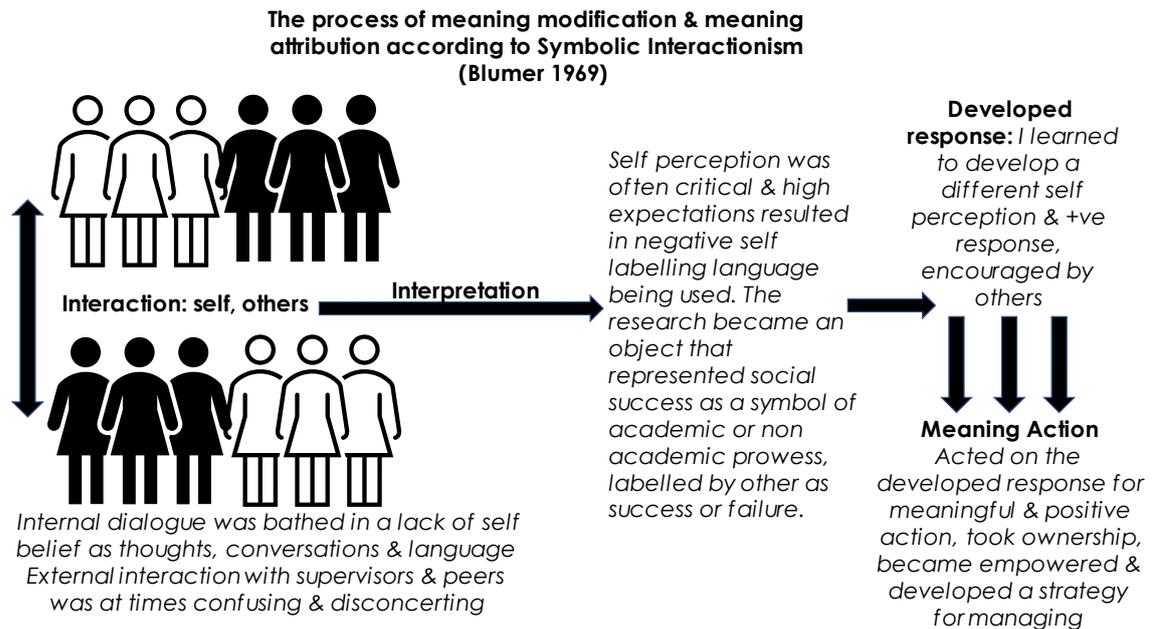


Figure 21: The process of meaning modification and meaning attribution in response to imposter phenomenon and my research

8.2. CHAPTER CONCLUSION

The aspiration was to commit to phenomenological research, firstly, because I had a desire to explore and interpret experiences and meaning in context so I could further understand the research focus. Secondly, to develop a clear academic understanding of research methodology, social construction, methods, data collection, data analysis and reporting findings. Thirdly, I wanted to develop my understanding of specific theory of HP and SI, which had gained momentum throughout the research process, albeit gradually and, I imagine on occasions frustratingly when viewed from the perspective of my supervision team. During the research process, being reflexive was key in demonstrating personal learning, reflexivity and praxis. At the beginning of the research study, only an essential understanding of relevant theoretical and methodology approaches was evident. I had very little experience of leading and managing research. Considering how I did the research in relation to theory meant formulating a comprehensive conceptual framework that acted as a superstructure for the whole of the research process and this included personal reflection on the research process, my own perspective on this research journey, what I learned about myself, the impact of internal and external dialogue on my behaviour, development of responses and meaning action, and as highlighted across the thesis, theoretical application of HP and SI.

8.2.1. So what?

My perception of social construction as a superstructure within the conceptual framework was new. I had reflected on understanding the differences between constructionism and constructivism. This meant that I had developed new learning as a result of reflecting on the research process. I was also able to understand and apply theory of learning and teaching towards a new perspective of research. As an academic, I had been functioning as a social constructivist. My social constructivist tendencies had driven me to utilise theories of learning to enable my students not as a teacher, but as a facilitator of their learning. They were not expected to receive without question. I preferred academic reality to be about actively engaging students in the classroom, encouraging dialogue, challenges and questioning to help them seek understanding, much in the same way as Heidegger's theory of hermeneutic development of commentary goes beyond surface learning to a more in-depth level. I acknowledged that each student came with their own individual realities of education, and their learning experiences, values and beliefs of academia. Often this was not without issues for students when the reality that some of them held was that they weren't academic. I was no different.

8.2.2. What now?

During my PhD journey I was still a student facing the same issues as other students, grappling with my work-life balance and on a long, incredibly daunting learning journey, which I had started to enjoy more as I developed. Once I began to gain confidence, I realised that if I shifted my thinking towards a new reality, what I desired was achievable. Perhaps, I had begun to accept my position as someone, a female academic, shifting away from the imposter phenomenon. Being challenged during interactions between myself and my supervision team helped me to unpick the theories underpinning my research. Feedback and interaction with my supervisors was completed in such a way as to nurture and gently nudge me into creating a new perception of self. Actively seeking feedback and being reflexive during the research process was instrumental in developing this new reality of self, as someone who could achieve my goals and be equal to many of my academic colleagues. This meant that I challenged my own typifications, particularly the way in which I viewed my individual learning journey, my ability and development and the imposter phenomenon I seemed to have struggled with without really being able to label this as such. This was one of my sudden realisations about myself. Despite this, and through being reflexive, I was able to maintain the integrity of the research approach and make explicit what was hidden from view within the research process, so that the research became tenable to me and others.

CHAPTER 9 CONCLUSION: FINAL THOUGHTS AND PERCEPTIONS

9.1 INTRODUCTION

During the research, parents described HVs as “*amazing...*”

This chapter reflects on the research in its entirety, illuminating the contribution it makes to existing knowledge and the implications of what has been learnt for future practice. It embeds how the research answers the research questions and aims by stating factual conclusions. This illuminates and justifies the contribution the research makes to existing knowledge. During the process of undertaking this PhD learning has taken place at several junctures and this is explored in earnest in Chapter 8. To further support reflexivity, retrospective learning is included i.e., identifying key thoughts and perceptions, looking back on the research process and looking forward to the future. Limitations and recommendations of the research are also explicit. This section is written in the first person.

9.1.1. Research overview

This interpretative phenomenological research describes and interprets the phenomenon of infant weight through the lens of parents and HVs by revealing and understanding the interaction that occurs between them. A conceptual framework of social construction centres the research as a superstructure, allowing a focus on the lived experience of participants. Symbolic interactionism and hermeneutic phenomenology are the theoretical perspectives used to interpret the interaction between both HVs and parents. Methods include semi-structured interviews and focus groups, and a thematic analysis interprets data corpus in a structured way. Broadly speaking, as overweight and obesity is a global, national and local phenomenon impacting across the lifespan, it is helpful to understand it in context of the NHS and delivery of the HCP. As previously stated in Chapter 2, in delivering the HCP, a HV is responsible for providing infant feeding advice within the first years of life, specifically reducing the incidence of obesity in childhood by helping families to make healthy lifestyle choices around nutrition and exercise. Therefore, they have an opportunity for early identification of lifestyle issues, support and timely intervention. This makes HVs pivotal in addressing childhood overweight and obesity with a family approach to weight and nutrition using behaviour change methods and evidence-based practice. Literature in Chapter 2 reflects overweight and obesity as a complex phenomenon. An analysis of its contemporary nature highlights potential gaps in research because less research exists involving both parents and HVs from an interpretative paradigm and, although a plethora of research focuses on childhood overweight and obesity, less research is available relating to infants, in comparison to older children, adolescents or adults. Parents as gatekeepers of infant feeding

and healthy nutrition are required to respond reciprocally to infant cues, knowing when infants are hungry and when they are full. However, feeding is not as straightforward as it seems for parents and, therefore, this has potential impact on infants. Furthermore, existing research did not apply symbolic interactionist and hermeneutic phenomenological theory to interpret the interaction between HVs and parents simultaneously.

9.1.2. Answering the research questions

At the conception of this research, a level of uncertainty existed about what was happening between HVs and parents during the interaction around infant weight. This was part of the motivation for the research in the first instance. Methodologically describing and interpreting the research phenomenon through the lens of parents and HVs, brings fragments of the whole together, capturing a unified picture or synergy of the participants' lived experience. This assists the researcher to identify why it matters. By way of answering the research questions, research illuminates how and what public health interaction occurs between participants and any key factors required for it to occur. It also reveals how key factors influence the outcome of the interaction overall. It transpires that several influential factors impact on the interaction between HVs and parents, which have not been considered in previous research. Conclusions include the level of assumptions made, referred to in Chapter 7 as idle supposition or structural presupposition, the distinction between emotions, knowledge and reasoning and the impact of diminution on HV service provision.

9.1.3. Assumptions

A key influence on meaningful interactions were the assumptions made by both participants. HVs assumed they all did similar things to address infant weight and healthy infant nutrition, however, some HVs addressed this in a timely way, and others did not. Some HVs preferred not to address infant weight as it was deemed problematic in a clinic setting, and they preferred to do this at home. HVs interacted with parents in an ephemeral way when weighing infants, and assumed parents were happy with this method of communication. Ephemeral interactions employed language that was perceived by HVs to be easily understood by parents, and HVs had developed a repertoire of phrases for this purpose. The repertoire avoided terminology that suggested infants had gained too much weight, or that reflected in the empirical literature i.e. obesity. Although parents attributed ephemeral responses by HVs as a positive outcome from weighting, this assumption was not always correct. Parents assumed ephemeral responses indicated no issues with infant weight, in reality HVs had made a decision not to address it at that point in time. Additionally, HVs do

not always clarify parents understanding of the centile chart and assumed they fully understood this, although often parents do not. HVs assume that if parents have any concerns about weight, they will raise this with them. Conversely, parents assumed that the HV would raise any issues of concern they had about infant weight with them. HVs' assumptions also included parents' wishes for infants' weight to be perfect, however parents wanted to know if weight exceeded that expected. Parents expected HVs not to make assumptions about infant feeding methods before mentioning weight, however, they do. Neither the parents nor the HVs are aware that assumptions are being made, therefore, the way the interaction takes place embedded assumptions as common lines of understanding.

9.1.4. Emotions, knowledge and reasoning

HVs expression of emotions and feelings was associated with infant weight gain, while for parents, it is associated with both infant weight gain, infant weight loss (infants underweight or not thriving) and infant feeding. Each participant has their own emotional reality. For some HVs emotional reality was one of fear and dread if they assessed infants as being overweight according to the centile chart, and they feel the need to raise this with parents. It can appear to override their knowledge and reasoning. Addressing this with parents was compared to raising safeguarding issues, potentially because of a lack of pattern recognition. In fact it was perceived as being more difficult for some. The plausible explanation within the findings is the response of parents, if excess infant weight was mentioned, is one of anger and upset, followed by a complaint to the HVs organisation. Parents reality of emotions focuses on the response from the HV because infant weight strongly correlated with good parenting, and socially-constructed preferences for infants that were "chubby", "chunky", or "bruisers". Although, parents felt emotional, they wanted to know if infants were overweight, yet they want HVs to choose their language carefully.

9.1.5. Diminution of HV service provision

Within the findings parents and HVs described feeling a "sense of loss" due to changes in service provision. A gradual occurrence over several preceding years, had significantly altered capacity for parental engagement around infant weight within the clinic environment. Clinic provision had reduced and consequently so had the role of the HV for infant weight management and infant nutrition. Parents described infant weight management as tick box or conveyor belt in approach. The HV service lacked sufficient resourcing and the role of the HV in infant weaning had diminished with less service provision likely having a negative impact on how infant weight was managed. If parents were not

attending clinic regularly for infant weight monitoring, a gap in the history of infant weight gain left the HV unable to detect the speed or propensity of weight gain. If no 3-4 month visit occurred this removed opportunities for conscious communication about weaning, timing and support for infant weaning because of misalignment. Secondary assumptions caused each participant to believe the other was responsible for eluding to infant weight issues. By relying on each other to initiate a conversation, neither assumed total responsibility. It was never really clear who's responsibility this was. These factors subjected interaction around infant weight, as open to miscommunication and misinterpretation. Parents wanted to be perceived as good and responsible parents making them worthy of respect from others. It was this notion of good, worthy and responsible parenting that possibly explained why they felt upset at the thought of their infants either underweight or overweight. HVs were seemingly unaware that parents wanted to know about infant weight as exceeding that expected. As a result, HVs wrongly interpreted the situation. A lack of resources and diminution of service provision resulted in HV practice as reactive and in some ways defensive when infant weight was not addressed because of a risk of a parental complaint.

9.1.6. Conceptual propositions

The theory of SI enabled recognition of symbols and language, important and or meaningful to participants during the interaction in the clinic. It also enabled the researcher to see how parents and HVs assumptions, emotions, feelings and social order impacted on the interaction process, internally and externally interpreting this, developed a response, as meaning was modified, and this led to (meaning) action. This opened up opportunity to describe and understanding the interaction sufficiently enough to identify what mattered to participants. It revealed the impact of knowledge, emotions and reasoning, and as mentioned earlier, developed response and meaning action. Making meaning from the interaction enabled subtle detail and or nuances to emerge that had previously been hidden or unexplored in existing research and those that impacted on the interaction and the outcome.

Hermeneutic Phenomenology referred to the term "Dasein". Understanding and applying this conceptual theory in the research highlighted the impact of the social world (subjective environment where interaction occurred) where participants and researcher existed, i.e., context, environment, surroundings and things that participants and researcher cared about. Dasein, structured on the premise of Fore-structure (fore-having, fore-sight and fore-conception) focused on existing knowledge and knowhow, prior awareness, social and cultural influences, caring and truth. This was a means of determining on a theoretical basis, the reality of interpretation in detail. Thus, leading to greater understanding. In other words, opportunity for a full analysis of understanding participants perspectives. As explored in detail

in Chapter 4 both theoretical perspectives enabled interpretation on two levels, the cultural context, policy and organisational delivery of services and the finer detail, subtlety or nuances of the interaction i.e., how the interaction presented in a given time and place. Figure 6, Chapter 4, Page 95 presents this combined conceptual theoretical model.

9.1.7. Knowledge contribution and justification

At the onset of this research the empirical literature highlighted that the research focus and phenomenon of infant weight was something that had not been explored in this way before. Equally, and reflected in government policy, public health opportunities were believed to be exploited when HVs and parents come together, and that clear understanding and lines of communication between parents and HVs existed, within the parameters of their roles. The research also aspired to create a positive impact on the long-term health of children in the local area and associated public health issues. Knowledge generated as part of the research potentially fosters proactive strategies to address infant overweight and obesity locally, creating a potential shift from any reactive public health practice towards a more proactive approach. The research set out to find the knowledge, reality and truth of the interaction as it occurred, and was established within a policy context, therefore aiming to illuminate how policy converted into public health practice. Meeting the research questions and aims, by applying the theoretical perspectives of hermeneutic phenomenology and symbolic interactionism, contributed to the success of the research, particularly in the new knowledge and justification drawn from taking a different perspective to the research than that already available in the empirical literature. As highlighted within the thesis, the research investigated, and interpreted for understanding, an interaction that had been occurring between participants in clinics for many years as part of the delivery of the HCP, i.e. a conventional occurrence. This occurrence was not new and, as a common method of contact between participants, it was embedded within service provision. Therefore, arguably, the research has created new information, knowledge and understanding of an existing issue, because understanding the interaction of HVs and parents when they came together in clinic around infant weight was a new area for investigation. However, the research extends the plethora of literature already available around childhood overweight and obesity, and areas where infant weight is a key focus, for example assessment of risk of infant and childhood overweight and obesity in health professionals, including HVs.

Overall, the research identified a number of unique macro and micro factors that impacted on the interaction around infant weight. From a theoretical perspective, symbolic interactionism illuminates language, symbols, objects, internal and external interactions, developed responses, meaning modification and meaning attribution of participants in the

research. Hermeneutic phenomenology provides opportunity for understanding how previous knowledge and experience, i.e. socio-cultural influences, organisational change to service provision and any short- or long-term outcome implications, impact on participants. This research approach created opportunity for new perspectives to inform decisions and explore priorities within HV practice. This could have a positive impact on parents' and HVs' knowledge, meaning, behaviour and subsequent actions around infant weight. It serves to consider the wider context of HV and inform the thinking of other public health practitioners because of potential for transference of knowledge generated. Finally, the research has developed a deep understanding of the interaction that takes place between HVs and parents around infant weight. At the very least, for the organisation taking part in the research it serves to enlighten HV practice when findings are disseminated.

9.1.8. Reflection on learning

This section is written in the first person. It includes a retrospective view of the research approach and how completing the research and PhD was an enabling process. No deliberate intention separates beliefs, professional experience, and my role as the researcher within this research. Rather, this was embraced during the research, as being authentic and self-aware meant being reflexive. The basis of reflexivity within the research is outlined in Chapter 8. However, the benefit of being reflexive is that it is a continual process. Therefore, reflecting on my individual learning as a result of undertaking the research is as important from my perspective as doing the research successfully. Being enabled is one of the benefits of embarking on the research from an academic perspective. Learning was continual and gradual, and my learning journey took several twists and turns, rather than a direct and a steep rise to get to this point. Learning has also at times felt like it was going in the opposite direction of where I wanted it to be. Being in the messy part of the research before stages gained clarity was disconcerting and sometimes frustrating. As explored in Chapter 8, building self-confidence in my ability to succeed was an issue, because of an internal narrative as an imposter.

However, I have learned to think differently. I have clarity about this interpretative research as a result of engaging in critical reading, critical thinking, and critical reflection during the process of completing it. This means that I developed a good understanding of the key concepts of my research, for example my conceptual framework of social construction, its role and impact, which were initially confusing and perhaps ambiguous. Applying this in a conceptual way was achieved through wide reading, allocating sufficient time to critique and scrutinise the literature, associated note taking and revisiting the key concept several times. Only then could I grasp the meaning of social construction and then translate this into what it meant for my research. Furthermore, understanding relationships between the

research paradigm, hermeneutic phenomenology and symbolic interactionism as theoretical perspectives, methodology and methods on a conceptual level was key. Only then could I demonstrate application with confidence in the research and subsequent thesis writing to understand how my approach enabled me to find out what could be known, that wasn't already known, in a constructive and appropriate way. This inductive approach meant I was able to determine propositions within this conclusion, based on the research process overall.

In hindsight, had I adopted a different research approach than interpretivism, my learning would have been different to that which is exposed here in this thesis. I considered the merits of a positivist research in Chapter 4 as an alternative approach. Although I acknowledged it as having specific strengths, it was unsuitable and limiting in approach for this research because it was a different methodology. Interpretivism aligned with the aim of focusing on gaining deeper perspectives and enquiring into the formerly unknown. Positivism would not have enabled the research questions to be asked, hence, formerly unknown knowledge would not have been revealed. In contrast, interpretivism provided opportunity for a flexible approach, focused on thoughts, thinking, feelings, and perspectives of participants, transcending across the whole research process. Having considered positivism briefly, I concluded that it was unable to bring to the table new knowledge and understanding of what was really going on between the participants in time and place, in the same way as interpretivism did by exposing participants subjective and multiple realities of knowledge, truth, and understanding. This methodological position provided the space for deeper enquiry and an expectation of learning during the process.

The most impactful elements of learning from this research centred on understanding the theory of symbolic interactionism and hermeneutic phenomenology, not just in relation to my research. I now recognise symbolic interactionism as a theory at the core of our daily interaction within the social world. Similarly, hermeneutic phenomenology and the concept of Dasein developed understanding and application of my positionality as a researcher and the positionality of others. By positionality of others, I mean understanding how previous knowledge and experience, prior awareness and influences were significant and impacted on actions. In summary, however, the critical thought process that occurred during the research provided a method of progressing from thinking and acting like a novice researcher to thinking and acting like a competent researcher, able to complete future interpretivist research with confidence, i.e. "*I can do this without supervision*". Perhaps, I can even supervise others who are in some of the messy stages I found myself in from time to time. Supervision has been key to getting to the point where I turned the corner on my learning, and I am assured by my supervisors that some PhD students never do get to that point in their journey, and I can empathise with them. I have proffered my research conclusions and

propositions with a new level of confidence, with a perception that I am actually a capable and knowledgably interpretivist researcher who can now move forward, publish and disseminate the results of this research and complete research with similar research design in the future.

9.1.9. Research limitations acknowledged

One of the limitations to acknowledge in the research was the geographical area where the research took place. Although three localities were involved, all of the participants recruited for the study were from one provider Trust. The Northeast, where the research took place, has six provider Trusts in operation. Therefore, bias may have been introduced as an element of organisational culture of HV participants and sociocultural experiences of parent participants. Furthermore, one of the HV participants was a nursery nurse, and their professional qualifications and role differed, meaning their participant perceptions may not be representative of the whole group. Additionally, the scope of the research is not generalisable because of an inductive interpretivist approach. It was never perceived to be, because it is a form of research that aimed to get sufficiently close to the essence of the issue to essentially illuminate the potential implications for others in similar situations. A further limitation of this work is the absence of parents to help shape the research questions and methods used within this research. Any future research would actively involve members of the public to do so. Finally, as a PhD student and lone researcher the research is confined to time limitations and progress points which may have been restrictive.

9.2. RECOMMENDATIONS

Overall, the findings highlight the complexity of the interaction around infant weight and disharmony of weight management and weaning services in the HCP because of diminution of HV service provision. The role and responsibility of the HV, as highlighted within Chapter 2, was the reduction in the incidence of overweight and obesity within families using evidenced-based practice and adhering to local and national policies. However, a fresh perspective was required to address infant weight management that incorporated the use of guidelines for equitable approaches to infant weight by HVs. Several recommendations are made drawing on the findings, discussion and conclusion of this research.

Recommendations consider both macro and micro perspectives. Macro perspectives do align with changes to national public health policy and HV practice, and a note is made that those related to equitable service provision, as strongly recommended, are drawn from

the literature review in Chapter 2. Recommendations are made from the research process in its entirety, including policy context, findings and recommendations from professional organisations that champion HV, such as the Institute for Health Visiting. Arguably, only specific recommendations can be made drawn directly from the findings themselves, and this has been done. However, as a researcher recommending and signposting only these does not justify a requirement for a joined-up approach to HV practice and service provision to address infant weight and childhood overweight and obesity in the UK, or in the research locality. An investment in UK HV service provision is strongly advised to increase equitability of the HCP across the UK. Micro recommendations focus on local policy and practice, with changes to local service provision. This means a shift in perspective from a reactive stance to a proactive stance, with weight being addressed in whole families. Furthermore, as a HV and educationalist, part of my role is to consider the impact of policy and strategy within public health. Clearly, changes recommended in this research are better achieved if reflected in line with government policy. Thus, a whole systems approach to tackling this serious global public health issue of obesity is recommended overall.

Recommendations can be found in table 25 below.

Table 29: Recommendations from the research

Recommendations requiring change to public health policy as discussed in the thesis	Recommendations to improve HV knowledge and capacity to address infant weight within their role and responsibility in practice	Recommendations as educational outcomes
<p>1. The number of mandated visits in the HCP (DH, DCSF 2009) in England increase to align with Scotland and Wales, i.e. the rest of the UK</p>	<p>1. The provision of evidenced-based training for health visitors as suggested by the Institute of Health Visiting (2020) following a cascade model with local champions disseminating evidence-based practice for healthy infant weight and healthy nutrition</p>	<p>1. Infant weight and nutrition to be included in SCPHN HEI curricula, both theory and practice</p>
<p>2. The 3-4-month visit should be mandatory for all families to provide equity and timely weaning advice meeting the needs of parents and infants more appropriately</p>	<p>2. Infant and childhood weight and nutrition to be highlighted as a core value in HV in the same way as safeguarding is, hence, the development and implementation of local policy and guidelines assisting HVs to shift to a whole-family approach to weight management and healthy nutrition</p>	<p>2. Symbolic interactionism to be included in SCPHN HEI curricula as a theoretical perspective to be understood in the context of interpretation rather than research</p>
<p>3. UK HV services require substantial financial investment to provide appropriate levels of resource to address public health needs of local populations. It is recommended that investment includes an increase in the number of available HVs to bolster the HV workforce, i.e. a further call to action</p>	<p>3. HV to work in partnership with midwives to adopt principles of timely support and early help for families where weight is an issue, or a potential issue</p>	

<p>4. Increase in funding to address long-term workforce development and the continued support for HV training and education, with higher education institutions able to source funding for specialist community public health nursing (SCPHN) programmes, at undergraduate and postgraduate levels.</p>	<p>4. Identification of risk factors by HVs when faced with excess infant or childhood weight, and responding to this effectively using behaviour change methods</p>	
<p>5. Additional funding to provider organisations to support SCPHN apprenticeships so that back money is available to placement providers, hence increasing the number of SCPHN apprenticeships available within local Trusts</p>	<p>5. HVs to create the opportunity for all parents they come into contact with to understand infant weight according to the centile and when compared to infants of the same age</p>	
	<p>6. HVs to provide understandable explanations of infant weight at each interaction in clinic using the centile chart, and to make clear whose responsibility it is to mention infant weight that is or has the potential to exceed the infant's centile</p>	
	<p>7. Use of consistent terminology by HVs that reflects the child health record where <i>centile</i> is used as the term of reference with parents, rather than <i>line</i>, <i>graph</i> or <i>chart</i></p>	
	<p>8. Prioritisation of baby-led weaning services and the evidence base for its use associated with healthy infant weight</p>	
	<p>9. Establish local task and finish groups to evaluate current practice around weighing infants in clinic, and assess the purpose and</p>	

	content of weaning services to establish consistent benchmarks for minimum delivery. This should include audit and recommendations for service improvement	
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9.2.1. Recommendations for future research

Recommendations for further research include the development of a larger study with a more widespread approach to recruitment. This means looking to recruit across more than one provider Trust within the Northeast region and/or one or more provider Trusts outside the area. Describing and interpreting the phenomenon of infant weight to reveal and understand the interaction that occurs between participants would remain a key focus. The research would be similar in research design. As overweight and obesity is a global issue, it would be interesting and worthy to identify a more extensive perspective of the HV service in relation to infant weight across a broader geographical area. This would aim to illuminate any similarities, differences, challenges or barriers that exist in light of the original findings of the thesis. Alternatively, research that aims to identify the impact of emotions or assumptions on the role of a wider group of health professionals, including HVs and / or across a wider range of health promotion activities, would also be beneficial. Again, this would aim to describe and interpret a selected phenomenon of public health practice and illuminate impact and outcomes. In doing so this would ensure that any future research plans include research questions that can build a body of work around HV practice and healthy weight and nutrition of infants. This means research that extends beyond the local area and is based on the evidence from this research study.

9.2.2. Final Thoughts and Perspectives

Finally, HVs are crucial in supporting children, families and communities. In fact, they were described as amazing by parents within this research for their support with infant feeding in a crisis. However, they have faced several cuts to HV service delivery, undoubtedly impacting on how the service and their roles and responsibilities are perceived by parents accessing the service locally. In this research, this resulted in perceptions of a service that was reactive, and task orientated around infant weight management and healthy nutrition, rather than proactive as suggested within the empirical literature and government policy. HVs demonstrated that they wanted to protect parents' feelings in relation to infant weight, and this was first and foremost in their minds when faced with infants who potentially exceeded a centile. The irony of this, is the global scale of childhood obesity within the UK and across the globe, because this short-term perspective is insufficient to make every contact count relating to infant weight. In the moments when HVs and parents come together, there is a golden opportunity for deliberate and group action to change the way they manage infant weight in the long term for all infants and children. Raising awareness of obesity risk and working together with families for a whole-families approach, rather than seemingly shying away. However, shying away is understandable given the emotional responses some HVs

and parents have, as described within the research findings. Arguably, addressing infant weight requires a shift from perceiving infant weight as problematic or something stigmatising to making it part of everyday practice, no matter what the weight of the infant is. Furthermore, the emotional responses of HVs and parents are potentially reduced if talking about infant weight becomes the norm within the interaction. It is therefore important to not overlook the long-term impact overweight and obesity can have on us all, particularly the long-term health and development of infants and children. As highlighted many times within this thesis, giving infants the best start in life is critical, and managing health infant weight and nutrition is part of that.

You are forgiven for identifying that weight across the lifespan is a complicated phenomenon. Yet in this research it has been reduced to a simple process of communication between parents and HVs, and an exploration of how knowledge and experience impacts on actions. However, suggesting a shift, a tweak or a fresh perspective could be instrumental in changing how infant weight is addressed in HV practice. A further dichotomy is the government rhetoric that places HVs at the heart of infant, children, families and community health and wellbeing for infant weight and healthy nutrition, often without sufficient financial empowerment of local authorities. The final message of the research is that providing insight into the interaction that occurs between HVs and parents through interpretative research was instrumental in illuminating the voices of the participants. Once illuminated, they are unsilenced. Once the voices of HVs and parents are unsilenced, the voices of infants and children can be heard.

GLOSSARY of TERMS

BF Breastfeeding

BLW Baby Led Weaning

BMI Body Mass Index

CF Complementary feeding

EBF Exclusive Breast feeding

HCP Healthy Child Programme

HV Health Visitor

NN Nursery Nurse

WHO World Health Organisation

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Appendix 1: Informed Consent Form – Parents



Professor Dianne Ford

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Department of Nursing, Midwifery and Health

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Newcastle upon Tyne

NE7 7XA

Tel 0191 215 6222

Consent form conforms to standard format as indicated on HRA website

IRAS ID: 181701

Centre Number:

Study Number:

Participant Identification Number for this trial:

CONSENT FORM

Title of Project: Infant weight: Health visitor and parent conversations. A phenomenological study.

Name of Researcher: Maggie Coates

**Please
initial
box**

1. I confirm that I have read the information sheet dated June 2017 (version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
3. I understand that Maggie Coates from University of Northumbria, Newcastle may look at relevant sections of my infant's clinic records and parent held records (red book) or data

collected during the study where it is relevant to my taking part in this research. I give permission for Maggie Coates to have access to this data and records.

4. Maggie Coates and academic supervisors can look at my anonymised data collected during the study.

5. I understand that the information collected as part of this research study, may be used, to support other research in the future, and may be shared anonymously with other researchers.

6. I agree to take part in the above study.

Name of Participant Date Signature

Name of Person Date Signature
taking consent

Appendix 2: Informed Consent Form – HVs



Professor Dianne Ford

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Department of Nursing, Midwifery and Health

Faculty of Health and Life Sciences

Coach Lane Campus East

Newcastle upon Tyne

NE7 7XA

[Tel 0191 215 6222](tel:01912156222)

Consent form conforms to standard format as indicated on HRA website

IRAS ID:181701

Centre Number:

Study Number:

Participant Identification Number for this trial:

CONSENT FORM

Title of Project: Infant weight: Health visitor and parent conversations. A phenomenological study.

Name of Researcher: Maggie Coates

**Please
initial
box**

7. I confirm that I have read the information sheet dated June 2017 (version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
8. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
9. I understand that the information collected about me as part of this research will be used to support other research in the future, and may be shared anonymously with other researchers.

10. Maggie Coates and academic supervisors can look at my anonymised data collected during the study.

11. I agree to take part in the above study

Name of Participant Date Signature

Name of Person Date Signature
taking consent

Appendix 3: Information Form – Parents



Professor Dianne Ford

Executive Dean

Department of Nursing, Midwifery and Health

Faculty of Health and Life Sciences

Coach Lane Campus East

Newcastle upon Tyne

NE7 7XA

Tel 0191 215 6222

Information Sheet for Health Visitors from South Tyneside Foundation Trust

Name of Researcher: Maggie Coates

Study Title: Infant weight: health visitor and parent conversations. A phenomenological study.

Study Question: "What conversations take place between health visitors and parents in relation to infant weight in the delivery of the Healthy Child Programme (HCP)?"

Participant Information Sheet conforms to standard format as indicated on HRA website

IRAS ID: 181701

05th June 2017

Dear Colleague,

Would you like to take part in a research study as a health visitor (HV) working in South Tyneside Foundation Trust?

I have asked you because:

1. You are a HV with a caseload that includes infants aged 2 years or under
2. You deliver the Healthy Child Programme to children and families
3. You carry out home visits and attend child health clinics
4. You work in South Tyneside where the research study will take place
5. You could highlight infants within your caseload above the 91st growth centile

Research summary:

- This research study will involve HVs working in South Tyneside Foundation Trust and parents living in South Tyneside
- Parents of infants across all growth centiles (apart from those under the 2nd centile) age 2 and under are also invited to take part
- It involves either “a semi structured interview” or “focus group” that will take place in South Tyneside in an NHS premises such as a local clinic
- The focus of the research study is infant weight in general across all the growth centiles, overweight and obesity in infants will also be a specific aspect of the research
- ***Your involvement in this research is voluntary and will always remain voluntary and you can withdraw at any time even if you have signed a consent form to take part.***

Who has reviewed this research?

Ethical approval for this research study was given, by Northumbria University on November 24th 2016. Further ethical approval was gained from the NHS Research Ethics Committee in2017.

What is the research?

This research is about how HVs and parents talk to each other about infant weight. What conversations have taken place? It will focus on infant weight in general across all the growth centiles including overweight and obesity (infants over the 91st and 98th growth centiles and excluding infants with a growth centile 0.2 or below). I am interested in talking to all HVs in a group or one to one about their experiences. The research is not taking place to look at how any individual HVs manage infant weight or single out any individual HVs or HVs views on this.

Why am I doing the research?

I am doing this research as part of my PhD at Northumbria University. A PhD is an academic degree and stands for “Doctor of Philosophy”. My PhD involves doing research in public health. I want to find out more about the conversations that take place between health visitors and parents about infant weight in general, including overweight and obesity in infants up to 2 years old. This will help me to answer questions such as “*How do Health Visitors deliver public health messages around babies weight?*”

My role in the research?

My role is facilitating focus groups and doing semi structured interviews with HV and parents, then analysing data collected. I will be able to give you your interview transcript back so you can look at this and tell me if it is accurate.

What is already known?

We already know that parents worry about their infants weight, especially in infants aged 2 and under and monitoring infants weight and growth is a big part of the Health Visitors role. In the United Kingdom (UK) nine percent of reception aged children are obese and 13 percent are overweight. We also know that the Healthy Child Programme that Health Visitors deliver has had the number of mandated visits reduced. The 3-4 month “weaning visit” is no longer a mandated visit.

How will you be involved?

You will be one of a group of about 20 HVs and 20 parents are invited to take part. Parent's semi structured interviews and focus groups will be separate from yours, and only HVs will make up your groups).

As part of data collection, you will take part in either a "semi structured interview" or a "focus group", or both, about infant weight, including overweight and obesity. These will take place in a suitable and convenient location within NHS premises and arranged in advance.

- a) **Semi-Structured interview:** The interview would take place with me and last approximately 40-60 minutes. It will be recorded for research purposes. No one would be able to identify you from the recording.
- b) **Focus Group:** This is where you would meet other HVs involved in the research to discuss infant weight across all growth centiles. I would lead and record this and it would last about 40-60 minutes. No one would be able to identify you from the recording. You may already know some of the other HVs in the group if they work in the same area as you.

How will my information stay confidential?

There are no specific risks to confidentiality within this study:

- No one will be able to identify you from the data collected during the study
- Anything you say in either the focus groups or semi structured interviews will stay confidential and any recordings made will be wiped straight away once they have been transcribed
- No personal information about you will be shared by the researcher and data will only be used for the purpose of the research
- All personal data will remain anonymous and destroyed after 12 months
- Information from the research study will be stored on a secure Northumbria University computer with password protection
- Information will not be stored on a data stick.
- You will not be identified in any direct quotes used in the researchers thesis, or any other future published work, these will be anonymous
- Ground rules, will be written by members of the group, for use during the group discussion

When would you be involved? This research will start in **September 2017** and data collection should be complete in **March 2018**. Once the research study is complete, I will use the information collected from all those in the study as part of the PhD. The results will be discussed in a thesis. I would also use the work completed as part of this PhD to publish work in public health.

What are the possible benefits of taking part?

Taking part in this research will give you an opportunity to discuss HV practice. Opportunity to listen to others, express your opinions, values and beliefs about infant weight across the growth centiles during both focus groups semi structured

interviews. You will also have the opportunity to reflect on the conversations you have had with parents, how and where these took place, and how you felt these went. You could meet other HVs with common interests. You may get a greater understanding of infant growth as a result, of taking part in the study by spending time with other HVs outside of your normal working activity. It could be an opportunity to share good practice, gain a greater understanding of research design and further understand other HV or parents perspectives.

What are the possible disadvantages of taking part?

This research does not involve any specific treatments. It is not a drug trial. There are no specific side effects or any treatment or therapies. It may take up some of your time. You might find that you have a different opinion to other HVs but it should not be an upsetting experience.

How can you find out more?

If you are interested in taking part in the research and would like to know more:

1. We could meet so I can explain the research in more detail
2. You would be invited to a meeting to find out about your role in the study and consider signing a consent form
3. There is a 7-day period for you to decide whether to take part, before you provide voluntary informed consent. This gives you a chance to think about taking part in the study and ask any questions

Consent forms will be available to my principal supervisor; Professor Pauline Pearson, PhD supervisor, Northumbria University.

If I have concerns about the research study?

[If you have any concerns about this research, the way it is carried out or my conduct, please contact Dr Peter McMeekin, Associate Professor, Department of Health and Life Sciences Ethics Lead. Tel: 0191 2156368 Email: peter.mcmeekin@northumbria.ac.uk](#)

Duty of Care:

As a registered nurse and HV, the Nursing and Midwifery Code govern me: (Standards of Conduct, Performance and Ethics for Nursing and Midwives) (NMC 2015). Confidentiality will be maintained at all times. I am bound to act by a Duty of Care should information be disclosed during the research, where the researcher believes that someone may be at risk of harm or it is divulged that a HV has breached their professional code.

If you have any questions or require any further information please contact: Maggie Coates on 0191 2156239 or @ maggie.coates@northumbria.ac.uk

To provide consent please sign as indicated below:

I consent to taking part in this research study.	
Signature of Health Visitor	Date:
NAME IN BLOCK LETTERS:	
Signature of researcher:	Date:
NAME IN BLOCK LETTERS: MAGGIE COATES	

If you do not want to receive information relating to the results of this research and wish to opt out, please complete and sign the box below.

I do not want to receive information relating to the results of this research	
Signature of HV	Date.....
(NAME IN BLOCK LETTERS).....	
Signature of researcher.....	Date.....
(NAME IN BLOCK LETTERS).....	

Maggie Coates PhD student

University of Northumbria, Newcastle

Appendix 4: Information Form – HVs



Professor Dianne Ford

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Tel 0191 215 6222

Information Form Parents

Name of Researcher: Maggie Coates

Study Title: Infant weight: health visitor and parent conversations. A phenomenological study.

Study Question: "What conversations take place between health visitors and parents in relation to infant weight in the delivery of the Healthy Child Programme?"

Participant Information Sheet conforms to standard format as indicated on HRA website

05th June 2017

Dear Parent,

Would you like to take part in a research study?

I have asked you because:

6. You are a parent of a baby aged 2 years or under
7. You have a health visitor (HV) who delivers the Healthy Child Programme to you and your family
8. The health visitor will have seen you at home or in a clinic
9. You live in South Tyneside where the research study will take place

Study summary:

- This research study will involve parents living in South Tyneside and HVs working in South Tyneside Foundation Trust.
- It involves either “a one to one interview” or “group discussion” that will take place in South Tyneside in an NHS premises such as a local clinic
- Parents of babies across all growth centiles (apart from those under the 2nd centile) age 2 and under are invited to take part
- The focus of the research study is babies’ weight in general across all the growth centiles, overweight and obesity in babies’ will also be a specific aspect of the research (4a).
- ***Your involvement in this research is voluntary and will always remain voluntary and you can withdraw at any time even if you have signed a consent form to take part.***

Who has reviewed this study?

Ethical approval for this research study was given, by Northumbria University on November 24th 2016. Further ethical approval was gained from the NHS Research Ethics Committee in2017.

What is the research?

This research is about how parents and health visitors talk to each other about babies’ weight. What conversations have taken place? It will focus on babies’ weight in general across all the growth centiles including overweight and obesity (babies over the 91st and 98th growth centiles) (4a). I am interested in talking to all parents in a group or one to one about their experiences. The research is not taking place to look at how any individual parents manage their babies’ weight or single out any individual parents or parent’s views on this (4b).

Why am I doing this research?

I am doing this research as part of my PhD at Northumbria University. A PhD is an academic degree and stands for “Doctor of Philosophy”. My PhD involves doing research in public health (4d). I want to find out more about the conversations that take place between health visitors and parents about babies’ weight in general, including overweight and obesity in babies up to 2 years old. This will help me to answer questions such as “*How do Health Visitors deliver public health messages around babies weight?*”

My role in the research?

My role is facilitating the group discussions and doing one to one interviews with parents, then analysing data collected. I will be able to give you your interview transcript back so you can look at this and tell me if it is accurate (4c).

What is already known?

We already know that parents worry about their babies weight, especially in babies aged 2 and under and monitoring babies weight and growth is a big part of the Health Visitors role. In the United Kingdom (UK) nine percent of reception aged children are obese and 13 percent are overweight. We also know that the Healthy Child Programme that Health Visitors deliver has had the number of visits cut. The 3-4 month “weaning visit” is no longer recommended in many areas of the UK, including South Tyneside.

How will you be involved?

You will be one of a group of about 20 parents and 20 Health Visitors are invited to take part. Their “one to one interviews” or “group discussions” will be separate from yours and only parents will make up your groups (4c).

As part of data collection, you will take part in either a “one to one interview” or a “group discussion”, or both, about infant weight, including overweight and obesity (4a). These will take place in a suitable and convenient location within NHS premises and arranged in advance.

- c) **One to One Interview:** The interview would take place with me and last approximately 40-60 minutes. It will be recorded for research purposes. No one would be able to identify you from the recording.
- d) **Group Discussion:** This is you would meet other parents involved in the research to talk about babies’ weight across all growth centiles. I would lead and record this and it would last about 40-60 minutes. No one would be able to identify you or your baby from the recording. You might want to choose a different name to use within the group if that makes you feel more comfortable. You may already know some of the other parents in the group if they live in the same area as you or go to the same child health clinic.

How will my information stay confidential?

There are no specific risks to confidentiality within this study:

- No one will be able to identify you or you baby from the data collected during the study
- Anything you say in either the one to one interview or group discussion will stay confidential, and any recordings made will be wiped straight away once they have been written down
- No personal information about you will be shared by the researcher and data will only be used for the purpose of the research
- All personal data will remain anonymous and destroyed after 12 months
- Information from the research study will be stored on a secure Northumbria University computer with password protection
- Information will not be stored on a data stick.
- You will not be identified in any direct quotes used in the researcher’s thesis, or any other future published work, these will be anonymous
- Ground rules, will be written by members of the group, for use during the group discussion
- Your GP **will not** be notified that you are taking part in this research
- **No** GP records will be accessed during this research, only information with your consent, about your babies’ growth centiles in either clinic notes or parent held record

When would you be involved?

This research will start in **September 2017** and data collection should be complete in **March 2018** (4f). Once the research study is completed I will use the information collected from all those in the study as part of my PhD. The results will be discussed in a thesis. I would also use the work completed as part of this PhD to publish work in public health.

What are the possible benefits of taking part?

Taking part in this research will give you an opportunity to be listened too. You can express your opinions, values and beliefs about babies' weight across all the growth centiles during both one to one and group discussions. You will also be able to look back on the conversations you have had with your health visitor, how and where these took place, and how you felt these went. You could meet other parents with common interests and make new friends. You might get a greater understanding of infant growth as a result, of taking part in the study.

What are the possible disadvantages of taking part?

This research does not involve any specific treatments. It is not a drug trial. There are no specific side effects or any treatment or therapies. It may take up some of your time. You might find that you have a different opinion to other parents but it should not be an upsetting experience. There are no monies available for child care costs if you take part in this research study (4e).

How can you find out more?

If you are interested in taking, part in the research and would like to know more:

4. We could meet so I can explain the research in more detail
5. You would be invited to a meeting to find out about your role in the study and consider signing a consent form
6. There as a 7-day period for you to decide whether to take part, before you provide voluntary informed consent. This gives you a chance to think about taking part in the study and ask any questions

Consent forms will be available to my principal supervisor; Professor Pauline Pearson, PhD supervisor, Northumbria University.

[If I have concerns about the research study \(4g\)](#)

[If you have any concerns about this research, the way it is carried out or my conduct, please contact Dr Peter McMeekin, Associate Professor, Department of Health and Life Sciences Ethics Lead. Tel: 0191 2156368 Email: peter.mcmeekin@northumbria.ac.uk](#)

Duty of Care:

I am governed by the Nursing and Midwifery Code (Standards of Conduct, Performance and Ethics for Nursing and Midwives) (NMC 2015) as a registered nurse and health visitor. Confidentiality will be maintained at all times. I am bound to act by a Duty of Care should information be disclosed during the research, where I believe someone may be at risk of harm or a HV has breached their professional code.

If you have any questions or require any further information please contact: Maggie Coates on 0191 2156239 or @ maggie.coates@northumbria.ac.uk

To provide consent please sign as indicated below:

I consent to taking part in this research study.	
Signature of parent:	Date:
NAME IN BLOCK LETTERS:	
Signature of researcher:	Date:
NAME IN BLOCK LETTERS: MAGGIE COATES	

If you do not want to receive information relating to the results of this research and wish to opt out, please complete and sign the box below.

I do not want to receive information relating to the results of this research	
Signature of HV.....	Date.....
(NAME IN BLOCK LETTERS).....	
Signature of researcher.....	Date.....
(NAME IN BLOCK LETTERS).....	

Maggie Coates PhD student

University of Northumbria, Newcastle

Research Opportunity: Calling Health Visitors!



Would you be interested in helping me with a research study about infant weight?

My research is about conversations between parents and health visitors about infant weight in general, but also including overweight & obesity.

I am interested in talking to health visitors in a group or individually about their experiences.

**See me in your local clinic OR
contact me directly:**

Maggie Coates Tel: 0191 2156239

Email: maggie.coates@northumbria.ac.uk

Could I come and talk to you?

Are you interested in infant weight? (0-2)

**APPENDIX 7: Letter of
Invitation – HVs**



Professor Dianne Ford

Executive Dean

Department of Nursing, Midwifery and Health

Faculty of Health and Life Sciences

Coach Lane Campus East

Newcastle upon Tyne

NE7 7XA

Tel 0191 215 6222

03rd June 2017

Dear Colleague,

Re: Research study: Infant weight: Health visitor and parent conversations

As a Health Visitor, I would like to invite you to be involved in a research study that I am doing as part of my PhD. A PhD is an academic degree and stands for "Doctor of Philosophy" (7b & c). My PhD involves doing research in public health.

Ethical approval for this research was given by Northumbria University (November 24th, 2016) and from the Research Ethics Committee (June 2017).

What is the research? This research is a qualitative research study to understand and explore the conversations that health visitors have with parents in relation to infant weight, overweight and obesity of infants aged 2 years and under. It will focus on infant weight in general across all the growth centiles, overweight, and obesity (infants over the 91st and 98th weight centiles) (7a). I am inviting you to participate because of your role in leading and delivering the Healthy Child Programme within the UK.

How will you be involved? In taking part, you would be invited to attend either focus group with other health visitors about infant weight, overweight and obesity, or a semi structured interview with the researcher about infant weight, overweight and obesity. These would last for approximately 40-60 minutes. If you would like to know more and would like to be involved, I would be happy to meet with you, give you more detail and the chance to ask any questions. Further information is also available to help you decide if you want to take part. **I would really appreciate you being involved. If you would like to find out more please contact me on 0191 215 6239 or at maggie.coates@northumbria.ac.uk.**

Yours sincerely,

Maggie Coates
PhD student University of Northumbria, Newcastle



**Northumbria
University**
NEWCASTLE

APPENDIX 8: Research Flyer
- Parents

Calling parents of babies under 2 years old

**Would you be interested in helping me with
some research about babies' weight?**

**My research is about conversations
between parents and health visitors around
babies' weight generally, but also including
overweight & obesity.**

**I am interested in talking to parents in a
group or one to one about their experiences.**

**See me in your local clinic OR
contact me below:**

**Maggie Coates: 0191 2156239
maggie.coates@northumbria.ac.uk**

Can I come and talk to you?

Appendix 9: Letter of invitation – Parents



Professor Dianne Ford

Executive Dean

Department of Nursing, Midwifery and Health

Faculty of Health and Life Sciences

Coach Lane Campus East

Newcastle upon Tyne

NE7 7XA

Tel 0191 215 6222

03rd June 2017

Dear Parent

Re: Research study: Infant weight: Health visitor and parent conversations

As a parent with a baby, I would like to invite you to be involved in a research study that I am doing as part of my PhD (7b). A PhD is an academic degree and stands for “Doctor of Philosophy” (7c). My PhD involves doing research in public health.

Ethical approval for this research was given by Northumbria University (November 24th, 2016) and from the Research Ethics Committee (June 2017).

What is the research? This research is to explore the conversations that health visitors have with parents about babies’ weight. It will focus on babies’ weight in general across all the weight centiles and specifically overweight and obesity (babies over the 91st and 98th weight centiles). I am inviting you because you have a baby aged 0-2 years, live in South Tyneside, have a registered health visitor or may have a baby above the 91st centile. I am interested in talking to all parents in a group or one to one about their experiences and the conversations they have with their health visitors (7a).

How will you be involved? In taking part, you would be invited to attend either a group discussion with other parents about infant weight, overweight and obesity, or a one to one interview with the researcher about infant weight, overweight and obesity. These would last for approximately 40-60 minutes. If you would like to know more and would like to be involved, I would be happy to meet with you, give you more detail and the chance to ask any questions. Further information is also available to help you decide if you want to take part. **I would really appreciate you being involved. If you would like to find out more please contact me on 0191 215 6239 or at maggie.coates@northumbria.ac.uk.**

Yours sincerely,

Maggie Coates

Maggie Coates
PhD student, University of Northumbria at Newcastle



Faculty of Health and Life Sciences

FOCUS GROUP- PARENT

Researcher:
Focus Group Code:
Location Code:
Date:
Start Time:
End Time:
Participant Codes:
Recorded:

Sample Focus Group Open Ended Questions for Parent Participants

1. What surprises you about the conversations you have with the HV about your babies' weight, particularly if about overweight or obesity?
2. What kind of advice have you had from the HV in clinic about baby's weight?
3. What type of support did you have during clinic from the HV or member of the HV team about baby's weight?
4. Have you had a home visit for the 3-4-month check and who did this?
5. What did you talk about?
6. Was it the HV or NN that did the visit (different between area 1, 2 or 3)?
7. What do you like most about the clinic in relation to baby's weight?
8. What concerns you the most about your baby's weight?
9. What questions do you ask the HV about baby's weight?
10. What questions does the HV ask you about baby's weight?

11. What part of the conversations you have with HV about baby's weight do you find the most helpful?
12. What kinds of things might stop you from having a conversation with the HV about your baby's weight?
13. Would you find it difficult to talk about your baby's weight if you felt he/she was overweight or obese?
14. Do you and your HV have the same opinion about your baby's weight?
15. What do you know/understand about the centile chart in the red book?

Sample Focus Group Probing Questions

1. Tell me a little more about that?
2. Is there anything else you would like to add?
3. Tell me more about how that makes you feel?
4. Can anyone else add their thoughts to that question?

Sample Focus Group Clarifying Questions

1. I want to make sure I have a clear picture of what you are saying can you explain it again?
2. What does over weight or obesity in baby's mean to you?
3. Can you give me an example of what you mean?
4. Does everyone think the same?

Appendix 11: Focus Group Schedule - HVs

Faculty of Health and Life Sciences

FOCUS GROUP- HV

Researcher:
Focus Group Code:
Location Code:
Date:
Start Time:
End Time:
Participant Codes:
Recorded:

Sample Broad Focus Group Open Ended Questions for HV

1. What is your experience of delivering the HCP in relation to infant weight?
2. What age group do you consider an infant to be?
3. What kind of advice do you give to parents during clinic about infant weight?
4. What type of support do you provide to parents during clinic as a HV or member of the HV team about infant weight?
5. Do you regularly provide home visits for the 3-4-month check?
6. What do you talk about with parents?
7. What do you like about addressing infant weight or what do you find most difficult?
8. What kinds of things concern you the most about infant weight?
9. What do you do to address this if an infant is above the 91st centile?

10. What questions do you ask parents and what do they ask you about infant weight?
11. How are 3-4 month visits delivered across your area, differently between Area 1, 2 and 3?
12. Are staff delivering 3-4 month checks different between area 1, 2 or 3?
13. What do you think is the most important piece of information to give to parents in relation to infant weight?
14. What concerns you the most about infant's weight for those on your caseload?
15. Do you and your parents have the same opinion about infant weight?

Sample Focus Group Probing Questions

5. Tell me a little more about that?
6. Is there anything else you would like to add?
7. Tell me more about how that makes you feel?
8. Can anyone else add their thoughts to that question?

Sample Focus Group Clarifying Questions

2. I want to make sure I have a clear picture of what you are saying can you explain it again?
3. What does over weight or obesity in baby's mean to you?
4. Can you give me an example of what you mean?
5. Does everyone think the same?

Interview Question	Probes	Researcher Notes
1. How long have you known your HV?		
2. How often do you see them?	Do you see the same HV all the time?	
3. What do you think the role of the HV is?		
4. Would you normally see your HV at home or in the clinic?		
5. What kind of things happen at the clinic when you go?	Do you hear the HV giving public health messages about infant weight? Can you give me some examples?	
6. What about when the HV visits you at home?		
7. Have you had 3-4 month weaning visit yet? If NO move to Q8.	Who did this?	
8. Who would you normally speak to for advice about you babies weight?		
9. Where do you get most of your advice about your own/families weight?	<i>Why would you normally speak to/go to source for this advice?</i>	
10. How would you know if your baby was overweight or obese?		
11. What kinds of things does the health visitor say about babies' weight?	<i>What conversations have you had? Were these helpful? Positive? Negative?</i>	
12. How accurate do you think the advice you get from the HV is about your babies' weight?		

13. Is there any information and or advice you get about your infants weight that is the most helpful?	<i>What made it helpful?</i>	
14. Is there any information and advice you get about your infants weight that is least helpful?	<i>What made this unhelpful to you?</i>	
15. What does the centile chart mean to you?	<i>Did the HV explain the Centile chart to you? (Explain what this is)Do you understand the centiles?</i>	
16. What kinds of things would make you think your baby was overweight or obese?	<i>Refer to the centile chart</i>	
17. Has the HV ever mentioned overweight or obesity to you?	<i>What did he/she say? How did this make you feel? Unhappy, shocked, worried? Happy to talk about it and get advice? Didn't want to talk about it? Not HV place? Would this make your relationship more difficult?</i>	
18. How has your baby moved along the centile chart? (Birth centile to now)		
19. What do you think is a healthy weight for babies?		
20. What would you do if you thought your baby was overweight or obese?	<i>How would this look to you?</i>	
21. What kinds of things does the HV say or do about overweight and obesity in your experience?		

22. Does the health visitor talk to you about your weight, and your babies' weight?	<i>What kinds of this does he/she say? Is this about weight gain? Weight loss?</i>	
23. Does this help you understand what a healthy diet could be for you and your family?		
24. Do you think that your HV is confident about giving advice about you and your babies' weight?	<i>What makes you think the HV is confident?</i>	
25. Is there anything else you would like to share, or I should have asked?		

There were originally 26 questions for parents. Question 25 from 26 was removed, leaving a total of 25 questions in Version 2.

Appendix 13: Semi-Structured Interview Schedule - HVs



Faculty of Health and Life Sciences

SEMI-STRUCTURED INTERVIEW FORM - HV

Researcher:
Participant Codes:
Location Code:
Date:
Start Time:
End Time:

Check list

- Introduction Yes No
- Do I have consent to record this interview Yes No
- Clarify the purpose of the interview Yes No
- Aproximate Length of Interview Yes No
- Confidentiality assured Yes No
- Participant informed that they can ask questions Yes No
- Participant informed that they can decline Yes No

Interview Question	Probes	Researcher Notes
1. How long have you known your HV?		

2. How often do you see them?	<i>Do you see the same HV all the time?</i>	
3. What do you think the role of the HV is?		
4. Would you normally see your HV at home or in the clinic?		
5. What kind of things happen at the clinic when you go?	<i>Do you hear the HV giving public health messages about infant weight? Can you give me some examples?</i>	
6. What about when the HV visits you at home?	<i>Same probes</i>	
7. Have you had 3-4 month weaning visit yet? If NO move to Q8.	<i>Who did this? Where did it take place if not at home? 1:1 What kinds of things did your HV talk about? What was the most useful about this?</i>	
8. Who would you normally speak to for advice about you babies weight?		
9. Where do you get most of your advice about your own/families weight?	<i>Why would you normally speak to/go to source for this advice?</i>	
10. How would you know if your baby was overweight or obese?		
11. What kinds of things does the health visitor say about babies' weight?	<i>What conversations have you had? Were these helpful? Positive? Negative?</i>	
12. How accurate do you think the advice you get from the HV is about your babies' weight?		
13. Is there any information and or advice you get about your infants weight that is the most helpful?	<i>What made it helpful?</i>	
26. Is there any information and advice you get about your infants weight that is least helpful?	<i>What made it unhelpful to you?</i>	

14. What does the centile chart mean to you?	<i>Did the HV explain the Centile chart to you? (Explain what this is) Do you understand the centiles?</i>	
15. What kinds of things would make you think your baby was overweight or obese?	<i>Refer to the Centile chart</i>	
16. Has the HV ever mentioned overweight or obesity to you?	<i>What did he/she say? How did this make you feel? Unhappy, shocked, worried? Happy to talk about it and get advice? Didn't want to talk about it? Not HV place? Would this make your relationship more difficult?</i>	
17. How has your baby moved along the centile chart? (Birth centile to now)		
18. What do you think is a healthy weight for babies?		
19. What would you do if you thought your baby was overweight or obese?	<i>How would this look to you?</i>	
20. What kinds of things does the HV say or do about overweight and obesity in your experience?		
21. Does the health visitor talk to you about yours and your babies' weight?	<i>What kinds of this does he/she say? Is this about weight gain? Weight loss?</i>	
22. Does this help you understand what a healthy diet could be for you and your family?		

23. Do you think that your HV is confident about giving advice about you and your babies' weight?	<i>What makes you think the HV is confident?</i>	
24. Is there anything else you would like to share, or I should have asked?		
25. Is there anything else you would like to share, or I should have asked?		

APPENDIX 14 Overall Themes of HV Data

Overall Themes of Health Visiting Data

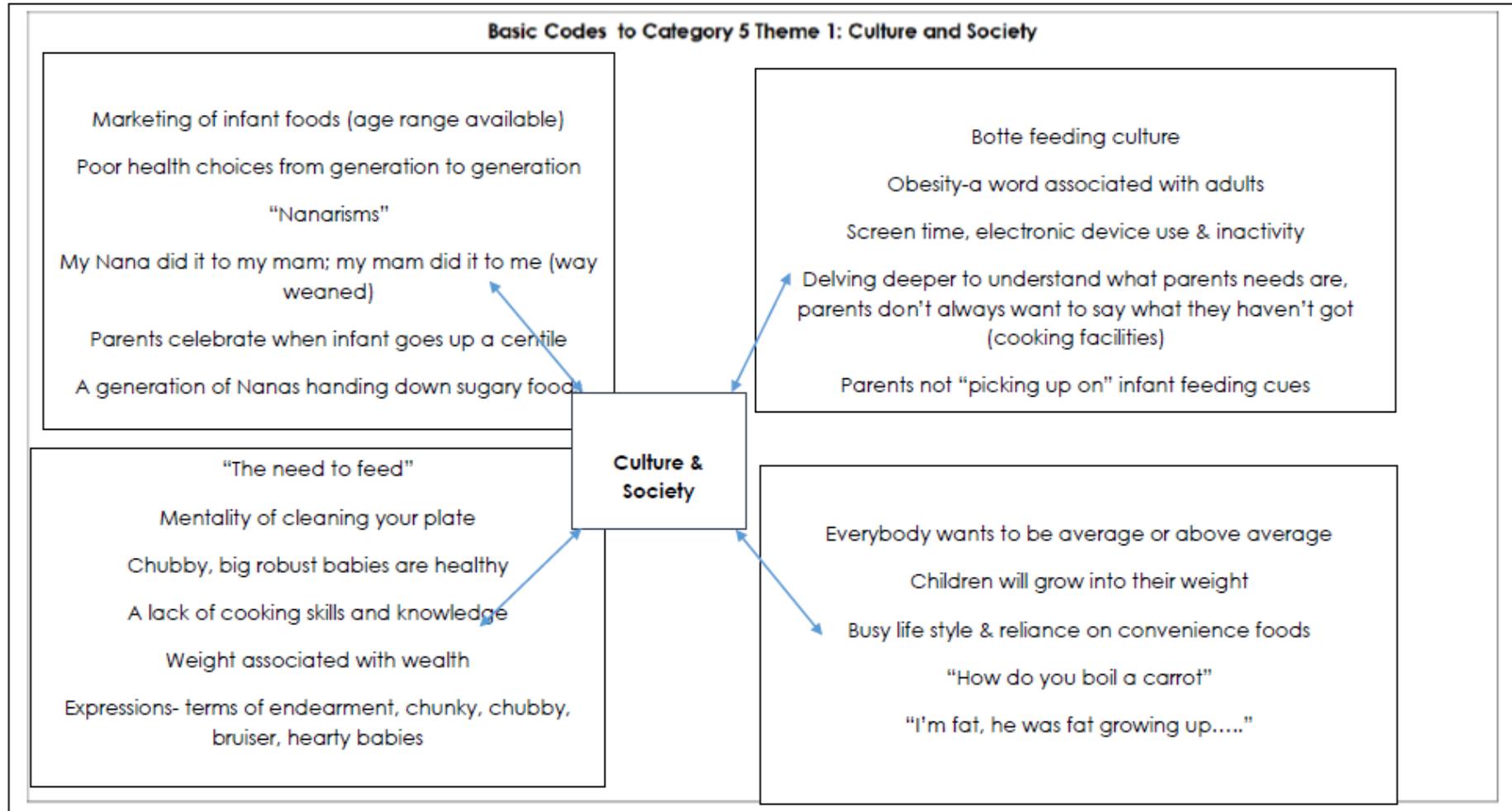
Original Categories (21)	Emerging themes
Category 5	1. Culture and Society
Categories 6, 8, 11, 12 and 16	2. Health Visitor Language and Strategy
Categories 7 and 13	3. The Impact of Organisational Change
Categories 9 and 17	4. Relationships
Category 15	5. Emotional Response of the Health Visitor
Category 1	6. Health Visitor Perceptions of Role in Infant weight and nutrition (1)
Categories 2, 18 and 21	7. Challenges
Categories 3, 4, 14, 17, 19 and 20	8. Health Visitors Perception of Infants and Parents
Category 10 Removed back to basic code	

Original Themes	Reordered for findings discussion
1. Culture and Society	1. Health Visitor Perceptions of Role in Infant weight and nutrition
2. Health Visitor Language and Strategy	2. Emotional Response of the Health Visitor
3. The impact of Organisational Change	3. Health Visitor Language and Strategy
4. Relationships	4. Relationships
5. Emotional Response of the Health Visitor	5. Challenges
6. Health Visitor Perceptions of Role in Infant weight and nutrition	6. Health Visitors Perception of Infants and Parents
7. Challenges	7. The Impact of Organisational Change

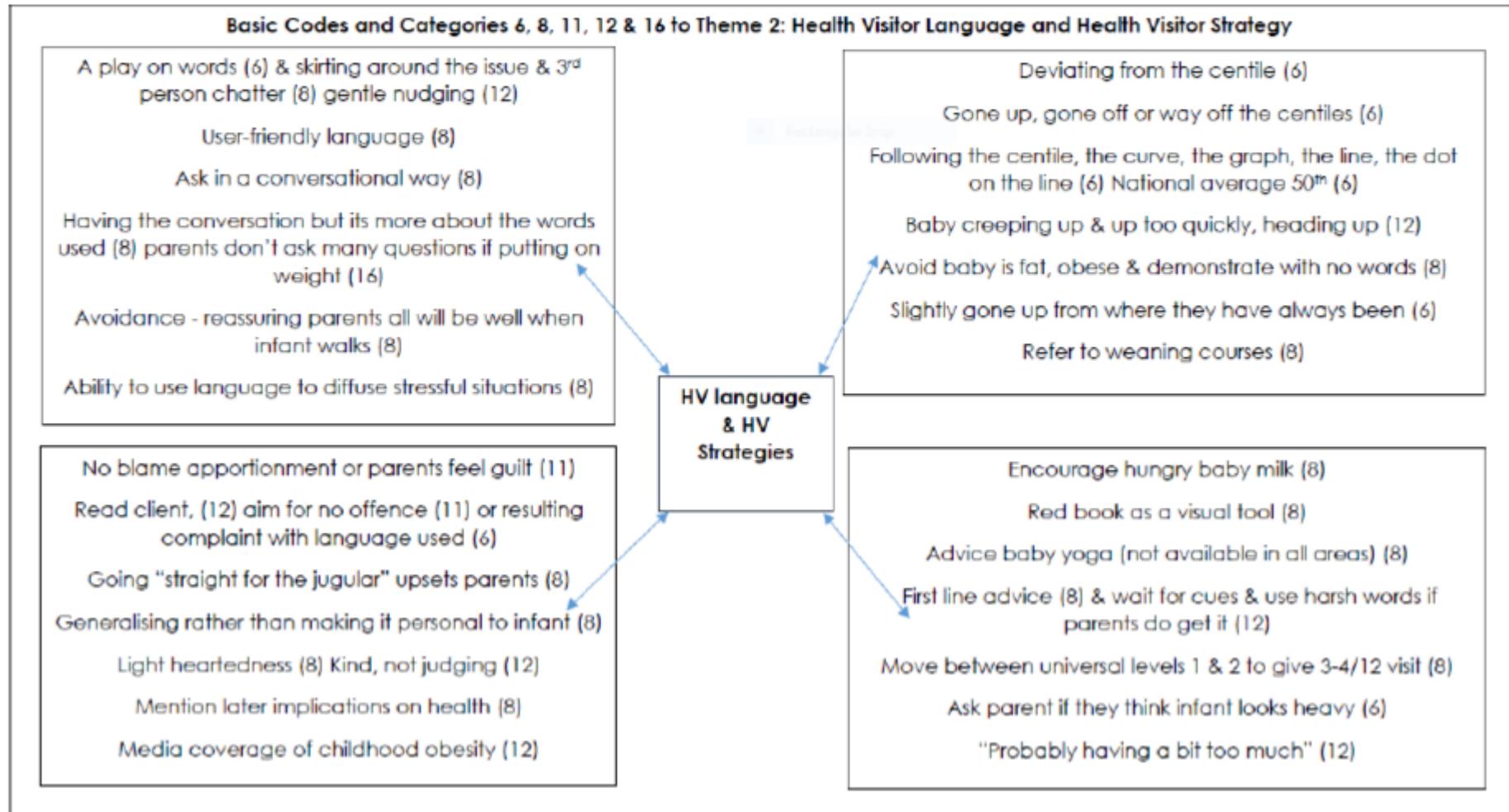
8. Health Visitors Perception of Infants and Parents	8. Culture and Society
--	------------------------

Original Themes	Themes mapped to summary of significant findings
1. Health Visitor Perceptions of Role in Infant weight and nutrition	Health visitors found addressing infant overweight and obesity with parents emotionally challenging (2, 5)
2. Emotional Response of the Health Visitor	Choosing the words to use was difficult (2, 4, 5)
3. Health Visitor Language and Strategy	Health visitors perceived the 3-4 month visit as crucial to address infant weight (3, 4, 7)
4. Relationships	Several key factors influenced the conversation about infant weight between the health visitor and the parent (4, 6, 7, 8,)
5. Challenges	Health visitors viewed themselves as specialists in infant weight and nutrition (1)
6. Health Visitors Perception of Infants and Parents	
7. Organisational Change	
8. Culture and Society	

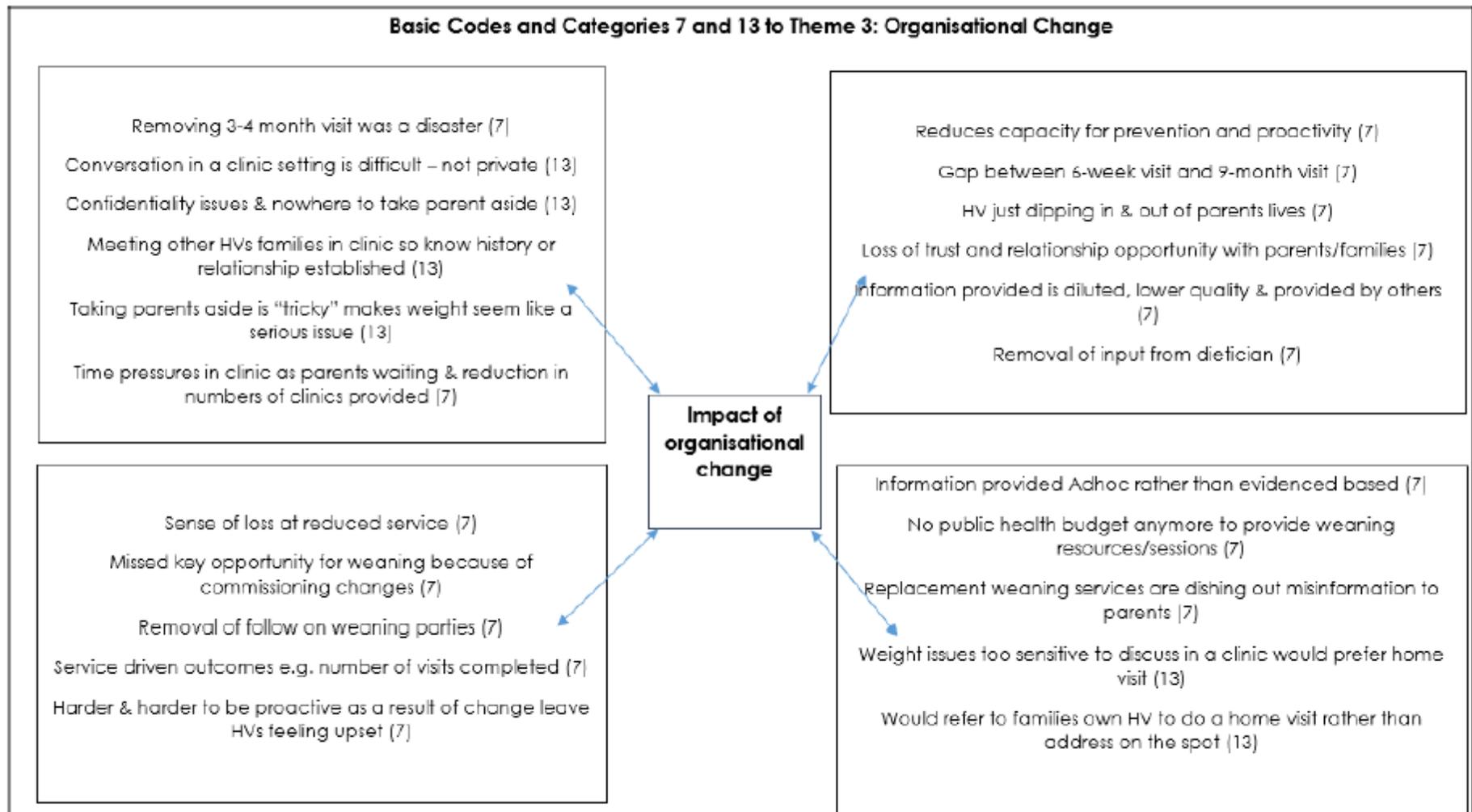
APPENDIX 15: HV Basic Codes, Categories to Themes HV Data



APPENDIX 16: HV Basic Codes, Categories to Themes HV Data

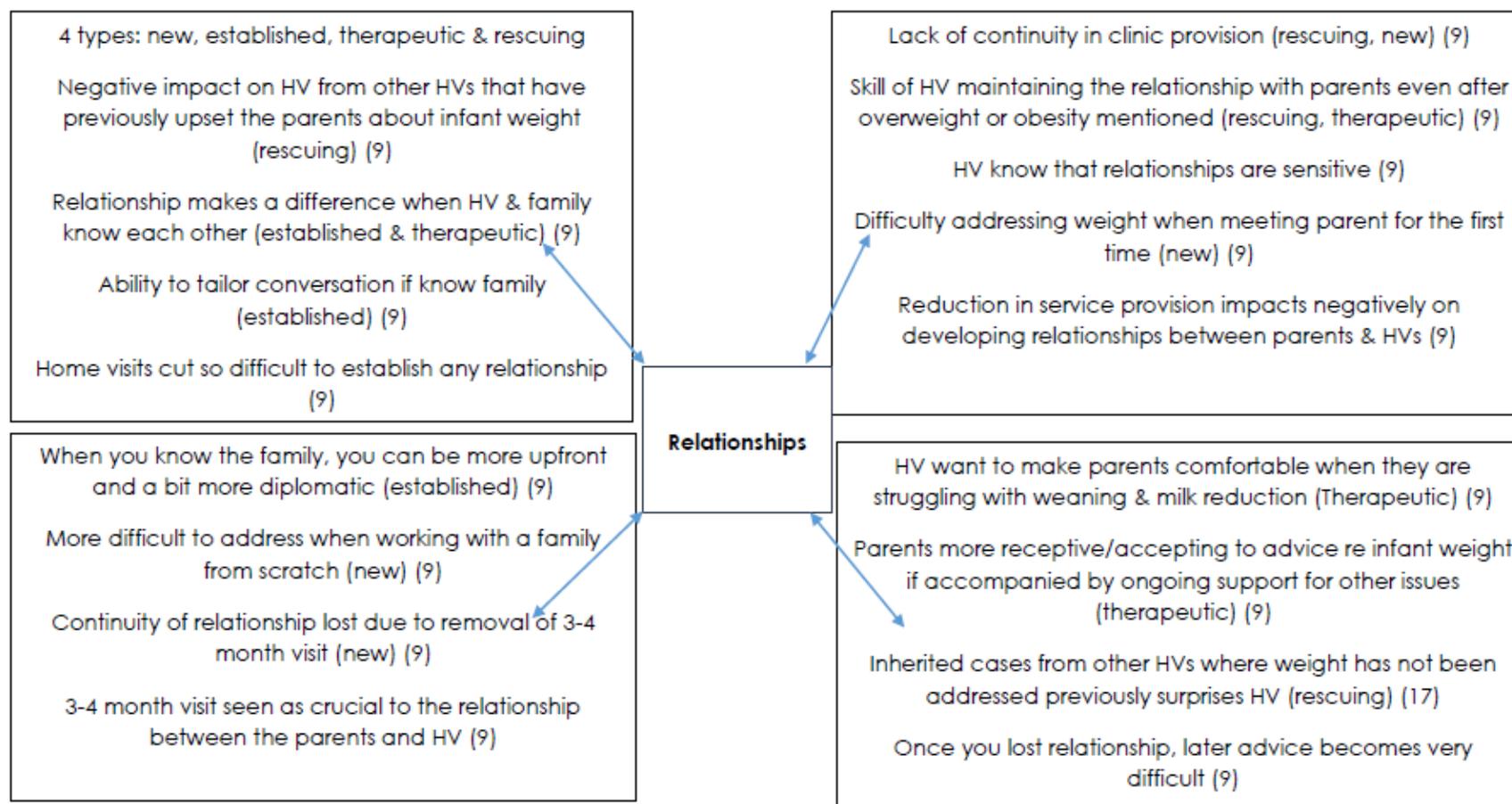


APPENDIX 17: Basic Codes, Categories to Themes HV Data

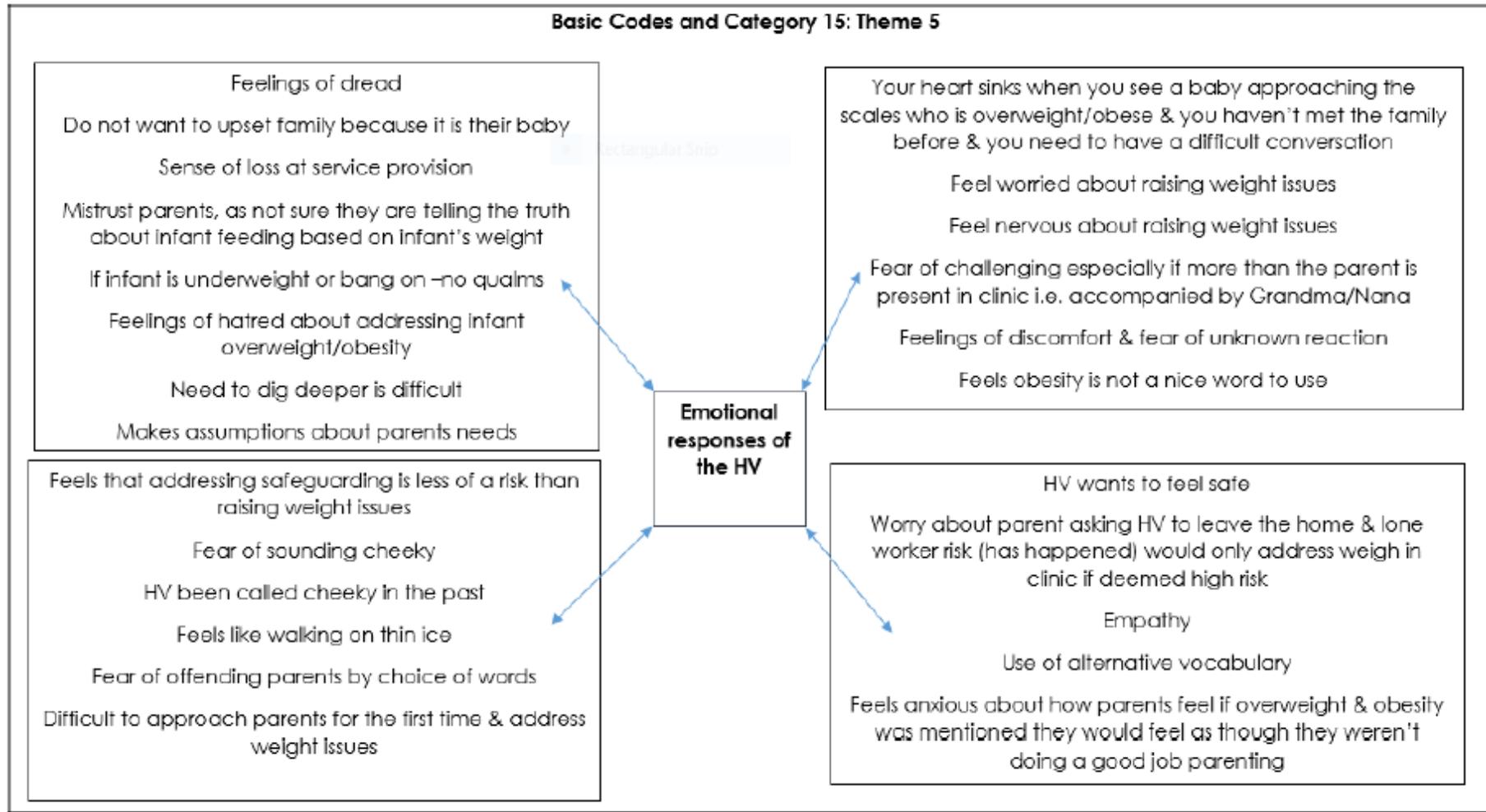


APPENDIX 18: Basic Codes, Categories to Themes HV Data

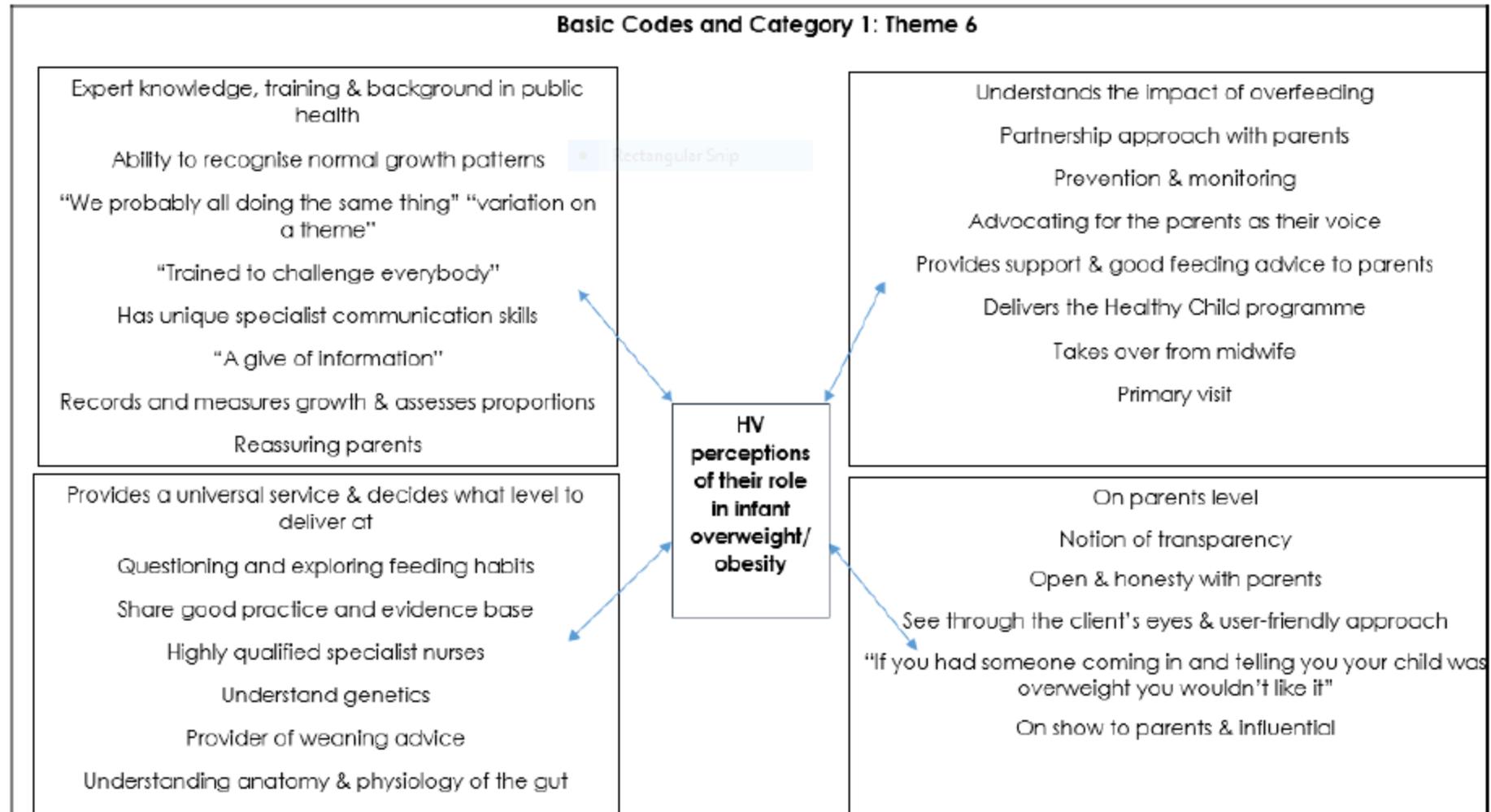
Basic Codes and Categories 9 & 17 to Theme 4: Relationships



APPENDIX 19: Basic Codes, Categories to Themes HV Data

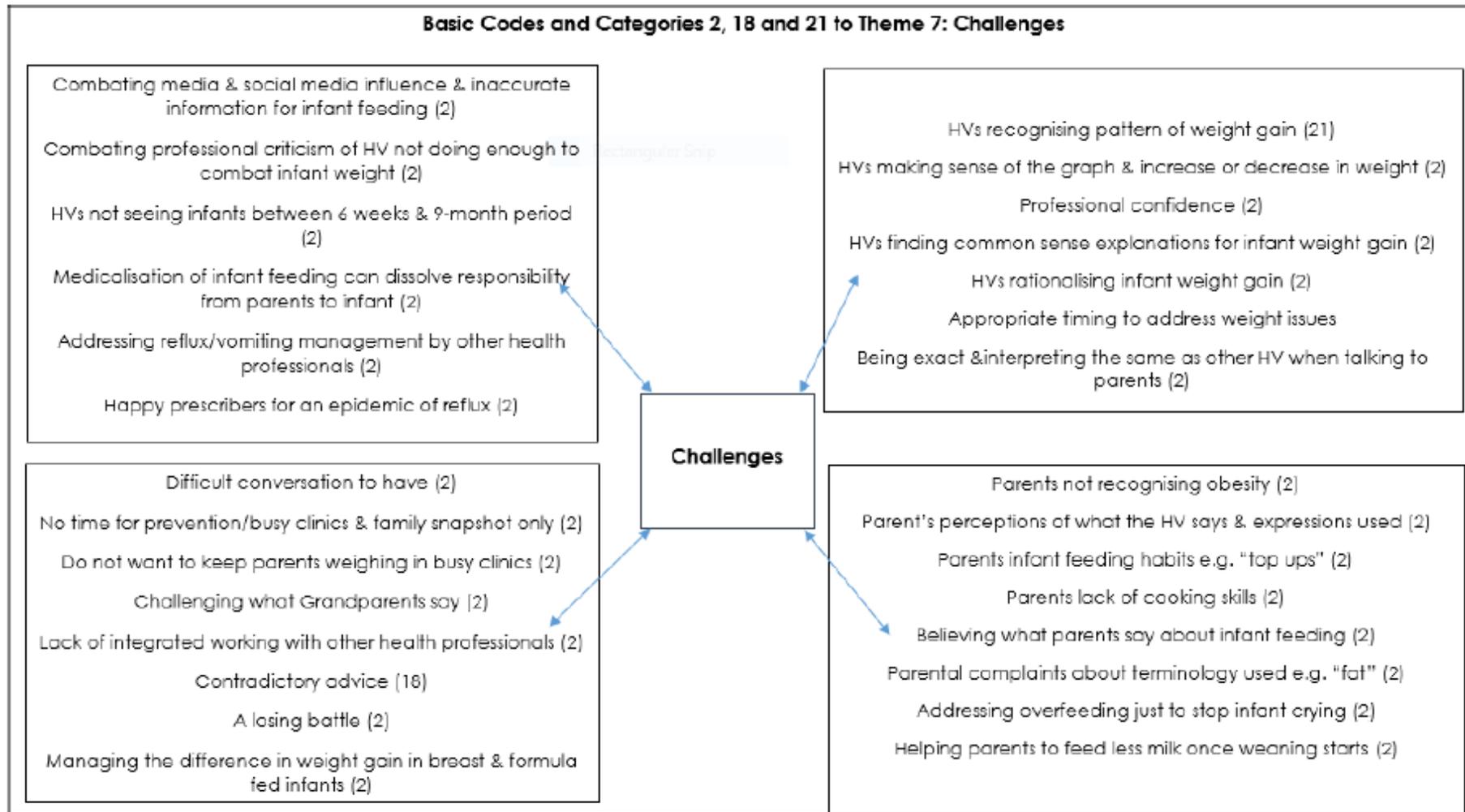


APPENDIX 20: Basic Codes, Categories to Themes HV Data

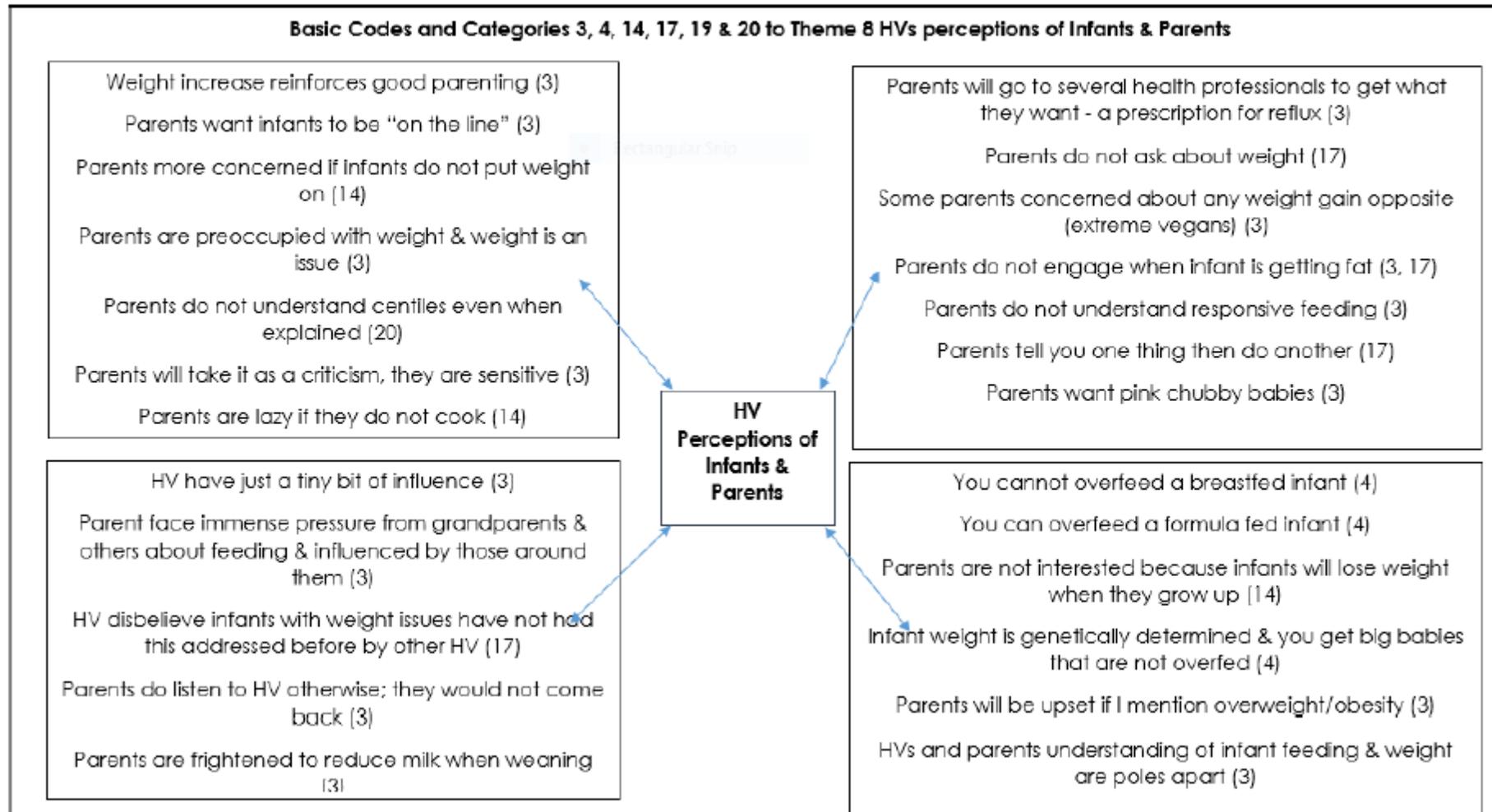


APPENDIX 21: Basic Codes, Categories to Themes HV Data

Basic Codes and Categories 2, 18 and 21 to Theme 7: Challenges



APPENDIX 22: Basic Codes, Categories to Themes HV Data



APPENDIX 23: Coding Parents Data

Research Question: "What conversations take place between HVs and parents in relation to infant weight in the delivery of the HCP?"

Research Aims: 1. How and what public health communication occurs around infant weight between HVs and parents in HV practice? 2. What key factors, if any, need to be in place for public health communication regarding infant weight to occur? 3. How do key factors influence public health communication between HVs and parents in relation to infant weight?

November 2018 FG3 & 4 Parents

<p>1 Conversations about weight only if there is an issue, Ask if it is normal, and what that looks like in terms of where infant is, Links conversations about weight and asking about weight as problem orientated, (missed opportunity for proactive contact)</p> <p>2. Difference between formulas fed and breast fed, weight increase noted by HV and HV indicated infant might be taking too much - when explained Bf on demand seems to be looked at differently depending on type of feeding (also noted in HV data where HV are surprised when they realised that this occurs, and they respond differently). SSI 6. Obese indicates that there is something wrong but you can't overfeed a Bf babies so I didn't realise you could categorise an exclusively Bf baby what you going to do put him on a diet-its shocking really</p> <p>3. Mums worry about weaning, what to give, and what not to give, (1st time mum). Parents actively thinking about weaning at 12 weeks and wanting to be prepared, concerned how often, how much, what to do, wondering when to start weaning, infant constantly hungry, "I am just stuck" (lack of timely or effective service provision) Mams worry that they aren't feeding their infants enough, focus on the weight increase, Confusion over weaning food and milk at the same time, SSI 5 when to put on second milk, SSI 5 "Weaning wasn't really in my head until I started weaning him" Thinks the onus is on her as a parent to ask questions about weaning and almost excuses the HV because she hasn't asked much as the reason why she didn't get much weaning information SSI 8 "Being a first time parent you haven't got a clue and you don't want to do anything wrong" SSI 8. Parent acknowledging the role of education and the responsibility of the parents to manage overweight and obesity- Self influence SSI 6 'I think he's hungry (parent already made up their minds?) a big lad so I will be weaning early, Is weaning the same as Bf or Ff in that most parents have decided before HV can influence? Getting information far too soon since 3-4 month visit was stopped, a bit</p>	<ol style="list-style-type: none"> 1. No problem, no conversation (parent that ask parent that don't ask-categorising?) 2. Breastfeeding "V" Formula feeding 3. Weaning dilemmas
--	---

pointless mentioning it then. SSI 6. Want to know information before starts weaning but not too far ahead needs to be timely.

HVs appear to be doing less and less, using NN for weaning visits when parent approaches HV for help, referring to what their mams did when they were weaned

4. Get more information from meeting people, somebody in the same boat, gets reassurance from peers, SSI 5 Friends, online listens to friends advice about weaning, goes to baby groups and asks, ask more questions about other issues with infant other than weight ? because therapeutic relationship established,

5. Sees HV as inaccessible in the clinic? (Been to clinic has not seen HV). Expressing the need to have more time to speak to the HV "spend a little bit of time with the HV but all it is weight and off you go" More time needed when younger infants, so parents try to go to less busy clinic for more opportunity to see HV although this becomes less of an issue when infant is a bit bigger, and parent feel more confident. Parents seek approval and reassurance from HV and enjoy the HV being pleased. Will come to clinic every week at first then every 2 weeks and then monthly as the infant gets older. Needed to check with somebody re weight and know that I was doing the right thing. A conversation with the HV feels like a tick box, there isn't much conversation you just get weighed and they say everything is ok, HV asks what kind of stuff is she eating as she is weaning SSI 8. Weaning advice from friends and work friends rather than HV, SSI 8. Some parent come for social, some for weighing only

SSI 5 "I probably should ask the HV more but when I go in there she is just weighing and I don't like to take too long" " do ask her little things but I feel like I don't want to have a full on conversation , relates this to time element sharing HV with other parents who may be in a hurry and sometimes she is in hurry with work commitments. SSI5 Wouldn't know if infant was overweight or obese by looking at the centiles

6. Little understanding of the centiles not able to articulate overweight or obesity on the centile, reassurance comes from knowing the infant is gaining weight, think you go into it blind at first until someone explains it to you. "I was lucky as he stayed on the 50th centile" "HV says as long as she's following the line" I have baby on the 91st centile but he's not fat I presume somebody would tell me" SSI 5 Understands the weight differences within the general population in accordance to own infant although blames and questions self about birthweight although can explain this by genetics of partner family, understands

4. Where parents get their weaning information

5. Parents navigating the clinic

6. Parents navigating the centile charts

that a sudden increase in weight gain .i.e. "Drastically jumping up the centiles rather than going up nicely there would be something seriously wrong like overfeeding him or something" Would be frightened if told overweight, recognise its good to have early conversations when young and weaning so you don't get into bad habits, if someone said infant was gaining weight too quickly would make parent more conscious at the weaning stage, what to feed so this didn't need to be addressed later on. Parents feel anxious SSI 5 Wouldn't know if infant was overweight or obese SSI 8. , Doesn't understand the centiles at all would have been more helpful if fully explained "I think they just presume you know "As long as she's putting on weight I'm happy" SSI 8. Would have no idea which centiles indicate overweight or obese, feels that this is hard to determine until the infant was older as every infant different SSI 6 Understands the centiles although hasn't had these explained. SSI 6. Has had conflicting information from HV about sleeping SSI 7. Parent understands that the HV is looking at weight going up or down although doesn't understand the centiles – looks at the pattern rather than the centile, SSI 7. Parent panic when infant loses weight because they haven't done anything differently s

7. Conflicting information provided by HVs noted on social media and posted by other parents as to the type of advice they are given by HVs. Also, some HV say wean early some say don't wean early, (Weaning seen as a critical period by parents) conflicts between baby led weaning, parent feels panicked about this feels this is a HV push towards BLW to combat obesity as infant doesn't take as much quantity. Infants will manage at 6 months if started in a timely way. Expressed the need for hints and tips for weaning and has had these but not from HV, Facebook sited as really useful. Conflicting advice from hospital in comparison to HV services about feeding and overfeeding (HV warned parent that other parents had been coming home upset because hospital had said infant was overfed and HV thought it was ok. HV advising hungry baby milk rather than early weaning? Lack of understanding about weaning after a weaning session in one area and good understanding of weaning in another inequity between areas. Contradictory advice about sleep and weaning. Some focus on baby led weaning some don't. (Bookable sessions in place of 3-4 month weaning visit not an equitable replacement). They change the rules...changing information about what they can eat and what they can't, when they should be eating when they shouldn't. Sources of information sited as from the internet, playgroups, soft play other parents, school. Parents get it in their heads that not sleeping they are not eating enough, don't associate obesity with infants more when child is about 4. SSI 6. I would be mortified because he is

7. Conflicting information

<p>Bf and it would sound like something is wrong when there is nothing wrong with him. Obese = too fat, Categorising a smaller bay as underweight is bad as well</p> <p>8. "I think it would be the end of the world" (thinking about how parent would feel if told infant was overweight/obese) "I would assume I would blame myself as I am in charge of feeding my baby" SSI 6. I think you would feel embarrassed and responsible because as a parent you have done that haven't you SSI 8 Is it classed as a form of neglect, I would feel horrendous, there probably is a different way other than saying your child is obese I think anyone would be upset about that. "I would feel horrendous"</p> <p>9. Parents noted the change in the provision of health visiting services how there was less opportunity for socialising, meet other people, have dinner attend groups when it was a family centre. The have changed it slowly bit by bit over the years. When they first built this it was a place where you wanted to be, now it's just somewhere to get your baby weighed. HV will only come out for routine checks now.</p> <p>10. HV has been responsive to parents either by phone or home visit, when parents have sought advice and support with minor illness or tearfulness, however this was viewed more as a duty of care by the parent rather than part of the healthy child programme. Noticed that some HV have a higher case load than others. This perception by the parent was based on the HV not being able to deliver the 9-12 month check until 15 months because of workload. Understood the infant to be developing fine through contact with other parents, online, and friends for peer support. Delay in service and response from the HV was replaced by speaking to someone on line- instant response. Parent understands that the HV can't be everywhere all of the time and that staff leave and don't get replaced and caseloads are just shared. (interesting to identify where this information is coming from (HVs themselves? Direct to parents). My HV has been nice, starting a fresh with a new HV would be hard on some people (in response to changes in HV services and caseloads) SSI 6. Parents not asking questions unless there is a feeding issue, not actively seeking support, Feels HV would be more concerned if he dropped rather than put on weight</p> <p>Semi Structured Interview 5 Parent</p> <p>Describes the HV as good as she helped when the infant was poorly, helped get back on track, good with Bf support as infant wasn't feeding, took HVs advice about waiting to wean at 6 months because of previous illness. Parent scared to wean because of infants</p>	<p>8. Parents reactions (Same when Bf as opposed to Ff)</p> <p>9. Sense of loss</p> <p>10. Parents perceptions of HV support</p>
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past medical history. Asking friends about weaning and what to give, parent asks for reassurance about fluid intake when weaning as infant reduced milk intake and parent wasn't sure if this was normal HV advice about infant issues outside weaning makes parents feel less scared and makes them feel better, (types of parents?) HV visited especially to see infant after hospital admission described as really nice SSI 6. The approach of the HV is crucial to the relationship development in the early stages –need for tact.

Semi Structured Interview 6 Parent

7. Parent has had 3 different HVs and knows another one is being allocated due to changes in service provision, has had conflicting information from HVs and midwives around sleeping and weaning I

Semi Structured Interview 7 Parent

Semi Structured Interview 8 Parent

Sought more HV contact in the early stages and because infant was premature, more concerned as first time mam, Finds comforts in the fact that the HV is happy with infant weight and reassured mam that she was doing everything right, Don't worry there is no right or wrong way, just do what works for you, Its more trial and error (relates to reducing infant milk intake when weaning) Reassurance that what you are doing is right, HVs come out loads at the beginning then you are just kind of left and it's up to you to go to the clinic and ask for help if you need it,

10. Parents perception of HV support cont.

10. Parents perception of HV support cont.

7. Conflicting information

Appendix 24: Codes, Categories and Themes –

Overview Parents data

CODING: Parent data

Weight as problem orientated
Missed opportunity for praction
Parents that ask & parents that don't ask
Overfeeding
Parents shocked if infants categorised as OW/O
HV responds differently if Bf or Ff
Parent surprised at different response
Weaning worry
Onus on parent to ask
Timing of weaning information
Being prepared
When 2nd milk
Weaning Information sources
HV seen as inaccessible in clinic
Younger infant greater need
Older infant less need
Weight and off vogo, weighing place
Need more time to talk
Seeking approval & reassurance
Tick box, busy clinic, taking others time
Knowledge about centiles chart variable
HV presumes parent knows
Reassurance of infant gaining weight
Self blame, end of the world, fear, emotion, panic
Presume would be told if infant OW/O
Early weaning dilemmas/BLW
Changing recommendations/conflicting
Delivery of weaning courses
Not sleeping means infant not eating enough
Support dependent on caseload size
More likely if successful support in a crisis
Waiting to wean
Duty of care
Sense of loss at changing services
Starting fresh with new HV is hard
Less opportunity for socialising
Concern if weigh decrease not increase
Requires HV tact as early days sensitive time
Parents seek instant response

CATEGORIES: Parent data

1. No problem No conversation
2. Breast feeding "V" Formula feeding
3. Weaning Dilemmas
4. Where parents get their weaning information
5. Parents navigating the clinic
6. Parents navigating the centile chart
7. Health professional conflicting information
8. Parents reaction to infant overweight & obesity
9. Sense of loss
10. Parents perceptions of HV support

THEMES: Parent data

Theme 1: Parents weaning journey

Theme 2: Parents navigating the conversation with the HV in clinic

Theme 3: The centile chart as fundamental in understanding infant weight

Themes 4: The nature and impact of relationship support

APPENDIX 25: Codes, Categories and Themes Parents Data

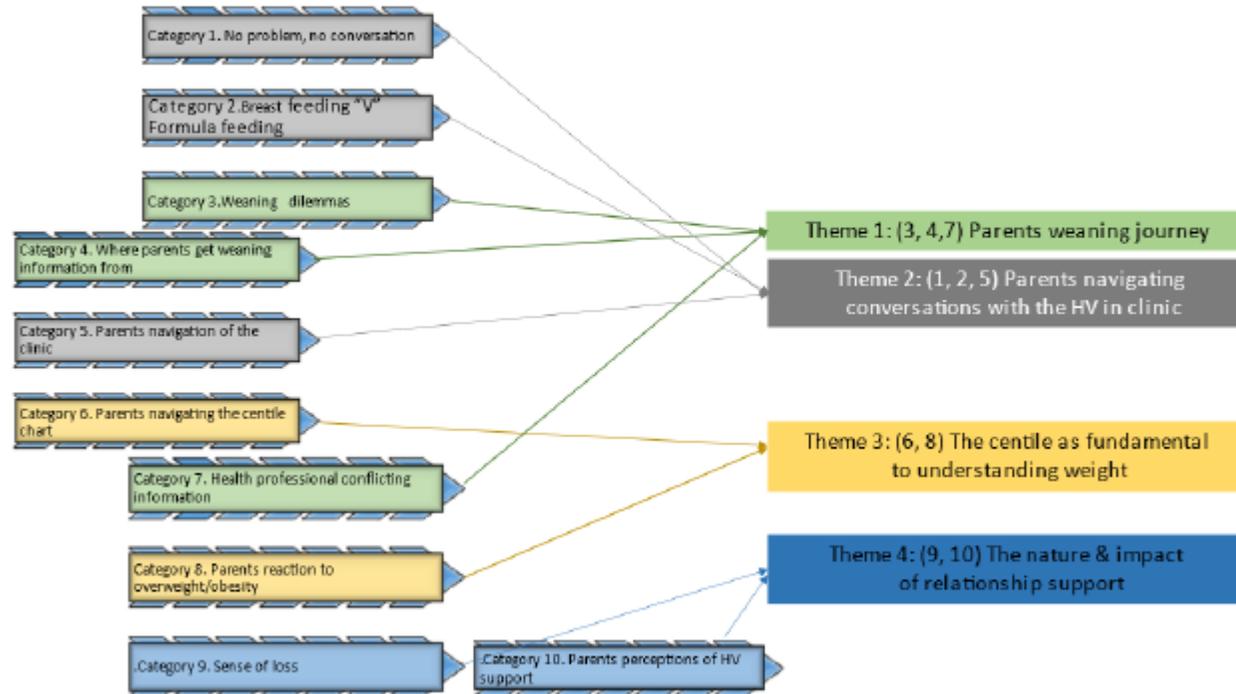


Diagram No. Parent data- Categories to themes

Appendix 26 Codes, categories and themes: Theme 2 Parents navigation of the conversation with the HV in clinic.

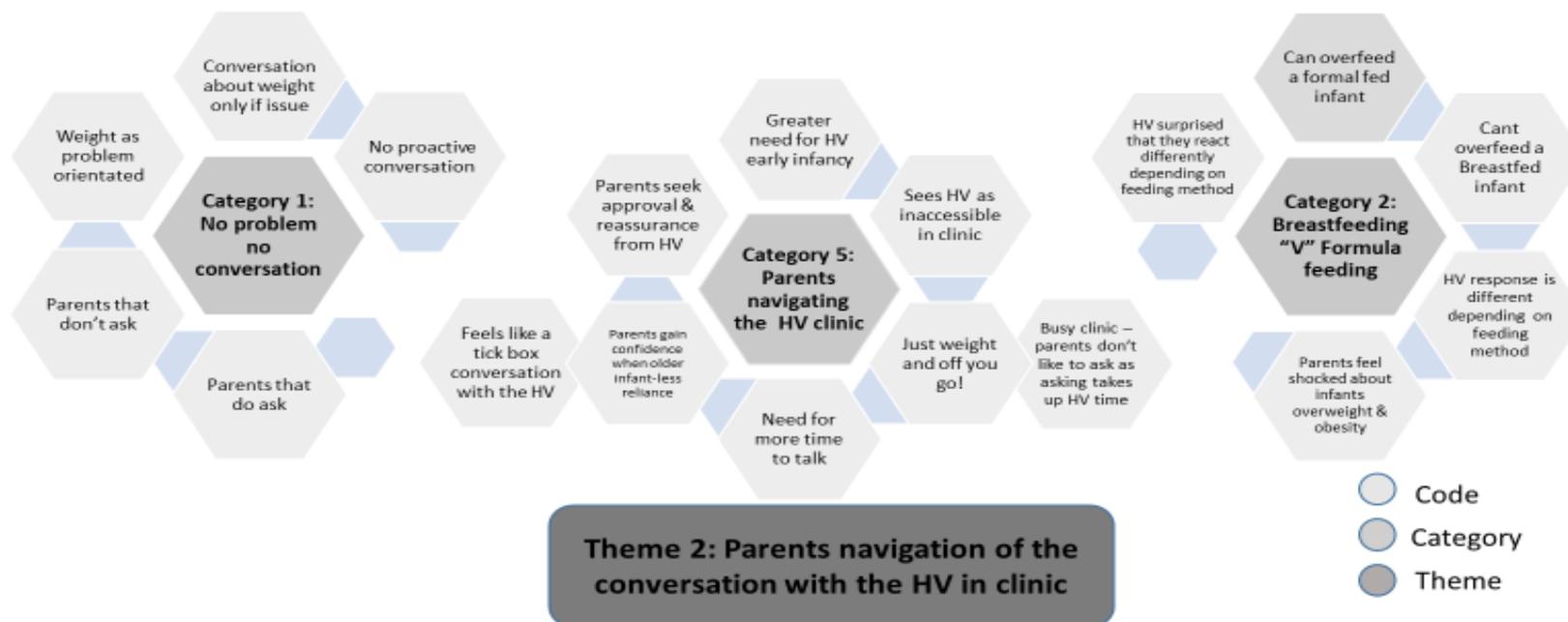
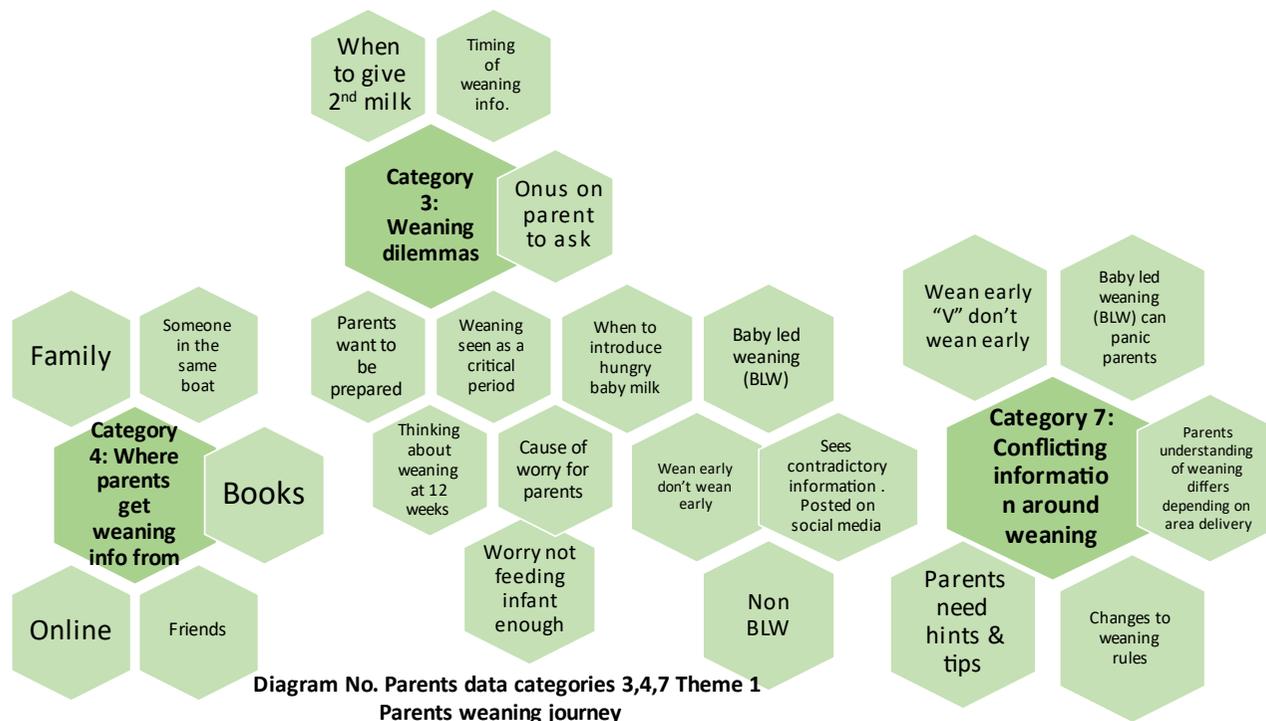


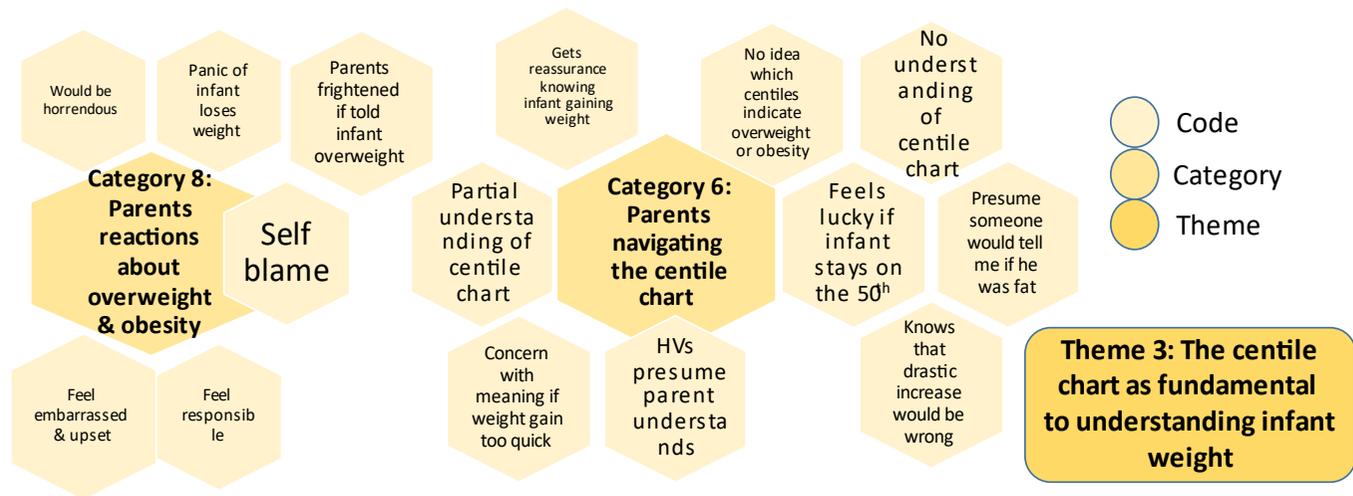
Diagram No. Parents data: Development of Categories 1, 2 & 5 into Theme 2 –Parents navigation of the conversation with the HV in clinic

Appendix 27 Codes, categories and themes Theme 1: Parents weaning journey



**Diagram No. Parents data categories 3,4,7 Theme 1
Parents weaning journey**

Appendix 29: Codes, categories and themes: Theme 3 The centile chart



**Diagram No. Parent data Categories 6, 8:
Theme 3**

APPENDIX 30: Initial Findings

Emerging broad themes June/July 2018

The purpose of this chapter is to present the findings of data collected using focus groups and semi structured interviews with health visitors and parents. It will provide an understanding of the key issues emerging from the data to identify the experiences of health visitors (HV) and parents in relation to the conversations that take place around infant weight. As previously highlighted, the research took place in the context of the NHS and the delivery of the Healthy Child Programme (Department of Health 2009). Several main themes have emerged from the data each with several sub themes. These are outlined below in Table 1. The research sought to capture the participant's views and interpret these to understand the phenomenon of infant's weight from both health visitors and parents' perspectives.

Table 1.

Emerging broad themes	Emerging sub themes
1. Multitude of emotional responses experienced by the health visitor when faced with overweight or obese infants	<ul style="list-style-type: none">• Feelings of dread• Difficulties and challenges• Fighting a losing battle with overweight and obesity• Working in the face of adversity
2. Political context and political rhetoric	<ul style="list-style-type: none">• Feelings of blame• Culture of blame• Public health policy• Poverty and deprivation• Marketing of formula and baby food• The disappearing HV
3. Impact of the changes to commissioning of HV services	<ul style="list-style-type: none">• Reduction in contact with parents and infants• Removal of the 3-4 month weaning visit• Time to discuss weight and feeding with parents• Different service providers• Parental preference for getting information
4. Professional dilemmas	<ul style="list-style-type: none">• Breast fed Versus formula fed infants• Inconsistency of information between health professionals• Medical advice for formula fed infants

6. Choosing the words	<ul style="list-style-type: none"> • Reluctance to use the words overweight or obese • Strategies, user friendly messages and indirect approaches • Therapeutic relationship status
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Theme One: The emotional response experienced by the health visitor when faced with overweight or obese infants

Theme 1: Theme 1 contains four sub themes (outlined in Table 1, Page 1) relating to the emotional response of the health visitor. The first sub theme focuses on a feeling of dread experienced by the health visitor when faced with an overweight or obese infant.

Sub theme one: This theme presents the emotional impact of addressing overweight and obesity with parents on the health visitor, a desire to protect any established relationship between the health visitor and the parent and a desire to protect the feelings of the parent. Firstly, health visitors express a "feeling of dread" when faced with the prospect of addressing overweight and obesity in infants. This feeling emerges as early as when the infant and parent are approaching the health visitor in the clinic to have the infant weighed. The feeling of dread focuses on the way in which the parent might respond to the health visitor during the conversation and occurs in advance of the conversation between the health visitor and the parent taking place. This links to the second sub theme of "challenges and difficulties". There was an express desire for the health visitor to be delicate in the way the parent was approached, so as not to cause any upset for them. A health visitor participant describes their feelings in the context of the following quote, a reflection on time-spent leading an NHS child health clinic.

Participant 1 (health visitor) describes her feelings of dread:

"For me it is something that I always dread when I weight them (refers to the infant) and you think Oh My God, how am I going to address this especially in a really busy clinic when you don't know them" (Participant 1 health visitor)

When asked by the researcher to explore how she feels the participant 1 (health visitor) describes how she finds it difficult to challenge parents. The same health visiting participant identifies some of the compounding factors relating to this notion of challenge:

"I dread it because it is almost as if I feel that I have to challenge parents and its worse if there are more than just the mam there so whether it's the dad or the partner or a friend or nana because you don't want to sound as though you are being cheeky.....it is really like walking on

the words overweight and obese with parents when having a conversation about infant weight. Health visitors that participated in the research could articulate a wealth of other expressions and choices of words used in the conversation they were having with parents, and these are demonstrated in direct quotes. Focus groups and semi-structured interviews highlighting the notion that the approach to the parent was key and the strategy used often depended on the previous relationship the health visitor had with the parent. Where the health visitor has developed a therapeutic relationship with the family and several contact visits have taken place for example antenatal and primary visits, health visitors appear to find overweight and obesity easier to address. In contrast, where the relationship with the parent was in its infancy or was the first time that the parent and the health visitor had met, it felt more difficult to address.

Whether or not there was, an established did not seem to impact on the choice of words and phrases used during the conversation and the consistent reluctance to use the words overweight and obese directly relating to the infant. Where these words were words of choice, they were used indirectly by referring to the general population, statistics, data and media coverage. Several other choices were shown to be preferred and used to explore overweight and obesity with parents.

The following quotes from health visiting participants demonstrate preferred language used to explore this phenomenon.

Participant 2 Health Visitor

"....Looking at the population they are on the top centile...we don't use the words overweight or obese because I am frightened that people get upset and I don't want people complaining because I know I would never insult anybody but it is about the words you use".

Interviewer: What words would you use?

Participant Health Visitor

"I would use things like heavier than the rest of the general population, or they are a little bit heavier than we would like..."

Similarly, other approaches used highlight a more generalized approach.

Participant Health Visitor

APPENDIX 31: Supervision Notes demonstrating learning and reflection

Data analysis: Supervision Wednesday 10th October 10am

Notes from discussion with Tina and Pauline:

- Use a different lens to investigate and analyse the data (choose a lens). Highlight any discrepancies in the narrative
- Multiplicity of truths with data coming from different perspectives
- Crystallization's approach
- Positive and negative mismatches and do participants recognize this
- Mythopoesis find article Tina sent on this
- Look for face validity with a group of HVs
- Consider how I have developed as a researcher; how did I view this originally and how have I progressed
- Critique and framework used such as Braun & Clarke
- "Bracketing" argue the purpose, be transparent where, why & how used, may refer to this in the discussion
- Reflect date and time for transparency
- Articles suggested: Tony Long, Sundelowski, M; Koch, 1994
- How did I triangulate, different methods of data collection?

Progress since September supervision:

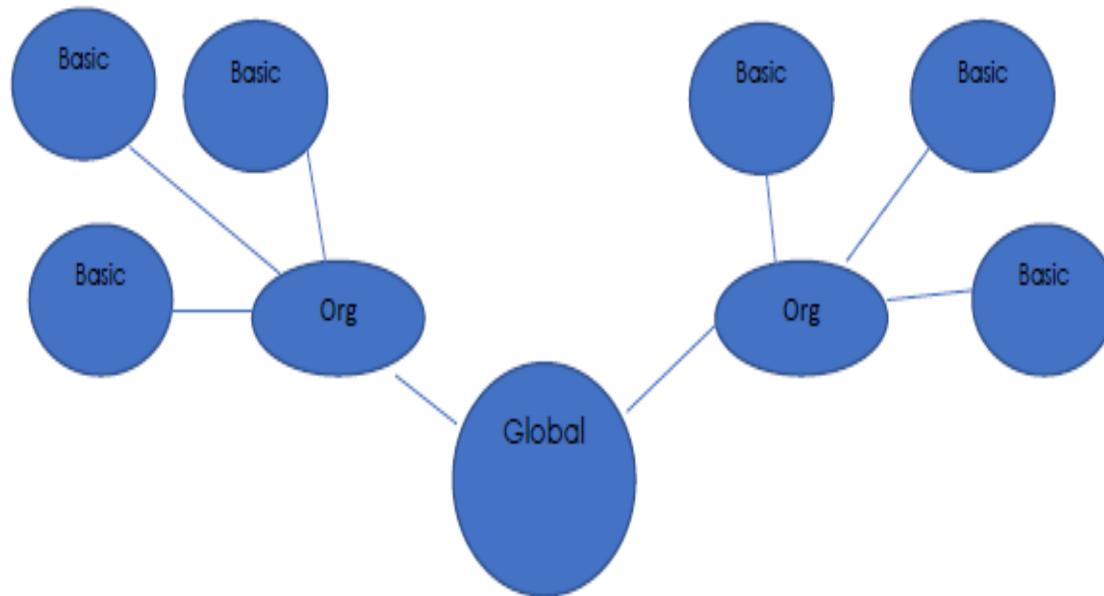
Action - Consider how to complete the analysis of data

Action - Literature search focused on analysis of qualitative data and thematic data analysis produced 16 articles critiqued

Action – Critique of literature identified two frameworks Braun & Clarke (2006) Six phase framework for doing a thematic analysis and Attride-

Question Could this be used to demonstrate the process of audit? Would this be acceptable to look at the data analysis from beginning to end and back again? Shows an audit trail.

TNA identifies Basic, Organizational and Global (super ordinate) codes.



Overlay Basic = Codes Organisational = Categories Global = Themes

Analysis of data by asking questions:

What is going on here, what are people doing, saying? (Gibbs & Taylor 2010)

Impact of context?

Metaphors & Analogies? (Ryan & Bernard no date)

Compare & Contrast

Word analysis

What might be influenced by the values, beliefs, attitudes or meaning repertoires of the participants?

What makes me focus on some of the data but not all?

Note to self: Need to go beyond description to generate knowledge, meaning making systems (not sure what these mean yet)

Values, attitudes paradigms, rituals, looking for assumptions, vagueness, contradiction, consistency, overt rules "v" unspoken or taken for granted (expose the under exposed)

Braun & Clarke's six-phase framework:

Step 1: Becoming familiar with the data

Step 2: Generate initial codes

Step 3: Search for themes

Step 4: Review themes

Step 5: Define themes

Step 6: Write up

Ref: Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology *Qualitative Research in Psychology* 3 (2) Page 77-101

<http://dx.org/10.11191/14780> Date accessed 5th October 2018)

Question How do I demonstrate bracketing?

Beginning only? During analysis? How does this relate to the literature rather than my own worldview, ontological and epistemological position?

Question: How do I demonstrate rigor i.e., validity and reliability for objectivity and credibility?

Question: What are the strengths and weaknesses of my research?

Findings unique to NE HV workforce although transferable to our public health workforces/settings?

Human experience emphasized (Anderson 2010)

Individual data analysis time consuming

Researcher presence may have altered the response of the participants.

Dependent on my own skill as a researcher (Novice status)? more easily influenced

Action: Need to reflect on how as a researcher I may have informed both data collection & analysis

Document everything about the analysis for a clear audit trail (Seers, K. 2011).

IPA – Interpretive phenomenological Analysis:

Thinking this is still my methodology. Involves a highly intense and detailed analysis of a small number of participants. Researcher needs to try and understand the participants world and describe what it is like (Larkin et al 2006). Some confusion with regard to my sample size and if my research is suitable for this approach?

Data analysis Stage Progress to date:

Stage 1: Becoming familiar with the data

Listened to recording during data analysis and amended semi structured interview and focus group questions accordingly as data analysis was taking place ✓

Listened to each recording several times ✓

Listened to recording and made initial analysis notes and reflection about the data and what might be happening here and shared with supervisors ✓ **Could this be used as reflective evidence and evidence of audit trail?**

All transcribing complete ✓

Re read all transcripts move onto stage 2

Stage 2 Generate initial codes

Appendix 32 Literature review analysis template: An snap shot of initial activity * as the literature chapter developed it was updated therefore not all articles contained will have remained in the thesis.

Article Author(s) year	Aims	Methodology	Sampling	Methods	Analysis	Results	Discussion
Kirsten E Anderson et. al., (2009)	To explore how fathers perceive the role they play in feeding & caring for their infants	Qualitative – Grounded theory	21 male caregivers, who were fathers or partners of the mothers of WIC income-eligible infants residing in two rural East Tennessee counties	In-depth, audio-taped telephone interviews	Grounded theory Interviews were transcribed, coded & analysed according to standard grounded theory procedures to identify emergent concepts. These concepts were explored & linked together to become themes	Results: Three themes emerged: (i) fathers' roles; (ii) fathers' perceptions; & (iii) control. Concepts within the theme of fathers' roles included physical & emotional support for both mother & infant, validation of maternal decisions, & financial support. In the present study, fathers' perceptions were primarily shaped by their own experiences, advice from those with experience, & information sought by the fathers. The theme of control appears to be the linkage between the fathers' attempts to modify infant behaviour & infants' response	Fathers appear to play an important role in the lives of infants, primarily through support of the mother, & are both directly and indirectly involved with food and fluid introduction. Although it appears that it is the mother who is ultimately responsible for making the final decisions associated with infant feeding, fathers are an important filter for information from others, as self-identified researchers regarding infant feeding recommendations & supporters of those decisions ultimately reached by the mother
LG Andersen et.al., (2012)	To investigate when & how weight & weight gain during infancy become associated with childhood obesity	A case cohort study	28, 340 children born from 1959–67	Children measured in Copenhagen schools, 962 obese children (2007 World Health Organization criteria), were compared with a 5% randomly selected sub-cohort of 1417 children	A series of multiple logistic regression analyses with adjustment for weight-tertile at the preceding visit. Additional regression analyses were conducted	Compared with children in the middle weight-tertile, children with a weight in the upper tertile had a 1.36-fold (CI, 1.10–1.69) to 1.72-fold (CI, 1.36–2.18) higher risk of childhood obesity from birth through 9 months, whereas children in the lower weight-tertile had almost half the risk of obesity from 2 through 9 months. The risk of childhood obesity associated with change in weight-tertile in each interval was stable at B1.5-fold per weight-tertile increase throughout infancy	Infant weight & weight gain are associated with obesity in childhood already during the first months

SL Anzman, et. al., (2010)	Review evidence of early environmental effects on children's eating & obesity risk	Lit review	Not outlined	Not outlined	Not outlined	4 literary themes discussed: Parental influences on eating & weight status in early life; Prenatal period; Postnatal suckling period; Transition to a modified adult diet	Implications for childhood obesity, early periods of rapid transition & development show promise as targets for childhood obesity prevention research
Lazaros Belbasis, et. al., (2012)	To map the diverse health outcomes associated with birth weight & evaluate the credibility & presence of biases in the reported associations	Lit review	39 articles including 78 associations between birth weight and diverse outcomes met the eligibility criteria	An umbrella review	SR & Meta-analyses of observational studies investigating the association between birth weight & subsequent health outcomes & traits	47 of 78 associations presented a nominally significant summary effect and 21 associations remained statistically significant at $P < 1 \times 10^{-3}$. 30 associations presented large or very large between study heterogeneity. Evidence for small-study effects and excess significance bias was present in 13 and 16 associations, respectively. 1 association with low birth weight (increased risk for all-cause mortality), 2 dose-response associations with birth weight (higher bone mineral concentration in hip & lower risk for mortality from cardiovascular diseases per 1 kg increase in birth weight) & 1 association with small-for-gestational age infants with normal birth weight (increased risk for childhood stunting) presented convincing evidence, 11 additional associations had highly suggestive evidence	The range of outcomes convincingly associated with birth weight might be narrower than originally described under the "fetal origin hypothesis" of disease. There is weak evidence that birth weight constitutes an effective public health intervention marker
Nicola J. Spurrier et.al., (2016)	To evaluate the feasibility of an individualised home-based	Pilot study	25 children in 23 families	Questionnaire & pre-post design evaluated a home-based lifestyle support	Analyses used SPSS for Windows version 17.0. Descriptive statistics	43 % of intervention recommendations were implemented 'very much'. Some descriptive changes were observed in	Findings did not support intervention feasibility in its current form. Future interventions

	intervention for treatment seeking overweight/obese 4-12 year olds & their caregivers			intervention	presented as frequencies or mean (standard deviation)/median (IQ range) Wilcoxin signed-rank tests & paired t tests were used to assess changes from baseline to follow up in subscale scores for the CDQ, Physical Activity Questionnaire & anthropometric data. Categorical data from the Home Environment Inventory were analysed using Chi square tests for independence. Statistical significance was set at $p < 0.05$	the home environment, most commonly including fruit & vegetables in their child's lunchbox, not providing food treats, & restricting children's access to chips/savoury snack biscuits. At the group level, minimal change was detected in children's diet & activity behaviours or weight status (all $p > 0.05$)	should target the family food & activity environment, but also utilise an approach to address the complex social circumstances which limit parent's ability to prioritise healthy family lifestyle behaviours
Banks, J. et.al., (2013)	Examine families' reasons for engaging or not engaging with child obesity services	Qualitative	68 children aged 5-16 who had been identified by their general practitioner (GP) as obese (BMI 98th centile based on UK growth reference data). Participants were referred by GPs in Bristol, South Gloucestershire and North Somerset, England	15 semi structured Interviews with families who completed a treatment programme & with families who withdrew from treatment, in order to examine in detail families' reasons for engaging with, or disengaging from, treatment	Thematic analysis	Data suggested that involvement of children in the decision to attend a clinic was important in building engagement. Specialist diet and exercise advice tailored to individual family circumstance encouraged clinic engagement, but failed to engage some families who felt their personal circumstances had not been considered sufficiently. The clinic environment was viewed as not age appropriate for some children & did not match the	Providing clinics for particular age groups in terms of environment & timing may enhance engagement with services

						expectations of some families. Our findings highlight the value of involving children in the decision to attend an obesity service & practitioners should, as much as possible, tailor advice to the circumstances of each family	
Perry, C. et. al., (2015)	Describe the Halton data set & establish how birthweights, 2 months, 8 months a& 40 months weights/BMIs of successive birth cohorts compare to 1990 reference data (UK 90)	A case cohort study	16, 381 singleton births recorded on the database were available for inclusion, representing 13 cohorts (birth-years) of children	In this study, routinely collected data were utilized to explore patterns of overweight in Halton infants and children. The main strength of the work lies in the size of the data set: 16 381 singleton births comprising 13 birth cohorts	Regression modelling of rates of children classified above 85th centile & above 95th centile compared with UK-90 reference fitting cohort & gender as covariates: incidence rate ratios (95% CI)	Analysis of the whole data set revealed that the study population was heavier and more varied than the UK-90 reference population	Evidence that the development of overweight & obesity may have its roots in very early life & has highlighted patterns of infant overweight & obesity not previously reported at 8 months of age
Campbell K, et. al., (2008)	Test the effectiveness of an early childhood obesity prevention intervention delivered to first-time parents & focussed on parenting skills which support the development of positive diet & physical activity behaviours, & reduced sedentary behaviours in infants from 3 to 18 months of age	Cluster-randomised controlled trial.	First-time parent groups as the unit of randomisation, was conducted with a sample of 600 first-time parents and their new-born children who attend the first-time parents' group at Maternal & Child Health Centres	A two-stage sampling process, local government areas in Victoria, Australia were randomly selected at the first stage. At the second stage, a proportional sample of first-time parent groups within selected local government areas were randomly selected & invited to participate. 600 first time parents 300 in each stage	Analyses was conducted using the intention to treat principle. Generalized Estimating Equations (GEE) [57] were used to fit regression models to describe the effects of the intervention on key outcome variables among parents & infants. Separate models will be fitted, to determine differences in key outcome variables in the	The first randomised trial internationally to demonstrate whether an early health promotion program delivered to first-time parents in their existing social groups promotes healthy eating	The early years hold promise as a time in which obesity prevention may be most effective. physical activity and reduced sedentary behaviours. If proven to be effective, INFANT may protect children from the development of obesity & its associated social & economic costs

					intervention & control groups		
Redsell, S. et al., (2011)	To explore obesity-related knowledge of UK HCPs & the beliefs and current practice of general practitioners (GPs) & practice nurses in relation to identifying infants at risk of developing childhood obesity	Qualitative survey	12 GPs & 6 practice nurses	Survey of UK HCPs (GPs, practice nurses, health visitors, nursery, community and children's nurses). HCPs (n = 116) rated their confidence in providing infant feeding advice and completed the Obesity Risk Knowledge Scale (ORK-10). Semi-structured interviews with a sub-set were audio recorded, taped and transcribed verbatim. Thematic analysis was applied using an interpretative, inductive approach. Results: GPs were less confident about giving advice about infant feeding than health visitors (p = 0.001	Thematic analysis was applied using an interpretative, inductive approach	GPs were less confident about giving advice about infant feeding than health visitors (p = 0.001) & nursery nurses (p = 0.009) but more knowledgeable about the health risks of obesity (p < 0.001) than nurses (p = 0.009). HCPs who were consulted more often about feeding were less knowledgeable about the risks associated with obesity (r = -0.34, n = 114, p < 0.001). There was no relationship between HCP's ratings of confidence in their advice & their knowledge of the obesity risk. Six main themes emerged from the interviews: 1) Attribution of childhood obesity to family environment, 2) Infant feeding advice as the health visitor's role, 3) Professional reliance on anecdotal or experiential knowledge about infant feeding, 4) Difficulties with recognition of, or lack of concern for, infants "at risk" of becoming obese, 5) Prioritising relationship with parent over best practice in infant feeding and 6) Lack of shared understanding for dealing with early years' obesity	Intervention is needed to improve HVs & NN's knowledge of obesity risk & GPs and practice nurses' capacity to identify & manage infants' at risk of developing childhood obesity. GPs value strategies that maintain relationships with vulnerable families and interventions to improve their advice giving around infant feeding need to take account of this. Further research is needed to determine optimal ways of intervening with infants at risk of obesity in primary care
Redsell, S. et al., (2010)	Study aimed to explore UK parents' beliefs concerning their infant's size,	Qualitative	38 parents (n = 36 female, n = 2 male), age range 19-45 years (mean 30.1 years, SD 6.28)	Six focus groups were undertaken in a range of different demographic localities, with	A thematic analysis applied using an interpretative,	Five main themes were identified. These were a) parental concern about breast milk, infant	A number of barriers to early intervention with parents of infants at risk of developing obesity. Parents are receptive to prevention prior to weaning

	growth & feeding behaviour & parental receptiveness to early intervention aimed at reducing the risk of childhood obesity		participated in the focus groups. 12/38 were overweight (BMI 25-29.99) & 8/38 obese (BMI >30)	parents of infants less than one year of age. FGs were audio-recorded, transcribed verbatim	inductive approach	contentment & growth; b) the belief that the main cause of infant distress is hunger is widespread & drives inappropriate feeding; c) rationalisation for infants' larger size; d) parental uncertainty about identifying and managing infants at risk of obesity and e) intentions & behaviour in relation to a healthy lifestyle	& need better support with best practice in infant feeding. In particular, this should focus on helping them understand the physiology of breast feeding, how to differentiate between infant distress caused by hunger & other causes & the timing of weaning. Some parents also need guidance about how to recognize & prepare healthy foods and facilitate physical activity for their infants
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Appendix 33: Electronic Records Obesity Research Articles A-D

Name	Status	Date modified
 2018-WHO UNICEF WBG data obesity stats.pdf		20/02/2019 14:24
 180906-First-1000-Days-Call-for-written-submissions.pdf		29/10/2018 09:27
 Anderson 2012 weight and weight gain during early infancy predict child...		16/11/2017 14:22
 Anderson et al 2009 roles_perceptions_and_control_of_infant_feeding_am...		17/11/2017 10:46
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Appendix 34: Electronic Records Obesity Research Articles A-D

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