

Participatory action research examining the
experiences of caring for infants who cry
excessively and the potential implications for
social work practice.

by

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ABSTRACT

Infantile excessive crying (IEC) (referred to as 'colic' or 'infantile colic') is a common condition affecting approximately 20% of newborn babies. However, there are no underlying medical reasons for the crying in approximately 95% of those infants, and there is a lack of evidence to suggest that the crying causes them harm. Rather, the intensity of the prolonged crying means that caregivers can sometimes struggle during these bouts, contributing to poor parental wellbeing, creating a strain on the parent-couple relationship, and may constitute a primary trigger for infant abuse. Therefore, this thesis investigates a potential role for the social care sector in supporting families affected by IEC.

The research adopted a two-stage process. Stage 1 involved five semi-structured interviews with social care professionals. These focused on addressing professional understanding and awareness of IEC, as well as exploring areas for practice development. This data was analysed by the researcher and shared during Stage 2. This stage consisted of three Participatory Action Research (PAR) groups, each with three parents who perceived their infant as having cried excessively at some point in the previous two years.

The findings from all five interviews suggested a need to increase professional awareness of IEC. Where professionals had personal experience of IEC, this was crucial in advancing their understanding of how the condition can impact the whole family. Similarly, parents simultaneously articulated a strong need for greater empathy, understanding, and practical support from professionals. Parents frequently felt unprepared and overwhelmed, which contributed to an ongoing search for explanations and a profound sense of emotional distress. They often internalised these challenges by attributing difficulties in bonding with their baby to personal failings.

The use of PAR facilitated the development of a pilot toolkit, co-created by parents and informed by the interview data. This toolkit currently serves as a preliminary framework in the early stages of development and would require further research before it could be disseminated for professional use. Therefore, a recommendation has been made for a wider-scale study to be undertaken to further investigate the potential link between IEC and the social care profession. This will help to develop the toolkit for wider dissemination and testing. It is predicted that this will further enhance the quality of support available to future families affected by IEC.

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GLOSSARY OF TERMS AND ABBREVIATIONS

AHT- Abusive Head Trauma

BDI – Beck Depression Inventory

CSPR- Child Safeguarding Practice Review

EPDS – Edinburgh Postnatal Depression Scale

GAD- 7 - Generalised Anxiety Disorder Scale

IEC – Infantile excessive crying

PAR- Participatory Action Research

PSAS – Postpartum Specific Anxiety Scale

SUDI- Sudden Unexpected Death in Infancy

UK- United Kingdom

USA- United States of America

DEFINITION OF TERMS

The following terms have been used throughout the paper and have been defined below to assist the reader in understanding the context in which they have been written.

Abusive head trauma: can also be referred to as 'shaken baby syndrome'. It is the act of shaking or hitting an infant or young child against an object (Joyce et al., 2025).

Allostatic Load: "the cumulative burden of chronic stress and life events" and the physical impact on oneself (Guidi et al., 2021)

Child Safeguarding Practice Review: an in-depth independent review of practice which is undertaken when a child is seriously injured or dies (Calderdale Safeguarding Children Partnership, 2023).

Family Group Conference: A family group conference is a family-led meeting facilitated by an independent coordinator. It provides an opportunity for family and friends to come together to develop a family plan based on the needs of the children (Family Rights Group, 2025).

Infantile colic: The term is commonly used within the NHS and health services. It is when a healthy baby cries regularly and inconsolably for at least a week. It is often medically described as crying that lasts longer than three hours a day for three days or more (NHS, 2022).

Infantile excessive crying: The term commonly used to describe the symptoms of crying, rather than the condition of 'infantile colic'. It is when a baby cries regularly and inconsolably for at least a week (NHS, 2022). The researcher uses the term to describe when parents/carers perceive their infants' crying to be excessive, irrespective of crying duration, as used by St James-Roberts et al (2019).

Mental Wellbeing: "the positive state of mind and body" (Department of Health, 2013). An individual in a state of positive mental wellbeing is predictive of increased life chances, including longer life expectancy, improved physical health, and better quality of life (Department of Health, 2013).

Parental Perception: how a parent/carer understands and interprets their reality. This comprises an objective component based on their child's characteristics and actions, impacted

by a subjective view of their child's development, learning and behaviours (Briegel et al., 2019).

Participatory Action Research: a research approach which places value on individual experience. It puts participants in a researcher role, which enables them to develop their own change and tackle societal issues (Cornish et al., 2023).

Primiparous: a parent who has given birth for the first time (Lindblad et al., 2022).

Rule of Three: The most widely used definition to describe infantile colic, which originally involved the infant crying more than three hours a day, three days or more, for longer than three weeks (Gelfand, 2023; Wessel et al., 1954). However, as used by the NHS (2022), the paper will adapt the 'Rule of Three' to include infants who cry for more than one week.

Social Support: the presence of support which promotes positive health and wellbeing through communication and psychological interactions (Haugan & Eriksson, 2021)

Sympathovagal Balance: The ratio between the parasympathetic and sympathetic nervous systems, which impacts how an individual responds to stressful situations (Sturge-Apple et al., 2011)

Participatory action research examining the experiences of caring for infants who cry excessively and the potential implications for social work practice.

CHAPTER 1: INTRODUCTION

This Participatory Action Research (PAR) study aims to examine the experiences of caring for infants who cry excessively and the potential implications for social work practice. PAR is defined by Baum et al (2006, p. 854) as an approach used to involve people to develop their own change with a focus on “reflection, data collection and action”. It relies on participants being in control of the research, establishing change through continual reflection (Donaldson, 2017). This orientation makes PAR particularly suitable for the present study, which seeks to address gaps in awareness and support for IEC, and to develop practical resources with both professionals and parents.

Historically, research has primarily concentrated on interventions which have focused on reducing crying durations to enhance the parents’ wellbeing (Garrison & Christakis, 2000). However, current data suggests that an underlying cause is present in only 5% of infants (St James-Roberts et al., 2019). Therefore, the vast majority of infants cry as a natural part of their development, with limited evidence to suggest that there may be a successful treatment plan otherwise (ICON, 2023; Perry et al., 2019). Consequently, more recent studies have adjusted their focus by prioritising parental support, which is described as in the “best interests” of the baby (St James-Roberts & Llewellyn, 2024, p.5). This could present a potential opportunity for professionals outside the remit of healthcare to offer this support to parents. This could mean equipping social care professionals with the necessary skills and knowledge so that they can offer this support to families who are already in receipt of their services. Therefore, this study investigates the awareness of IEC amongst social care professionals, as well as evaluating the support currently available to families in receipt of social care.

The thesis is divided into six chapters consisting of the introduction, literature review, methodology, findings, discussion, and conclusion.

1.1 General Statement

Infant crying is regarded as a normal part of development, which enables babies to communicate their needs to their caregivers (ICON, 2023). However, some infants cry more than others, with no evident cause, and this is referred to as infantile excessive crying (IEC) (or ‘infantile colic’) (NHS, 2022). The condition affects newborn babies up to the age of six

months, with most caregivers reporting improvement by four months old (NHS, 2024). The prevalence of IEC is widely debated throughout the literature; although it is believed to affect between 11.9% (Santos et al., 2015) and 39% of infants under 3 months (Garnacho-Garnacho et al., 2024; Halpern & Coelho, 2016; NHS, 2024). This wide variation is often attributed to the absence of a universally accepted definition of IEC (Reijneveld et al., 2001). According to the National Health Service's (NHS) definition of 'colic', it is when an infant cries for "more than 3 hours a day, 3 days a week for at least 1 week, but is otherwise healthy" (NHS, 2022). With increased crying bouts characterised by an inability to soothe the infant, parents often seek support due to concerns about a potential underlying cause, which can place increased pressure on UK health services (St James-Roberts et al., 2019).

Whilst IEC is regularly discussed within healthcare literature (Garrison & Christakis, 2000), evidence suggests that the condition can have a detrimental impact on parental wellbeing (St James-Roberts et al., 2019), family relationships (Levitzky & Cooper, 2000) and safeguarding concerns (Barr, 2014). This is particularly important when working with families in receipt of social care provision, as involvement with this profession could suggest pre-existing vulnerabilities (UK Parliament, 2021). This means that the occurrence of IEC could further compound ongoing stressors which may already be present. Therefore, this study focuses on the current IEC awareness and support within children's social care, rather than the wider population.

1.2 Statement of Problem

A vast amount of attention has previously focused on medical treatment or intervention aimed at reducing crying durations (Garrison & Christakis, 2000). The main problem with this approach is that 95% of these babies are otherwise healthy, leading to their often-abrupt discharge from healthcare services (St James-Roberts et al., 2019). Moreover, there is little evidence to support the effectiveness of remedies or treatments for reducing IEC-related crying symptoms (Perry et al., 2019). Hence, it could be argued that the involvement of paediatric health care may only be required for the 5% of infants who present with crying symptoms and are assessed as having an underlying cause.

Furthermore, IEC has been found to have a detrimental impact on parental wellbeing (Türkmen et al., 2022), the parent-infant relationship (Akman et al., 2006) and the parent-couple relationship (Stifter et al., 2003; Leigh & Roos, 2008), whilst also increasing the risks of infant abuse (Barr, 2014). With these associated concerns in mind, St James-Roberts & Llewellyn (2024) argue that consideration should be made for how IEC may affect wider family

functioning, encouraging professionals to anticipate potential problems for both caregivers and their infants. For families who are already in receipt of social care support, these anticipated problems may further compound existing stressors, which may already be present, including domestic violence and poor parental mental health (UK Parliament, 2021). Therefore, this presents a potential opportunity for investigating IEC and its potential implications for social care practice.

1.3 Research Aim

The salient aim of the research is to examine the experiences of caring for infants who cry excessively and the potential implications for social work practice. This is supported by the following three objectives:

1. To conduct interviews with social care professionals to explore their awareness and understanding of IEC,
2. To undertake Participatory Action Research (PAR) groups with caregivers to examine their experiences of IEC and the support available to them.
3. To collaborate with caregivers to co-develop a prototype toolkit to support social care professionals working with families affected by IEC.

1.4 Justification and Significance of the Study

To the best of the researcher's knowledge, this is the first study which explores a potential role for the social care profession within the management of IEC. Enhancing awareness of IEC across the social care profession is felt to be crucial, as involvement with social services often indicates pre-existing vulnerabilities, such as poor parental wellbeing or exposure to domestic violence (UK Parliament, 2021). Given that IEC is also associated with poor parental wellbeing (St James-Roberts et al., 2019), and an increased risk of infant abuse (Barr, 2014) and domestic abuse (Songül Yalçın et al., 2010), an increased awareness would enable professionals to provide more targeted and effective support to the families they already support. Therefore, whilst many studies have explored specialist interventions for families affected by IEC (St James-Roberts et al., 2019; Salisbury et al., 2012; Bohr et al., 2021), this thesis argues that greater awareness and understanding of the condition is needed amongst frontline professionals who are already working with vulnerable families.

In addition, the assessment processes used within the social care sector could have the potential to identify wider contextual issues which may not be identified through a predominantly medical lens (Hunt, 2024). Employing a holistic approach to assessment in the

management of IEC would allow consideration of issues beyond infant health, including parental mental health difficulties, domestic abuse and financial hardship (Rogowski, 2024). Notably, a Child Safeguarding Practice Review (CSPR), which was conducted following significant injuries to a 7-week-old baby, highlighted that professionals had failed to consider 'wider family issues' when IEC, poor parental wellbeing and financial hardship were present (Calderdale Safeguarding Children Partnership, 2023). In addition, the NSPCC (2023) reports how perinatal mental health needs often go untreated as professionals do not have the confidence or knowledge to speak to parents about the support that may be required pre- and post-birth. This could result in parents not receiving the support they are entitled to. To the researcher's knowledge, no guidance exists for social care professionals to aid a holistic assessment and management of IEC in order to support vulnerable families. Thus, this research will explore the potential role of social care professionals in supporting families within their care who are affected by IEC.

1.5 Theoretical Framework

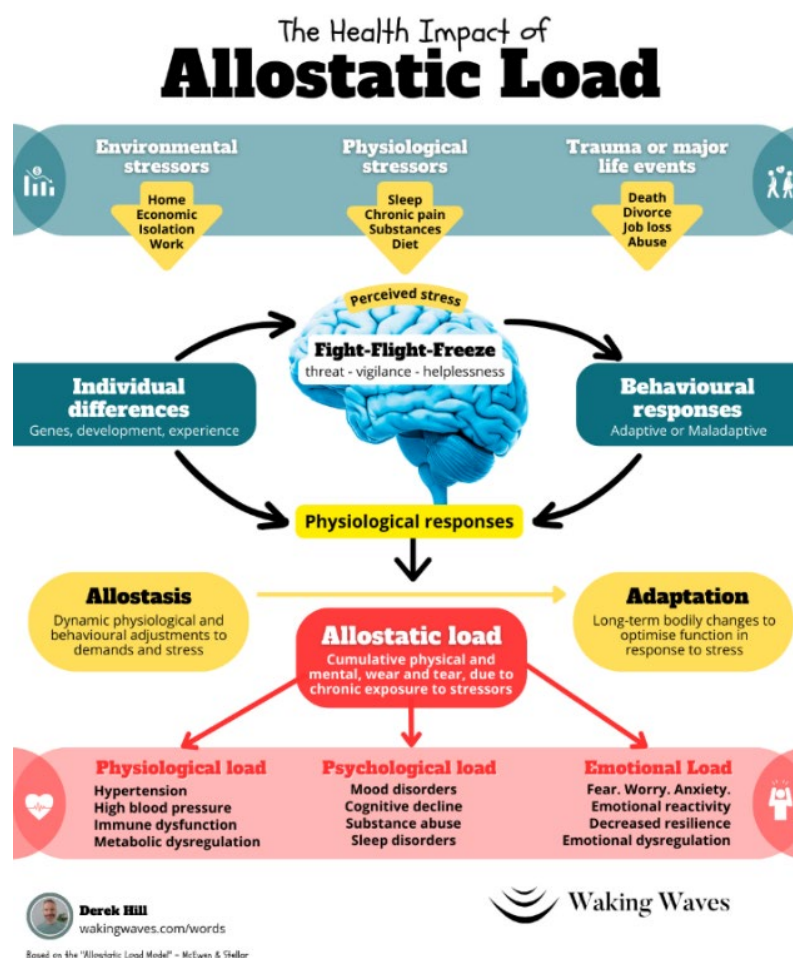
It is strongly recommended that all studies adopt a theoretical framework, which is defined as a concept or existing theory (Lederman & Lederman, 2017). The implementation of a theoretical framework helps the researcher justify the importance of the study (Lederman & Lederman, 2017). Within this thesis, the allostatic load theory has been used. Allostatic load is defined as the cumulative burden of stress, where individuals may move from normal psychological functioning, where stress is deemed tolerable and short-lived, towards 'allostatic overload', where stress is experienced long-term with a lack of emotional recovery between each episode (McEwen & Stellar, 1993; Faya et al., 2019). This results in strong and persistent activation of the body's stress response system which can lead to a lower tolerance to stress and, in turn, may reduce a parent's capacity to cope (Faya et al., 2019). This provides a framework for understanding how the cumulative effects of chronic stress can disturb the body's regulatory systems, impairing its ability to maintain physiological balance (McEwen, 1998; Kerr et al., 2020). Whilst the allostatic load framework often refers to the potential physical health implications of chronic stress and increased allostatic load, such as obesity and an increased risk of disease (McEwen & Stellar, 1993), this thesis primarily focuses on its psychological and emotional aspects. This is relevant as existing literature highlights IEC as a recurring and persistent stressor which may affect parental wellbeing and mental health (NHS, 2022; St James-Roberts et al., 2019; Barr, 2014). Thus, the allostatic load framework demonstrates how a cumulation of stress can influence a person's physiological and psychological functioning (McEwen & Stellar, 1993).

The extent of allostatic load is influenced by the balance between the sympathetic nervous system (the nerves which activate the fight or flight response) and the parasympathetic nervous system (the nerves which activate the calm response), and this is referred to as the sympathovagal balance (Sturge-Apple et al., 2011). The balance between these systems influences the body's reaction to events, typically manifested in three states of arousal;

- normative arousal (an even balance of fight/ flight response with calmness to replicate responses which are within the expected norm),
- hyperarousal (a state of increased anxiety and awareness; a person may present with heightened alertness)
- hypoarousal (a freeze response which replicates a state of emotional 'shutdown' where a person may present as withdrawn) (Sturge-Apple et al., 2011).

The framework can be visualised in Figure 1.

Figure 1: The Allostatic Load Concept



(Hill, 2023)

N.B Authority has been granted by the creator to display Figure 1 within this thesis.

When identifying the potential impacts of IEC on an individual, the allostatic load framework was deemed appropriate as it is focused on a cumulation of stress, rather than an individual incident. This is critical when investigating IEC as the condition is characterised by being repetitive and persistent; therefore, demonstrating how it can impact a caregiver's physiological, psychological and emotional functioning over time (Hill, 2023; McEwen & Stellar, 1993). Furthermore, the use of the allostatic load framework is deemed particularly valuable when investigating a potential role within the social care profession. This is because involvement with children's social care is usually determined by the presence of existing adversities, such as domestic violence and poor parental mental health (Bywaters et al., 2018; Department for Education, 2023; UK Parliament, 2021). Furthermore, children in deprived areas are more likely to be subject to child protection plans or care proceedings (Bywaters et al., 2018), and poorer mental health is more prevalent among those from poor socioeconomic backgrounds (Daly & Kelly, 2015; Cena et al., 2021). This means that families in receipt of children's social care may already be at an increased risk of chronic lifetime stress and, therefore, this could suggest a reduced capacity to cope with the distress associated with IEC (St James-Roberts et al., 2019; McEwen & Stellar, 1993). Therefore, viewing IEC through the lens of the allostatic load may help professionals to identify factors which may extend beyond the crying itself to consider it in relation to existing adversities, parental wellbeing, and the perceived social support available (McEwen & Stellar, 1993).

1.6 Research Questions

As this study explores IEC beyond a medical lens, the following research questions address caregiver experiences, available support, and the potential role of social care practice.

RQ1: How does IEC impact caregivers?

RQ2: What informal and formal support is available to caregivers of infants who cry excessively?

RQ3: How can social care professionals support families in their care who are affected by IEC?

1.7 Overview of Research Approach

Interpretivism is the overarching belief that underpins the research, with some influence from constructivism (William, 2024). These paradigms have been selected because they align with the researcher's belief system, particularly in relation to the allostatic load framework, which theorises that knowledge is shaped by individual perception, unique to each person (Pulla & Carter, 2018). Encapsulating the research paradigm, the study will be undertaken using qualitative research methods and PAR (Cornish et al., 2023). PAR has been chosen as it enables those central to the research to develop their own change through investigating current practices in comparison with their own experiences and perceptions.

The research has been structured into three distinct stages, which will all serve specific purposes while collectively aiming to develop current practice and improve the experiences of families. The three stages are;

- **Stage 1:** The researcher will undertake an initial literature review to understand whether social support could be effective in reducing parental allostatic load and improving parental wellbeing.
- **Stage 2:** The researcher will conduct interviews with social care professionals to understand the current knowledge base and practice development requirements. Interviews will be undertaken before the PAR groups so that the data collected can be shared with PAR group members.
- **Stage 3:** PAR groups will take place which will focus on understanding the parental experience of caring for their infant, the support they received during this time, and what further support would have been valuable to them. The use of PAR and the inclusion of parents affected by IEC through action research will result in the development of a social care toolkit.

1.8 Scope and Limitations

The current study explores a potential opportunity to increase workload efficiency through multi-agency working (Atkinson et al, 2007). However, as the study is based on a small sample size, the findings should be interpreted with caution. To strengthen the findings within the present study, the results will be integrated with findings from the literature review to make

recommendations for further large-scale research. To the researcher's knowledge, this is the first study available which explores the awareness of IEC among the social care profession and, therefore, will be used primarily to present a preliminary concept for further exploration.

In acknowledging positionality, the researcher is likely to have some unconscious and conscious biases, which may have developed through being a qualified social worker and a mother to an infant who cried excessively. All participants will be advised of this during recruitment and at the start of interviews and PAR groups. The researcher will remain open throughout interviews and PAR group discussions about being a mother and a social worker. However, the management of such information will ensure these experiences do not impact the perceptions of others. This will be achieved by the researcher maintaining neutrality and offering their views solely to provide information. An example of this would be that the researcher may share details within the PAR groups about how IEC was discussed in the social work setting where they had previously worked, but will not provide information about the quality of the support offered to her as a mother, which may influence PAR group discussions and the perceptions of others. Although the researcher has personal experience with IEC, strategies such as reflexive journaling, triangulation, and peer debriefing will be implemented to reduce potential bias and uphold the trustworthiness and validity of the findings. PAR group members are likely to discuss topics of a sensitive nature; therefore, it is felt advantageous in these instances to be open with participants about the researcher's experience of being a mother to an infant who cried excessively. This endeavours to promote honesty across the PAR group, which will help build trust and limit possible fears participants may feel about being judged (Probst, 2015).

1.9 Summary

This study will examine the experiences of caring for infants who cry excessively and the potential implications for social work practice. The study will be undertaken using qualitative semi-structured interviewing and Participatory Action Research (PAR) (Baum et al., 2006) whilst being underpinned by the allostatic load theory as the study's theoretical framework.

To the researcher's knowledge, there have been no studies investigating how IEC is understood within the social care profession; however, there has been much written about the potential benefits of social and therapeutic support for these families (St James-Roberts et al., 2019; Montazeri et al., 2022). Therefore, this serves as a clear rationale for investigating whether there is a role within the social care profession to offer an additional opportunity of support to families who are already in receipt of their care. However, this would rely on social

care professionals having a sound knowledge base of IEC and its potential impacts before they are able to offer this support to families.

Therefore, the next steps will include a review of the current literature. This will be completed to help develop an understanding of what social support is currently available to families globally. This initial step is felt crucial to enable the researcher to understand whether existing findings are suggestive of social support having a positive impact on the management of IEC.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

As discussed within the introduction, IEC can have a detrimental impact on parental wellbeing, family functioning and infant health (St James-Roberts et al., 2019; Martini et al., 2015; Barr, 2014). Therefore, recent literature has increasingly shifted its focus from attempts to reduce the crying towards supporting parents to manage the potential challenges associated with caring for an infant who cries excessively (Barr, 2014; St James-Roberts et al., 2019; McPherson et al., 2022).

However, no other research has been identified which investigates IEC from the perspectives of social care. This has connotations for the current literature review as it creates challenges for investigating how effective this profession is at supporting families who are caring for infants who cry excessively. That being said, a larger body of research examines the role of social support in the management of IEC, specifically its effectiveness at improving parental wellbeing. Therefore, the literature review will focus on social support interventions, with a particular focus on how effective this support is at improving parental wellbeing.

This focus is informed by the allostatic load framework, which is used as a metaphorical concept to understand how exposure to chronic stress can influence how individuals perceive and respond to challenging situations (McEwen & Stellar, 1993). This was felt to be a beneficial framework to use as the condition is characterised by being repetitive and persistent; therefore, demonstrating how it can impact a caregiver's physiological, psychological and emotional functioning (Hill, 2023; McEwen & Stellar, 1993). Therefore, through undertaking this literature review, it hopes to provide a deeper insight into the potential impact of social support interventions on improving parental capacity to cope and thus, reducing allostatic load (McEwen & Stellar, 1993). As the role of a social care professional is largely based on the implementation of social support (BASW, 2023), understanding the effectiveness of social support interventions may present a potential role for this profession.

Therefore, the following questions were developed, and these guided the literature review's structure;

1. Does social support improve parental wellbeing during periods of IEC?
2. Can parental wellbeing improve, irrespective of changes in infant crying severity?

These questions explore whether social support can improve parental wellbeing during the period of IEC. However, it distinguishes itself from other studies as the focus is not based on reducing infant crying, but rather explores whether parental wellbeing can be improved, irrespective of external, uncontrollable factors (such as IEC) remaining the same. This is important because evidence suggests that many parents experience a decline in mental wellbeing during the postpartum period (Missler et al., 2020), which may be further exacerbated when an infant cries excessively (St James-Roberts et al., 2019). Thus, these questions focus on whether social support can reduce parental stress and improve a caregiver's capacity to manage the emotional demands associated with IEC, even where crying continues.

As limited evidence exists within the UK context, international literature will also be considered. This is particularly relevant given that infant crying is an international occurrence as a biological infant response (Carollo et al., 2023; Engel, 1977). Furthermore, examining evidence from a range of settings hopes to enable consideration of how existing interventions may inform future support and practice within the UK.

The chapter will begin by defining IEC and discussing its relevance to the allostatic load framework. It will then critically analyse literature relating to social support interventions, before considering the implications of the findings on children's social care practice.

2.2 Background

2.2.1 Description of the condition

IEC is a common condition which is estimated to affect approximately 20% of infants (St James-Roberts et al., 2019), with more recent research predicting a prevalence of up to 39% (Garnacho-Garnacho et al., 2024). According to the UK NHS definition, 'infantile colic' is defined as an infant who cries more than three hours a day, for three days or more, lasting longer than a week with no identified cause, in an otherwise well baby (NHS, 2022). This was first described as Wessel's 'Rule of Three'; a term still used within some research to support the identification of symptoms today (Wessel et al., 1954; Akçay et al., 2020; NHS, 2022). However, Wessel's 'Rule of Three' has since been adapted to create the 'Rome IV' criteria. The 'Rome IV' criteria differs from the 'Rule of Three' as it incorporates infant fussing behaviours, rather than being based on the crying duration alone (Zeevenhooven et al., 2017). The rationale behind this amendment is supported by Hiscock et al., (2014) who suggest that the inability to soothe an infant is the most worrying aspect for many parents, regardless of how long their infant has been crying. Despite the 'Rule of Three' and 'Rome IV' criteria being

widely used, there is no universal definition for IEC, and this has been considered problematic when comparing the studies' findings (Indrio et al., 2023). For this thesis, the 'Rule of Three' definition, which is characterised by symptoms lasting up to one week, will be used, as it is the definition currently adopted by the NHS (2022).

2.2.2 Infantile excessive crying and the allostatic load framework

A theoretical framework was derived through a review of the literature and serves as a foundation for the exploration of existing theories, providing a roadmap for developing the research arguments (Lederman & Lederman, 2017). The allostatic load framework provides this theoretical foundation for the study (McEwen & Stellar, 1993; Sturge-Apple et al., 2011). This term refers to the cumulative damage caused by chronic stress experienced throughout an individual's lifetime (Hastings et al., 2023). Whilst every person experiences stress within their lifetime, Fava et al (2019) describe a distinct difference between 'tolerable stress' and 'toxic stress'. Tolerable stress is characterised by short-term physiological and psychological reactions where an individual's personal resources act as a protective factor and a person experiences full psychological recovery (Fava et al., 2019). Whereas toxic stress refers to a cumulation of stress which results in "strong, frequent and/or prolonged" activation of the body's stress response system (Fava et al., 2019, p.108). Toxic stress is experienced by individuals who are in a state of allostatic overload, where distress is cumulative and emotional recovery is minimal, or absent (McEwen & Stellar, 1993).

In a study investigating the allostatic load framework and its relationship to psychosocial risk factors and parenting behaviours, it was discovered that each of the 153 mothers fell into one of the following three categories of sympathovagal functioning:

- hyperarousal: when an individual is in a state of heightened alertness, sometimes associated with anxiety,
- normative arousal: when an individual is in a state of calm and can rationalise and feel in control of their emotions,
- and hypoarousal: when an individual presents emotionally numb, which is sometimes associated with depression or dissociation behaviours (McEwen & Stellar, 1993; Sturge-Apple et al., 2011).

The study by Sturge-Apple et al (2011) examined how mothers responded to their 17 to 19-month-old children when faced with unfamiliar and stressful situations. Findings demonstrated how mothers with evidence of increased chronic lifetime stressors (those living in poverty and within areas of increased crime rates) were linked to lower levels of maternal responsiveness and increased passivity when engaging with their toddler during periods of distress, such as

crying (Sturge-Apple et al., 2011). Therefore, the allostatic load framework could highlight how a cumulation of past stressors could impact how one responds to their infant during periods of excessive crying.

Whilst IEC is a common condition, it does not affect every family in the same way (St James-Roberts et al., 2019). Therefore, further exploration is required to investigate why some families may struggle with IEC more than others, and the circumstances associated with why some caregivers seek support for their infant's crying when it does not meet the threshold of 3 hours crying per day. As in St James-Roberts et al (2019), this included one caregiver who sought support when their infant was crying 1.3 hours daily. The allostatic load framework provides a possible explanation for this phenomenon. With this considered, attention needs to be placed on those families who may struggle more with IEC to help identify support available to them. With Bywaters et al (2018) reporting that children are ten times more likely to be on a child protection plan or in the care of the local authority if they live in areas of deprivation, it could be assumed that families supported by statutory social care are less likely to be in a state of normative arousal due to the likelihood of them having experienced more lifetime stressors (Sturge-Apple et al., 2011). If this is so, it could be argued that additional awareness of IEC is required within the remit of social care, where families are more likely to be in hyper or hypo states of arousal.

Utilising the allostatic load framework, the literature review focuses on interventions available to new or expectant parents which adopt a social support approach. Allostatic load supports the idea that parents can be supported back to a normative arousal state, even when their infant continues to cry. This approach was taken as it enables the researcher to identify the potential benefits of parental support outside the remit of health services. If parents can be supported to return to a state of normative arousal, this could provide increased possibilities for future interventions, further steering away from attempting to cure the crying itself.

2.3 Methods

The focal literature review aimed to understand whether social support can have a positive impact on the mental wellbeing of parents with a particular focus on reducing stress, enhancing coping strategies and improving overall family outcomes.

Therefore, this section outlines the process used in the literature review and the rationale behind the chosen method.

A review of the literature using a structured search was undertaken initially in January 2023, followed by subsequent searches in November 2023, January 2024, September 2024 and January 2025. The latter dates were included to ensure that the most recent publications were incorporated.

Within this thesis, social support was defined as a package of support for parents/full-time carers that focuses on improving wellbeing, relationships, and social skills (Hogan et al., 2002). Through familiarisation with the available literature, the improvement of parental wellbeing was deemed to be the main area of interest for the review, included in both eligibility criteria and data extraction. The rationale for this decision was based on the premise that an improvement in parental wellbeing could have a direct influence on other risk factors associated with IEC, such as parental frustration levels and thus, lowering the risk of infant abuse (Barr, 2014). Given the limited data linking IEC and the social care profession, it was felt that exploring a potential association between social support and IEC could determine whether existing evidence indicates that the delivery of social support, irrespective of profession, could be beneficial for families. This, in turn, provides the foundation for undertaking the present research.

Once the review question had been developed, a review of the available literature was undertaken. Undertaking a literature review was seen as a critical stage as it provided the researcher with an opportunity to collate existing knowledge and identify a pathway for further exploration (Mak & Thomas, 2022). This highlighted potential gaps in knowledge, which was felt to strengthen the study's originality and enable more meaningful contributions (Snyder, 2024). This approach also provided some flexibility for reviewing various intervention types and data analysis methods (such as comparing Randomised Controlled Trials (RCTs) with studies that did not have a control group).

2.3.1 Eligibility Criteria

In determining how the studies were selected for review, a priori eligibility criteria were set.

- (1) All studies must have evaluated a social support package or intervention for parents/carers with newborn babies. Support packages must be completed by six months postpartum.
- (2) All studies must have completed baseline and outcome assessments on parental wellbeing.
- (3) All studies must have completed baseline assessments on infantile crying. For prenatal interventions, an assessment must have been completed within 8 weeks of

birth. These assessments could be based solely on parental perception of problem severity.

- (4) All studies must have completed outcome assessments on infantile crying. These assessments could be based solely on parental perception of problem severity.
- (5) Packages supporting families and infants with chronic health conditions and disabilities were excluded. This also included interventions for infants who were born prematurely.
- (6) Intensive mother and baby residential stays were excluded because their nature was deemed inappropriate for generalised implementation.

International studies were included as crying is considered a universal response that demands prompt and immediate reactions from parents regardless of the country one resides in (Carollo et al., 2023).

2.4 Source Identification

All empirical research was included. Systematic reviews were not included in the literature review. This action was taken to ensure the search focused on retrieving primary data sources.

2.4.1 Electronic sources and search terms

A search was completed across three e-databases: Medline, CINAHL, and Social Science Full Text. The search terms consisted of: “(mother OR father OR parent OR carer OR family) AND (infant OR newborn OR baby) AND (colic OR crying) AND (intervention OR programme OR support) AND (wellbeing OR mental health).”

As the study was to understand whether a gap exists within the social care field, the literature was restricted to post-2000 to provide a representation of contemporary practice. It was envisaged that this would provide a richer understanding of current research interventions and awareness within the field.

A search was also completed using *Google Scholar* using the terms ‘social support package intervention infants’ babies’ colic crying.’ The reference lists of the selected literature were also reviewed for relevant studies.

2.4.2 Data Extraction

Data was extracted which focused on parental wellbeing and infant crying. These measurements were selected as it was felt they addressed the literature review questions,

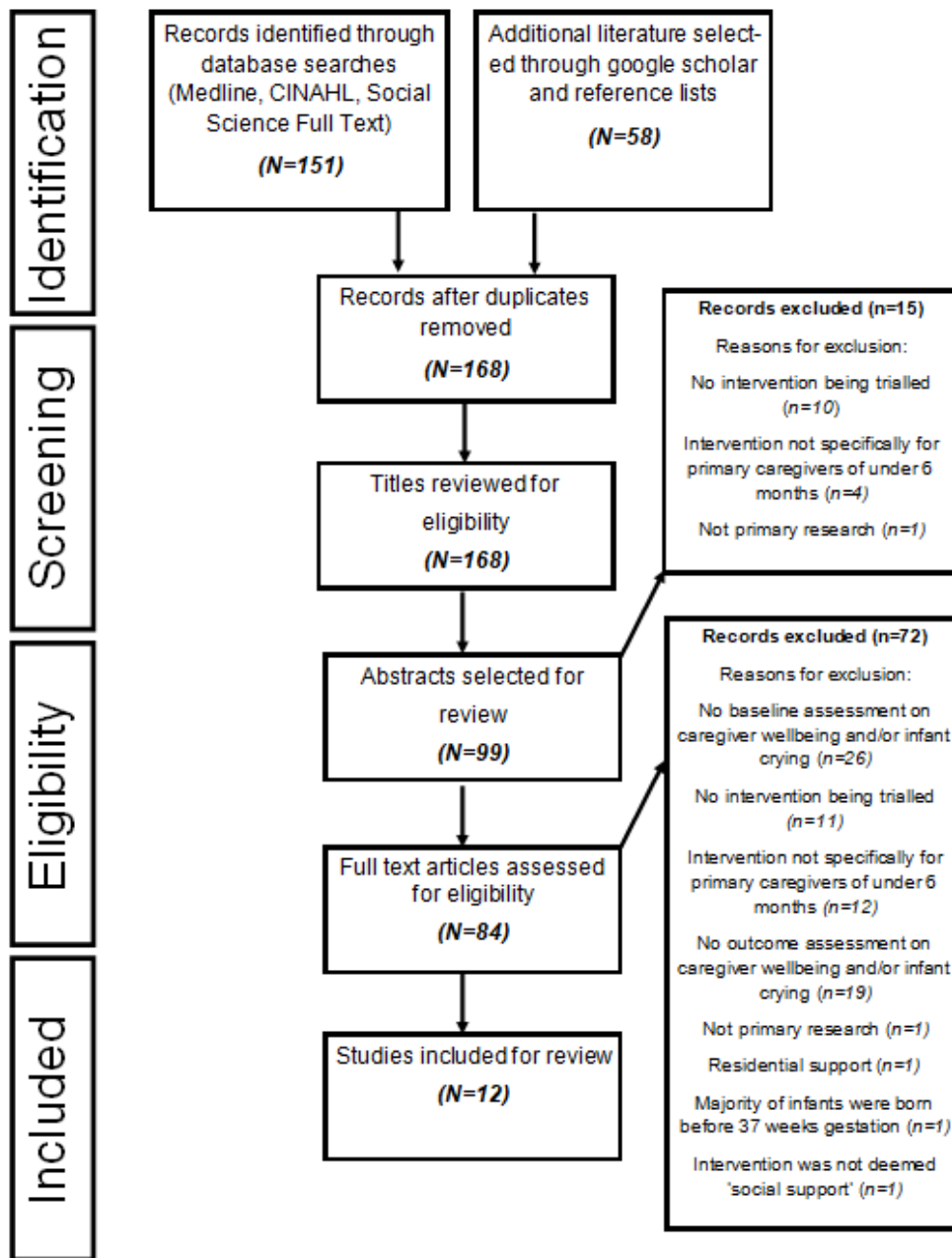
which are detailed in Section 2.1. To help answer these questions, infant outcomes and parental wellbeing measurements were extracted. Capturing both parental and infant outcomes was seen as a critical part of the literature search as it sought to answer whether parental wellbeing could be improved, regardless of crying symptomology remaining the same. This was deemed crucial to understanding the effectiveness of social support intervention at reducing the psychological impact of IEC, where infant crying may not be treated.

Within parental wellbeing, these outcomes included maternal and paternal anxiety, depressive symptoms, psychological distress, perceived stress, coping ability, parental confidence and overall emotional wellbeing. Where qualitative data was available, findings were extracted which related to parental experience of stress, emotional burden, frustration and parental perceptions of support. For infant outcomes, these were focused on changes in crying frequency, duration, severity, and parental perception of the crying, which included unsettled behaviour. These outcomes included the parents' perceptions of crying and fussing behaviours, as well as quantitative measures.

2.5 Literature Search Findings

As below, the e-databases initially returned 151 publications, which were reviewed by their title using the inclusion and exclusion criteria.

Figure 2: Prisma flowchart showing the source identification process



In total, 12 studies were included for full review and discussion.

After completing the literature search, 12 studies were selected for review. The data from these were critically analysed to provide a deeper understanding of the effectiveness of social support interventions and the feasibility of their implementation within the UK.

The interventions reviewed utilised the following approaches to support parents:

1. Universal Support, which was available to every new parent (within the realms of their inclusion criteria) (Akbarzadeh et al., 2016; Missler et al., 2020; Hiscock et al., 2014)

2. High-risk target group; support focussed on those at higher risk of infantile excessive crying, or poor parental wellbeing (Fisher et al., 2016; McPherson et al., 2022; Werner et al., 2016; Grubb et al., 2024; Montazeri et al., 2022).
3. Specific support available to families affected by IEC (Montazeri et al., 2022; Salisbury et al., 2012; Powel et al., 2018; St James-Roberts et al., 2019; St James-Roberts et al., 2024).

Universal support and high-risk targeted interventions were not specific to IEC; however, they must have all measured crying and parental wellbeing within their assessments. Montazeri et al (2022) was the only study which overlapped across two of the groups as it recruited anxious mothers with infants who cried excessively, therefore meeting the criteria for high-risk target groups and specific support for families affected by IEC.

Out of the 12 studies selected for review, there were nine different interventions trialled across five different countries. Two studies took place in Iran (Akbarzadeh et al., 2016; Montazeri et al., 2020), one was based in the Netherlands (Missler et al., 2020), two were from Australia (Hiscock et al., 2014; Fisher et al., 2016), three from the United States of America (USA) (Werner et al., 2016; Grubb et al., 2024; Salisbury et al., 2012), and four were based within the UK (McPherson et al., 2022; Powell et al., 2018; St James-Roberts et al., 2019; St James-Roberts et al., 2024).

The nine various interventions include a Prenatal Attachment Intervention (Akbarzadeh et al., 2016), a Psycho-educational Intervention (Missler et al., 2020), The Baby Business Program (Hiscock et al., 2014), What Were We Thinking (WWWT) (Fisher et al., 2016), Practical Resources for Effective Postpartum Parenting (PREPP) (Werner et al., 2016; Grubb et al., 2024), Behavioural Therapy Counselling (Montazeri et al., 2022), a Family-Based Psychosocial Intervention (Salisbury et al., 2012), and the Surviving Crying Intervention (Powell et al., 2018; St James-Roberts et al., 2019; St James-Roberts et al., 2024). Details of each intervention have been included within Appendix 12.

The data was critically reviewed and analysed, and summaries of each approach and their key findings can be seen in Table 1.

Table 1: Literature Review Findings

Study	Aim of the Study	Location of study	Intervention	Study Design	Sample	Intervention Approach	Key Findings
Akbarzadeh , Dokuhaki, Joker, Pishva, & Zare (2016)	To explore the effect of teaching attachment behaviours to pregnant women on infant mental health from birth to 3 months of age.	Iran	4-6 prenatal face-to-face sessions teaching attachment behaviours.	RCT	Intervention group (96 pregnant women) 100% married/cohabiting (M/C) Control group (94 pregnant women) 100% M/C	Universal support	Intervention group women experienced significantly lower rates of anxiety at 3 months postpartum vs control group participants ($p=.01$). At birth, intervention group infant mental health scores were higher than control group infants (16.66 vs 16.07) ($p=.013$). Intervention group infants cried significantly less than control group infants at 3 months ($p=.021$).
Missler, van Straten, Denissen, Donker, & Beijers (2020)	To examine the impact of a psychoeducational intervention on parenting stress.	Netherlands	Psycho-educational intervention consisting of an information booklet, an educational video, a prenatal support visit and a postnatal phone call.	RCT	Intervention group (59 pregnant women and 31 partners) 94.1% M/C Control group (61 pregnant women and 38 partners) 95.6% M/C	Universal support	Both control group and intervention parents experienced the highest levels of stress, anxiety and depression at 6 weeks postpartum. Both groups experienced an improvement in stress by T4; however, these were not statistically significant. No differences existed between groups for crying bouts at 6 weeks (T3) and 10 weeks (T4).
Hiscock, Cook, Bayer, Mensah,	To evaluate a prevention program for infant sleep and	Australia	'Baby Business'; a low intensity support	RCT	Intervention group (385 families) 96.4% M/C	Universal support	At 6 months, intervention group participants were less likely to score >9 on the EPDS compared to control group participants (7.9% vs 12.9%, $p<0.03$).

Cann, Symon & St James-Roberts (2014)	cry problems and postnatal depression.		package consisting of a booklet and video clip which complemented a postnatal telephone consultation at 6-8 weeks and a group session at 12 weeks postpartum.		Control group (385 families) 96.9% M/C		Infant outcomes were similar between groups.
Fisher, Rowe, Wynter, Tran, Lorgelly, Amir, Proimos, Ranasinha, Hiscock, Bayer & Cann (2016)	To determine whether the 'What Were We Thinking?' (WWWT) A programme for couples and babies can prevent postpartum common mental disorders among primiparous women at 6 months postpartum.	Australia	What Were We Thinking? (WWWT). A gender-informed psycho-educational programme for couples, consisting of primary care input, printed materials and a face-to-face seminar offered at 6-8 weeks postpartum.	Cluster Randomised Controlled Trial	Intervention group (204 primiparous mothers) Care as usual group (196 primiparous mothers)	High-risk target – primiparous mothers	Significantly lower intervention parents experienced mild to moderate anxiety levels at 6 months (18/185 relative vs 16/173 (<i>SD</i> 9.3) within 30 days of endline. There were no other differences noted for parental wellbeing between the control and intervention groups. Infant outcomes were similar between groups.

McPherson, Wiseman, Jasilek, McAloney-Kocaman, Morawska, Haig (2022)	To evaluate the efficacy of Baby Triple P in a UK context.	UK	Baby Triple P – Four antenatal group sessions, followed by postnatal telephone calls for first-time parent couples.	RCT	Intervention group (78 couples) 61.5% M/C Care As Usual group (78 couples) 70.1% M/C	High-risk target group – primiparous mothers and partners	Intervention mothers scored significantly better on the DASS depression scale at all four assessment points, compared to control group mothers ($p=.010$). However, there was no impact on anxiety or stress. For intervention partners, DASS scores showed a statistical intervention effect for anxiety ($p=.010$) compared to control group partners. However, there was no impact on depression or stress. Intervention infants cried less than CAU infants; however, these results were not statistically significant ($p=.48$).
Werner, Gustafsson, Lee, Feng, Jiang, Desai & Monk (2016)	To examine the effectiveness of Practical Resources for Effective Postpartum Parenting (PREPP).	USA	The PREPP Intervention consisted of three sessions pre- and postnatally. These complemented two phone call check-ins at 18-72 hours postpartum and 2 weeks, a PREPP Mindfulness Meditation App, and a	RCT	PREPP Intervention Group (27 at baseline, 16 provided outcome data) 73.1% M/C Enhanced Treatment as usual (ETAU) (27 at baseline; 19 provided outcome data) 62.9% M/C	High-risk target group – mothers predicted to be at high risk of postnatal depression	PREPP mothers had significantly lower depression and anxiety symptoms at 36-38 weeks of gestation compared to ETAU mothers (18.48 <i>SD</i> 12.82 vs 13.83 <i>SD</i> 10.64). By 6 weeks postpartum, ETAU participants scored higher than PREPP mothers for depression (M = 17.7, <i>SD</i> 9.81 vs 12.09, <i>SD</i> 7.31) Intervention mothers reported significantly less frequent crying and fussing infant behaviours at 6 weeks compared to ETAU mothers ($p=.02$).

			PREPP booklet.				
Grubb, Wilson, Zhang, Liu, Lee, Monk, Werner (2024)	To assess the effectiveness of PREPP compared to enhanced treatment as usual in reducing symptoms of depression and anxiety, and episodes of infant fuss and cry behaviour and improving parental and infant sleep in the early postpartum.	USA	The PREPP Intervention consisted of three sessions pre- and postnatally. These complemented two phone call check-ins at 18-72 hours postpartum and 2 weeks postpartum, a PREPP Mindfulness Meditation App, and a PREPP booklet.	RCT	PREPP Intervention Group (88 mothers) Enhanced Treatment as usual (ETAU) (87 mothers)	High-risk target group – mothers predicted to be at high risk of postnatal depression	The intervention significantly reduced depressive symptoms at assessment points 6, 12 and 16 weeks postpartum, and these results were statistically significant ($p<.0001$). PREPP intervention infants cried significantly less than ETAU infants between 6 and 16 weeks. At all three assessment points (6, 12, 16 weeks), the results were statistically significant ($p>.001$, $p=.004$, $p=.006$).
Montazeri, Hasanpour, Mirghafourv and, Mostafa Gharehbaghi, Medhi Ghods Tehrani & Mahajjel Rezai (2022)	To investigate the effects of behavioural therapy counselling on infantile colic (primary outcome), maternal anxiety, and mother -infant attachment	Iran	Behavioural therapy counselling, which consisted of 8 systematic desensitisation counselling sessions, took place over 4 weeks, with 2-	RCT	Intervention group (23 mothers) Control group (23 mothers)	High-risk target group / Specific to families affected by IEC	Postpartum anxiety scores were lower at outcome amongst intervention mothers compared to control group mothers ($m=119.5$, $SD=7.3$ vs $m=120.6$, $SD=10.2$). When controlled baseline values were input into an ANCOVA, these became statistically significant ($p=0.029$) Minimal differences between infant crying scores were noted two weeks post-intervention ($p=0.271$).

	(secondary outcomes) in anxious mothers with colicky infants.		3 sessions per week.				
Salisbury, High, Twomey, Dickstein, Chapman, Liu & Lester (2012)	To determine if family-based psychosocial treatment would result in a faster reduction in excessive infant crying, greater improvements in infant and/or family sleep and lower scores on measures of maternal depression and parenting stress post treatment than in infants receiving standard paediatric care.	USA	Family-centred treatment, which consisted of three postnatal home visits with a mental health clinician and paediatrician.	RCT	Intervention group (31 parents) 70.97% M/C Standard Paediatric Care (SPC) (31 parents) 67.74% M/C	Specific to families affected by IEC	There was no intervention effect noted between groups for maternal depression. Intervention group infants showed a statistically significant ($p=.011$) reduction in crying bouts over the course of the assessments. By 6 weeks, 85.71% of intervention infants no longer met the threshold for crying more than 3 hours a day, compared to 51.85% of SPC infants ($p=.007$).
St James-Roberts, Garratt, Powell, Bamber, Long, Brown, Morris,	To develop a novel intervention package to support parents of excessively crying infants and to examine	UK	'Surviving Crying' support package, which consisted of printed materials, a website, and	Exploratory study	Stage 1: 20 parents. Fifty-five health visitors / specialist community public health nurses.	Specific to families affected by IEC	No differences were noted between the referred crying group and the new birth visit group for depression using the EPDS. Referred crying mothers were more anxious than new birth visit parents (a GAD-7 score of 6.8 vs 5.8)

Dyson, Morris, Bhupendra Jaicim (2019)	the feasibility of delivering and evaluating it in the NHS.		Cognitive Behavioural Therapy (CBT) delivered by qualified practitioners to support parental wellbeing.		Stage 2: 57 parents. One hundred and twenty-four health visitors / specialist community public health nurses. 87.7% M/C		Referred crying group parents and new birth visit parents scored moderately low for parental confidence (a score of 1.9 vs 2.0, respectively). Baseline measurements found that most parents felt frustrated by their infants' crying. No parents experienced any frustration at all.
Powell, Bamber, Long, Garratt, Brown, Rudge, Morris, Bhupendra Jaicim, Plachcinski, Dyson, Boyle & St James-Roberts (2018)	To provide a longitudinal evaluation of whether a parent support package might improve the wellbeing and mental health of parents of excessively crying infants.	UK	'Surviving Crying' support package consisting of printed materials, a website, and Cognitive Behavioural Therapy (CBT) delivered by qualified practitioners to support parental wellbeing.	Exploratory Study	57 parents. 92% M/C	Specific to families affected by IEC	Mean outcome EPDS scores ($m=7.10$) did not meet the sensitive indicator of depression, which was 10 or the clinical one of 13. Mean outcome anxiety scores reduced from an average of 6.47 (SD 4.87) at baseline to 3.93 (SD 3.87), falling below the threshold for mild depression. Parental confidence outcome scores showed a modest increase to an average of 2.15 (SD 0.19) compared to 2.02 (SD 0.21) at baseline. With a score of 1 indicating low confidence levels, and a score of 5 indicating higher, parents continued to experience moderately low confidence levels by outcome. Parent frustration levels had decreased by outcome, with most parents experiencing no frustration at all ($n=13$, 25.5%) or only a little frustration ($n=23$, 45.1%).

St James-Roberts, Griffiths, Watson, White, & Brown (2024)	To develop a health visitor training module based on the Surviving Crying intervention, assess whether health visitors could deliver the service successfully, confirm whether parents gained similar benefits to those in the earlier study, and prepare for a controlled trial.	UK	'Surviving Crying' support package, which consisted of printed materials, a website, and Cognitive Behavioural Therapy (CBT) delivered by specially trained health visitors.	Development and Initial Evaluation	10 health visitors. 20 mothers, with 12 completing outcome assessments. 75% M/C Fathers and primary caregivers were invited but not taken up.	Specific to families affected by IEC	Mean EPDS scores at outcome no longer reached the sensitive cut-off for depression (10.35, SD 5.06 at baseline vs 6.75, SD 3.33 at outcome). Anxiety scores fell from 7.1 (<i>SD</i> 5.38) at baseline to 3.92 (<i>SD</i> 3.20) at outcome. With a score above 5 indicating mild anxiety, outcome measures showed the mean score fell below this range. Parents experienced lower frustration levels following the intervention. By outcome, most participants were either a little frustrated (8%, <i>n</i> =1) or not frustrated at all (58%, <i>n</i> =7).
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Key

EPDS: Edinburgh Postnatal Depression Scale (Cox & Holden, 1987)

DSM IV: Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994)

GAD-7: Generalised Anxiety Disorder-7 scale (Spitzer et al., 2006)

HRSD: Hamilton Depression Rating Scale (Hamilton, 1960)

DASS: Depression, Anxiety, Stress Scale (Lovibond & Lovibond, 1995)

2.5.1 Universal Interventions

Three studies were selected for review (Akbarzadeh et al., 2016; Hiscock et al., 2014; Missler et al., 2020), each adopting a universal approach to support families with newborn infants. These studies were all Randomised Controlled Trials (RCTs) and took place in Iran (Akbarzadeh et al., 2016), the Netherlands (Missler et al., 2020) and Australia (Hiscock et al., 2014).

(i) Universal Study Details

The largest of the included studies was Hiscock et al (2014), with 770 parents recruited. In contrast, Akbarzadeh et al (2016) recruited 190 pregnant mothers, and Missler et al (2020) involved 189 parents (mothers and their partners). Across the three studies, the timings in which the interventions took place varied, ranging from exclusively prenatal support (Akbarzadeh et al., 2016), overlapping support both prenatally and postnatally (Missler et al., 2020), and solely postnatal support (Hiscock et al., 2014).

Focusing on prenatal support, the intervention by Akbarzadeh et al (2016) is underpinned by the theory of attachment (Bowlby, 1979). The intervention involved four to six educational sessions focused on the importance of prenatal and postnatal infant bonding. This was the only study included in the review where the intervention was implemented exclusively during the antenatal period.

Combining education and psychological support, the intervention by Missler et al (2020) provided parents with information and support to understand and adapt to their parenting role through the implementation of a booklet, video, home visit, and telephone call. Similar to Akbarzadeh et al (2016), Missler et al (2020) also recognised the potential value in providing information to caregivers during the prenatal period. The justification for delivering information prenatally was to enable caregivers to digest the information before birth and provide them with an opportunity to ask questions (Missler et al., 2020).

In contrast, the 'Baby Business' programme by Hiscock et al (2014) waited until 4 weeks postpartum before providing caregivers with information. The intervention by Hiscock et al (2014) included a booklet and a DVD on the topics of infant crying, sleep and parental self-care. This support was to complement an individual telephone call between 6-8 weeks and a parent group session at approximately 12 weeks. The timings of the intervention were meticulously considered, with the delivery of information being provided to families before peak crying time (which usually occurs at 6-8 weeks), and a support call was offered during

this period. This action presents an understanding of the need to increase support to families during this time.

(ii) Outcomes

Akbarzadeh et al's (2016) study demonstrates how antenatal, attachment-based education can effectively enhance infant wellbeing and maternal mental health, with intervention group women experiencing significantly lower levels of anxiety at 3 months postpartum ($p=.01$). Similarly, assessments at birth found that group infants cried significantly less ($p=.021$) than those from the control group, with only 3.1 % ($n=3$) of intervention participants rating their infants cry as 'intense', compared to 10.6% ($n=10$) of control group parents. Likewise, infant mental health scores (covering a range of factors, such as crying, sleep, and breathing rates) were significantly better at birth ($p=.013$) and at three months of age ($p=.007$) for infants in the intervention group, compared to those in the control group. There were also improvements noted for the infant's general health at birth; however, these were not statistically significant ($p=.859$). This suggests a potential correlation between reduced maternal anxiety and infant mental health. However, it is important to consider the potential impact of Akbarzadeh et al's (2016) inclusion criteria on the findings, as it excludes single parents, those with unplanned pregnancies, and moderate to high levels of anxiety. Whilst the impact of the intervention can be observed through comparisons made between the control and intervention group data, baseline data across both groups could differ from other studies due to these stringent inclusion criteria.

In contrast, the findings by Missler et al (2020) did not show significant differences among intervention participants for stress ($p=.61$ at 6 weeks postpartum and $p=.59$ at 10 weeks postpartum), depression ($p=.38$ at 6 weeks and $p=.54$ at 10 weeks) or anxiety ($p=.73$ at 6 weeks and $p=.96$ at 10 weeks). Moreover, more intervention parents perceived their infants to be crying excessively at six weeks and at 10 weeks (at 6 weeks, postpartum nighttime crying was $p=.79$ and daytime was $p=.69$; by 10 weeks, daytime crying was $p=.48$ and nighttime was $p=.58$). As suggested by Missler et al (2020), it could be possible that educational interventions increased parental awareness of issues to observe. This concept would also support the findings of Hiscock et al (2014), where caregivers who received the intervention were more likely to have sought help from a medical professional regarding concerns about their infant. However, the findings from Hiscock et al (2014) conflict with those of Missler et al (2014) as intervention participants within Hiscock et al (2014) scored significantly better ($m=5.1$; SD 4.0) on the EPDS at six months postpartum compared to ($m=5.8$; SD 4.3) control group participants ($p=.04$). Therefore, whilst participants were more likely to access support at four months postpartum for their infants crying, this led to reduced

symptoms of depression two months later. These findings support the notion that increased support may improve parental mental health. Notably, the intervention by Hiscock et al (2014) was found to be ineffective at improving infant outcomes, including crying and sleep problems in newborns. Therefore, this could suggest that improvements in parental mental wellbeing are not necessarily a direct result of improved infant crying symptoms. Thus, this signifies the potential value of professional support in improving parental mental wellbeing, regardless of crying symptoms remaining the same.

All three universal studies included within the review took place outside of the UK and therefore provide some context to the practice available to families globally. However, caution should be taken in assuming their fit within the UK as they are all RCT's and the definition of 'care as usual' can vary significantly across countries. Whilst it was felt beneficial to include international studies due to the limited UK evidence available and excessive crying being a global concern, the use of these findings could present some challenges, particularly in terms of interpretation and applicability. Firstly, the control group participants within Hiscock et al (2014) received 'usual care' from the Maternal and Child Health (MCH) Nurse; a free service available to all new parents within the state of Victoria (Hiscock et al., 2014, p. 347). Whilst there are no details provided on what this 'usual care' entails, an assumption can be made that this likely differs from UK practice. Therefore, this challenges whether the limited impact would be the same if the control group was reflective of practice within the UK.

That being said, the findings so far suggest that there may be some benefit in introducing universal social support within the UK, as an improvement in parental wellbeing has been noted in 2 of the 3 universal studies reviewed (Akbarzadeh et al., 2016; Hiscock et al., 2014). Nevertheless, due to the small number of studies reviewed, further exploration would be required. Notably, the value of universal support, as suggested by Missler et al (2020), is that it can reach families who may need support but not be deemed 'high risk'.

2.5.2 Interventions Available to High-Risk Groups

Five studies used selection criteria which targeted a particular client demographic as possible risk factors for poor parental wellbeing or IEC. Four of the studies were RCTs (Montazeri et al., 2022; McPherson et al., 2022; Werner et al., 2016; Grubb et al., 2024) and one was a Cluster RCT (Fisher et al., 2016). The studies varied in locations, with two studies taking place in the United States of America (USA) (Werner et al., 2016; Grubb et al., 2024), and the remaining studies from Australia (Fisher et al., 2016), Iran (Montazeri et al., 2022), and the UK (McPherson et al., 2022). Four of the studies used a similar approach to the universal services mentioned earlier, focusing on prevention rather than treatment (Fisher et al., 2016;

McPherson et al., 2022; Werner et al., 2016; Grubb et al., 2024). Whereas the fifth study (Montazeri et al., 2022) targeted those already impacted by IEC who exhibited symptoms of maternal anxiety as a potential risk factor for further complications.

(i) High-Risk Group Study Details

The largest of the studies that focused on a high-risk group was Fisher et al (2016), with 204 intervention participants at baseline (187 at outcome) and 196 control group participants (177 at outcome). Similarly, the study by McPherson et al (2022) recruited 156 first-time parent couples, and Grubb et al (2024) included 175 expectant mothers.

The studies by Werner et al (2016) and Grubb et al (2024) both examined the effectiveness of the 'Practical Resources for Effective Postpartum Parenting' (PREPP) programme. The intervention consisted of overlapping support implemented during the antenatal and postnatal period. The programme consisted of three online or in-person sessions at 28-32 weeks of gestation, 34-39 weeks of gestation and 6 weeks postpartum. There were also two phone call check-ins at 18-72 hours postpartum and 2 weeks postpartum, a PREPP Mindfulness Meditation App, and a PREPP booklet. Parents were also provided with a swaddling blanket and an infant carrier. During the PREPP programme, parents were encouraged to set goals, develop positive caregiving strategies and self-reflect on their parenting journey. Within Werner et al (2016), trained psychologists implemented the PREPP programme; however, this was later amended within Grubb et al (2024) to include clinical social workers. This amendment is the first study that explicitly acknowledged the potential role and value social workers could have in the management of infant care and IEC, a critical yet previously overlooked dimension of early intervention.

McPherson et al (2020) shared some similarities to the PREPP programme in that the primary outcome was to improve parental wellbeing and reduce depression and anxiety symptoms during the postnatal period. The Baby Triple P (BTP) intervention consisted of eight sessions: four 2-hour face-to-face group sessions, which took place before birth, and four weekly telephone sessions from 6 weeks postpartum. The sessions covered various topics, including preparation for parenthood, the importance of a positive parent-infant relationship, and cry and sleep behaviours. The telephone calls shared a likeness to the PREPP programme (Werner et al., 2016; Grubb et al., 2024) as parents were encouraged to set individual goals that they could work towards.

Delivering a postnatal intervention, the 'What Were We Thinking?' (WWWT) programme targeted first-time parents and shared some similarities to the Baby Triple P intervention

(McPherson et al., 2022) as it was also aimed at parent couples, rather than solely the mothers. The WWWT programme consisted of three components: primary care input, which was facilitated by trial Maternal and Child Health Centres, printed materials and a face-to-face seminar offered at 6-8 weeks postpartum. The two main focuses of the WWWT materials were titled '*About Babies*' and '*About Parents*'. These categories covered topics including infant crying, sleep behaviours, parental expectations, and parental support needs.

In contrast, Montazeri et al (2022) adopted a different approach when compared to the other four interventions reviewed, as it was the only study that incorporated potential high-risk factors (anxiety) combined with IEC. The intervention consisted of eight systematic desensitisation counselling sessions, which began at 2-6 weeks postpartum. The purpose of the intervention was to place parents in anxiety-provoking situations to enable them to reflect and explore these feelings with the view to becoming desensitised over time.

(ii) Outcomes

Werner et al (2016) reported that the intervention reduced maternal depressive and anxiety symptoms, and this was most notable at 6 weeks postpartum, where the findings were statistically significant ($p=.01$, $p<.01$, respectively). This was in contrast to the ETAU group, where there was no significant impact for either depression or anxiety ($p=.22$, $p=.94$, respectively). These findings were similar to the study by Grubb et al (2024), which demonstrated a significant reduction in depressive symptoms at all three postnatal assessment points (6, 12 and 16 weeks), showing medium to large effect sizes. In addition, Werner et al (2016) and Grubb et al (2024) both calculated infant crying using the Baby's Day Diary (Barr, 1988). Intervention infants from both studies cried/fussed less than those in the Enhanced Treatment as Usual (ETAU) groups; these findings were statistically significant ($p=.02$ for Werner et al., 2016 and $p<.001$ for Grubb et al., 2024). Therefore, it is evident that the PREPP programme was pivotal in improving both infant crying and parental wellbeing. It is unclear whether the intervention, which had a positive impact on parental wellbeing, was instrumental in reducing infant crying durations, or vice versa. Therefore, the question as to whether it is possible to improve parental wellbeing, irrespective of crying symptoms, remains.

In contrast, the WWWT programme (Fisher et al., 2016) showed no differences between intervention and Care as Usual (CAU) groups for either parental wellbeing or infant fussing/crying behaviours, except for measurements at 6 months, which showed a lower prevalence of mild to moderate anxiety symptoms among caregivers enrolled on the intervention. This shared likeness to Hiscock et al (2014), where minimal differences were noted between the intervention and control groups. Within Fisher et al (2016), the CAU support

consisted of five postnatal visits within the first 6 months, and 8 'First Time Parent' sessions within the first year. These additional support sessions are not universally applied and therefore are not present within the other studies reviewed. Therefore, it is possible that no significant differences were found between the two groups due to the relatively high level of support given to CAU participants.

To explore this concept further, the intervention by McPherson et al (2022) was applied within the UK and, therefore, comparable to UK practice. Being the only UK study, this enables comparisons to be made between UK CAU groups, which will help to understand the impact of these interventions on UK practice. Overall, the Baby Triple P intervention showed no significant impact on crying or fussing behaviours in infants (McPherson et al., 2022). With regard to mental wellbeing, there was no significant impact on the levels of stress or anxiety experienced by the mothers or the levels of stress or depression for fathers within McPherson et al (2022). However, the package was shown to have a significant positive impact on depression amongst mothers ($p=.01$) and anxiety for partners ($p=.01$) at all assessment periods post-intervention. All assessments took place after birth at 10 weeks, 12 months, and 24 months. Therefore, this may yield preliminary evidence that social support interventions could have positive long-term impacts on parental depressive and anxiety symptoms, irrespective of infant behaviour or temperament.

Likewise, the intervention by Montazeri et al (2022) effectively improved parental wellbeing, with intervention group mothers scoring significantly lower than control group mothers for anxiety ($p=.029$). Whilst intervention group infants presented a lower 'colic' score, these findings were not statistically significant ($p=.271$). This shared a likeness to Hiscock et al (2014), where parental wellbeing also improved, irrespective of infant crying behaviours remaining the same. Furthermore, the Baby Triple P package, which was implemented during pregnancy and the postnatal period, had long-lasting effects on the mental wellbeing of caregivers, even after the newborn stage had passed. Therefore, these findings support earlier suggestions by Hiscock et al (2014) that it is possible for parental wellbeing to show improvement, regardless of external factors (such as infant crying) remaining the same.

Out of the five studies reviewed that have focused on caregivers who are deemed to have 'high risk' characteristics, four (McPherson et al., 2022; Montazeri et al., 2022; Grubb et al., 2024; Werner et al., 2016) provide some evidence that focusing interventions on participants with certain risk factors can improve outcomes for families and infants. The significance of this information is that it shows targeted interventions which address specific risk factors (such as first-time parents or poor antenatal mental health) may be more effective in preventing or

mitigating poor parental wellbeing and IEC than perhaps more universal approaches. Furthermore, the findings from two of the studies (McPherson et al., 2022; Montazeri et al., 2022) support earlier discussions that it is possible for an improvement in parental wellbeing, irrespective of external circumstances (Hiscock et al., 2014). However, the small sample sizes in all five of the studies could raise the question as to whether the lack of conclusive evidence for the implementation of such interventions outweighs the cost benefits of only targeting a particular clientele. This stance could also lead to caregivers not receiving the support required because they are not deemed as 'high risk'. Furthermore, considerations should be made to ensure that families who are eligible to take part in targeted interventions do not experience stigma as a result (Fisher et al., 2016).

2.5.3 Interventions for Families with Presenting IEC Symptoms

In addition to the WWWT study mentioned earlier (Montazeri et al., 2022), four studies evaluated a programme delivered at the time of their infants' excessive crying. One of the studies was an RCT (Salisbury et al., 2012), and the remaining three were development or evaluation studies (Powell et al., 2018; St James-Roberts et al., 2019; St James-Roberts et al., 2024).

(i) IEC Specific Study Details

All five studies which recruited parents with infants who currently cried had relatively small sizes. St James-Roberts et al (2019) recruited 20 parents during Stage 1 of the study and 154 participants during Stage 2 of the study. However, 97 of those were discounted as their infants did not cry excessively at any stage during the study, and this left 57 participants receiving the support package. Likewise, 10 health visitors and 20 parents took part in St James-Roberts et al (2024), and only 12 parents provided outcome data due to issues surrounding the Covid19 pandemic. These figures showed similarities to Salisbury et al (2012), where 63 parents were recruited, and Montazeri et al (2022), where 46 mothers were recruited.

The Surviving Crying Programme in the UK was the focus for three of the four studies reviewed (Powell et al., 2018; St James- Roberts et al., 2019; St James-Roberts et al., 2024), whereas Salisbury et al (2012) was based within the USA. Two of the three papers which evaluated the Surviving Crying (SC) programme (Powell et al., 2018; St James-Roberts et al., 2019) were based on the same study. The intervention by St James-Roberts et al (2019) consisted of the full report, and the paper by Powell et al (2018) evaluated the intervention as a published article.

The study by St James-Roberts et al (2019) was undertaken in two stages; stage 1 recruited parents whose infants previously cried excessively to take part in a focus group to develop a support package for future families, and stage 2 involved testing out the package with families whose infants currently cried. Similarly, St James-Roberts et al (2024) used the Surviving Crying materials developed by St James-Roberts et al (2019) to test out its feasibility when the CBT element was delivered by specially trained health visitors. Therefore, this research began by preparing a draft Surviving Crying training package which would later be disseminated to health visitors, including a practitioner's manual, regular supervision and a training lecture and workshop.

The Surviving Crying intervention consisted of three elements of support. A Surviving Crying website was developed to provide families with expert advice on IEC, video recordings from parents of excessively crying infants and tips on caregiving techniques. The booklet included all the written information from the website. In addition, parents were offered up to five Cognitive Behavioural Therapy-based (CBT-based) sessions, which could take place in person or over the phone within a 4–6-week period. These sessions explored infant crying, family support needs, parenting information and reassurance, caregiving skills and infant soothing techniques, as well as emotional regulation strategies.

Participants were separated into two groups: the 'new birth visit' and the 'referred crying' group. The 'referred crying' group consisted of parents who had sought help or advice from their health visitor relating to excessive crying symptoms, whereas the 'new birth visit' group were provided with information between 10-14 days postpartum and followed up until 6-8 weeks. The rationale behind the 'new birth visit' group was to understand whether there was an advantage to be gained from monitoring parents before the onset of excessive crying; the view was that this may detect symptoms of excessive crying earlier. Those who did not report their infant to be excessively crying were not offered the SC programme.

In contrast, Salisbury et al (2012) adopted a two-prong approach at 4-8 weeks postpartum. The support consisted of three postnatal visits immediately following baseline, then 2 and 6 weeks after. Each time, families were visited by a mental health clinician and a paediatrician. The mental health clinician worked with the parents to develop strategies to reduce self-criticism and stress. Information was also provided to families about normal feeding, crying, and sleeping patterns to aid in a reduction in self-critical beliefs. On the other hand, the paediatrician explored factors associated with infant health concerns, such as cow's milk protein allergies, feeding schedules, and gastroesophageal reflux.

(ii) Outcomes

The impact of the St James-Roberts et al (2019) intervention was reported within Powell et al (2018). The intervention was effective at improving both depression and anxiety. Data showed how EPDS had reduced from a mean of 10.2 at baseline, compared to 7.10 at outcome. St James-Roberts et al (2019) used a sensitive cut-off of 10 to identify parents who may be suffering from depression, compared to the clinical diagnostic of 13 or above. Therefore, EPDS scores reduced from a mean average indicating possible depression, to below this threshold. Likewise, anxiety scores also reduced from a mean of 6.47 at baseline to 3.93 at outcome. With a score above 5 indicating mild depression, this score also fell below the threshold. When making comparisons to the more recent study, the findings within St James-Roberts et al (2024) also showed positive outcome measurements for both parental anxiety (baseline mean score 7.1, SD 5.38 and outcome scores of 3.92, SD 3.20) and depression (baseline mean score of 10.35, SD 5.06 and outcome mean score of 6.75, SD 3.22). These findings are important as specially trained health visitors implemented the Surviving Crying's CBT element within the more recent study (St James-Roberts et al., 2024). Therefore, this presents a potential opportunity for wider programme dissemination, which is not based on the availability of CBT practitioners.

Findings from St James-Roberts et al (2019) showed how the 'new birth visit' group was successful in identifying infants earlier, with average infant ages across the 'new birth visit' group being 6.6 weeks. This was comparable to 12.8 weeks for those in the 'referred crying' group. Acknowledging that IEC usually affects infants up to the age of four months, with a crying peak experienced at approximately 1-2 months (St James-Roberts et al., 2019), the support offered at 12.8 weeks would be during the latter stages of this crying. When comparing these findings to those of the most recent study by St James-Roberts et al (2024), the mean baseline assessment age for infants across both groups was 9.27 weeks. This shared similarities with the previous study (St James-Roberts et al., 2019), where infants were 9.6 weeks old. With a mean average age of 2.87 weeks from the onset of excessive crying within St James-Roberts et al (2024), the timing of these baseline measurements and support implementation was, on average, more than six weeks after. This highlights that parents may not seek support for their infants' crying immediately following its onset. This requires further exploration, particularly as baseline measurements within St James-Roberts et al (2019) showed that 'referred crying' participants experienced increased anxiety levels with a mean of 6.8, compared to those from the 'new birth' visit group who scored an average of 5.8. With scores between 5 and 10 indicating mild anxiety symptoms, a difference of one point could indicate that parents' anxiety symptoms had already increased by the time they sought support for their infants' crying. These findings are significant as they highlight a need for prompt

recognition of the condition to encourage caregivers to access support at the earliest opportunity.

All three papers (St James-Roberts et al., 2019; Powell et al., 2018; St James-Roberts et al., 2024) investigated the impact of IEC on parental frustration levels. Baseline measurements showed how most (52.6%) parents felt very or extremely frustrated by their infants' crying. By outcome, these had reduced to most parents feeling only a little frustrated (45.1%) or not frustrated at all (25.5%). Likewise, the findings from St James-Roberts et al (2024) mirrored these outcomes. When reviewing these levels, the number of parents feeling extremely frustrated by their infants' crying reduced from 9 (45%) at baseline to 0 (0%) at outcome. Similarly, those feeling very frustrated by their infants' crying decreased from 3 parents (15%) to 1 (8%) at endline. These findings supported earlier data from Powell et al (2018) that the Surviving Crying Programme is highly effective at supporting parents, reducing emotional distress, and improving parental wellbeing. Furthermore, the introduction of the health visitor role within St James-Roberts et al (2024) reinforces the value of the support package, whilst providing an intervention which is more accessible to families.

Overall, the study by St James-Roberts (2019) was successful at recruiting parents who viewed their infants' crying to be excessive, with the average mean crying/fussing behaviours being 6.9 hours daily. However, the minimum total number of hours of crying/fussing behaviours was 1.3 hours daily, and therefore these participants would not have been eligible to take part in other studies that applied the 'rule of three' (Wessel et al., 1954) within their inclusion criteria (Salisbury et al., 2012; Montazeri et al., 2022). The idea that parents can perceive their infants' crying as excessive at upwards of 1.3 hours daily could suggest that other factors may be involved in addition to crying duration (such as an inability to soothe their infant or a lack of social support (St James-Roberts et al., 2019)). St James-Roberts et al (2019) suggested that parents may be more concerned about the unexplained reasons behind the crying, which then prompts them to seek support. Thus, the ability to ask questions to an experienced professional about concerns regarding infant health could strengthen the value of the study by St James-Roberts et al (2024), as health visitors may be better placed to answer these concerns, compared to CBT practitioners. The use of a joint approach which implements therapeutic support and involvement from a medical professional prompts a further exploration of interventions.

Within Salisbury et al (2012), an assessment of infant crying showed how the duration of infants' cries reduced more quickly among intervention infants than those who received standard paediatric support ($p=.011$). There was also an improvement shown in maternal

depressive symptoms; however, these were not statistically significant. That being said, a notable reduction in emergency room visits amongst intervention group infants suggests potential practical benefits. The interventions' ability to improve infant crying without further demands placed on health services is promising and an area for further exploration. However, the limited impact on parental depression suggests that this reduction in crying did not result in improved parental wellbeing. Furthermore, findings from Hiscock et al (2014) suggest that an increase in professional support at four months led to improved parental wellbeing at six months. Therefore, it is plausible that the reduced number of emergency room visits was counterintuitive as it did not improve parental wellbeing.

Overall, the benefits of implementing an intervention at the time of the crying is that it provides families with information which is relevant to them at the time; a potentially important aspect when reviewing programme impact and how parents retain information based on how relevant they find it (Fisher et al., 2016). As many of the studies reviewed had a low sample size, this means that improvements should be interpreted with caution. Furthermore, the absence of a control group within St James-Roberts et al (2019), Powell et al (2018) and St James-Roberts et al (2024) means that it is difficult to suggest that an improvement in wellbeing had a positive impact on crying behaviours, or vice versa, when reviewing the 'Surviving Crying' Programme. However, the Surviving Crying intervention was implemented within three of the studies reviewed and presents a strong argument for wider dissemination due to the significant impact it has been shown to have on parental wellbeing.

2.6 Discussion

Following a review of the literature, the findings from the twelve studies will be discussed in more detail to understand how these align with existing research. For the purpose of this discussion, the findings will be analysed in three sections; the biological, psychological and social influences. Together, these form the biopsychosocial perspective. The biopsychosocial model was developed by Engel (1977) and presents an argument for how biology, psychology and social factors all interlink and contribute to one another.

Therefore, this approach demonstrates the allostatic load framework as it articulates how a cumulation of stress can influence how an individual responds to it (McEwen & Stellar, 1993). Within the context of IEC, the crying may activate an individual's sympathetic nervous system as a **biological** response to stress (McEwen & Stellar, 1993), which can affect a person's **psychological** functioning and stress coping (including increased anxiety or poor cognitive functioning) (McEwen & Stellar, 1993; St James-Roberts et al., 2019). These outcomes may

be influenced by **social** determinants (such as an individual's socioeconomic status) (Szanton et al., 2005; Johnson et al., 2017). Therefore, this fits with the study's theoretical framework, as an individual who experiences increased allostatic load can experience interruptions in their biological, psychological and social development (McEwen, 1998). Throughout this discussion chapter, the impact of the twelve interventions will be discussed in line with these three domains (Engel, 1977). In doing so, this will help demonstrate the cumulative effects of IEC, including how effective the interventions were at improving these.

2.6.1 Biological Factors

Infant crying is regarded as a biological response used to communicate a need to a caregiver (Bornstein et al., 2017). However, caring for an infant with IEC can affect parental wellbeing (St James-Roberts et al., 2019). Therefore, interventions have historically focused their attention on reducing crying to aid an improvement in parental wellbeing, rather than vice versa (Garrison & Christakis, 2000). However, the physiological cause for the crying in 95% of infants cannot be located (St James-Roberts et al., 2019) and therefore, more recent interventions have shifted focus to supporting parents to improve their responses to the stress associated with IEC (St James-Roberts et al., 2019; Montazeri et al., 2022; McPherson et al., 2022). Nevertheless, four out of the twelve studies reviewed (Akbarzadeh et al., 2016; Werner et al., 2016; Grubb et al., 2024; Salisbury et al., 2012) successfully reduced infant crying, and all of these results were statistically significant ($p=.021$; $p=.02$; $p>.001$, $p=.004$, $p=.006$ at all three checkpoints; $p=.007$, respectively). Therefore, whilst an underlying cause may not be found (Barr, 2014), this does suggest that social support interventions may successfully improve infant crying symptoms.

However, the relationship between infant crying and parent wellbeing appears more complex, with one not necessarily always affecting the other (Salisbury et al., 2012; Montazeri et al., 2022; McPherson et al., 2022). Whilst four studies (Akbarzadeh et al., 2016; Werner et al., 2016; Grubb et al., 2024; Salisbury et al., 2012) successfully reduced infant crying, parental wellbeing had been improved in two studies (Montazeri et al., 2022; McPherson et al., 2022) without the need to reduce crying. In addition, Salisbury et al's (2012) intervention was shown to improve infant crying, but there was no improvement in parental wellbeing. These findings suggest that an improvement in crying alone may not always result in improved parental wellbeing, and vice versa.

From a biological perspective, these findings could be associated with the allostatic load framework. To help understand how the allostatic load may influence parental wellbeing, Sturge-Apple et al (2011) investigated allostatic load and its potential impact on parenting

behaviours by using a 'strange situation paradigm' whereby parents were asked to follow seven steps of separation with their 17- to 19-month-old children. The findings showed that caregivers with disrupted sympathovagal functioning were more likely to respond to their child becoming distressed by displaying maladaptive parenting behaviours, such as becoming hostile (Sturge-Apple et al., 2011). Therefore, not only does prenatal anxiety increase risks of IEC (Akbarzadeh et al., 2016; Werner et al., 2016), but the experience of chronic lifetime stress could increase the caregivers' reactivity to the crying. Therefore, the crying may appear more intense to someone with increased allostatic load, as their sympathetic nervous system may be triggered every time the crying occurs (Sturge-Apple et al., 2011). Furthermore, mothers in a state of hyperarousal did not recover following the final episode and therefore exited the paradigm outside of their normative arousal state (Sturge-Apple et al., 2011). For caregivers whose sympathetic nervous system activates the hyperarousal state following an episode of crying, it is evident how the recurring nature of IEC can continually trigger this response with little opportunity for recovery. Therefore, the allostatic load framework has presented a potential reason why individuals across the twelve studies differed in their responses to IEC. This provides a foundation to investigate the extent to which these biological influences, such as sympathetic nervous system reactivity, may influence an individual's psychological outcomes.

2.6.2 Psychological Factors

In all five of the studies reviewed which provided support to families affected by IEC, the condition was found to negatively affect parental wellbeing (St James-Roberts et al., 2019; Salisbury et al., 2012; Powell et al., 2018; St James-Roberts et al., 2024; Montazeri et al., 2022). Baseline measurements for postpartum depression within the most recent study reviewed showed an average EPDS score of 10.35 (St James-Roberts et al., 2024). Similarly, baseline EPDS scores within the earlier study were 10.08 (St James-Roberts et al., 2019). Notably, the lowest EPDS score within St James- Roberts et al (2019) was 1, compared to the highest score of 22. Therefore, whilst many families may report challenges to their mental health during the period of IEC, this did not appear to be universally experienced. However, overall, these scores are notably higher than those from a wider-scale study by Zacher Kjeldsen et al (2025), which investigated the prevalence of postpartum depression across the population. Out of 142, 795 mothers reviewed, an overwhelming majority (92.2%) scored below 11 on the EPDS, with a median average score of 4 (Zacher Kjeldsen et al, 2025). Whilst a score of 13 and over is defined as a clinical indicator of postnatal depression, St James-Roberts et al (2019) adopted a score of over 10 as a more sensitive indicator, as recommended by Wisner et al (2002). Thus, the mean average baseline scores across both St James-Roberts et al (2024) and St James-Roberts et al (2019) fall within this threshold.

This suggests that caregivers with infants who cry excessively have increased EPDS scores. These findings are supported by Salisbury et al (2012), who used the Beck Depression Inventory (Kendall et al., 1987) to assess the severity of depressive symptomatology across parents. Despite randomisation during recruitment, baseline scores showed a clear variation, with a treatment group mean of 14.48 compared to a standard care mean average of 9.80. Using the BDI assessment measurement tool, a score of 10-17 identifies a mild mood disturbance, whilst a score of 9 and under is considered 'normal' (Kendall et al., 1987). Notably, treatment group infants cried, on average, one hour a day more at baseline when compared to standard care. Thus, the parents in the treatment group had higher scores for depression and had infants who cried more.

If attention is drawn to parental anxiety levels, the Surviving Crying studies (Powell et al., 2018; St James-Roberts et al., 2019; St James-Roberts et al., 2024) all used the GAD-7 framework for assessment purposes. Over the four studies which assessed anxiety, one third of parents (5/20) within St James-Roberts et al (2024) and nearly 45% (25/57) within the earlier study (Powell et al., 2018; St James-Roberts et al., 2019) had GAD-7 scores which demonstrated the presence of moderate or severe anxiety levels. Meanwhile, Montazeri et al (2022) only recruited participants into the study if they scored higher than 112 on the Postpartum Specific Anxiety Scale (PSAS) (Fallon et al., 2016). According to Fallon et al (2022, p.657), the PSAS scale identifies a score of >112 as a reliable indication of "clinically significant" anxiety. During the recruitment process, Montazeri et al (2022) found that 58 out of the 157 participants scored high for anxiety; over a third of the mothers who were assessed. These findings support those of St James-Roberts et al (2019) and St James-Roberts et al (2024) that approximately one third of parents/carers with excessively crying infants have moderate to severe anxiety symptoms. These rates are higher than statistics across the general population, which were taken during 2018/19, where it was estimated that 19.8% of individuals experience high levels of anxiety (Mental Health Foundation, 2023). This suggests that the presence of IEC can result in an increased risk of anxiety. However, whilst discussions presented in Section 2.6.1 suggest that prenatal maternal anxiety can increase the prevalence of IEC (Akbarzadeh et al., 2016; Wener et al., 2016), the understanding of whether the presence of IEC alone can cause maternal anxiety with no pre-existing prenatal symptoms appears to be an underexplored area. Despite this, it is evident that a clear relationship exists between parental mental health and IEC, and thus, targeting support towards caregivers with infants who cry excessively could attract those who are also struggling with their mental health. An example of a study which adopts this approach is Bohr et al (2021), who implemented the 'Crying Clinic' to investigate the effectiveness of a drop-in clinic aimed at parents who were struggling with their infant's crying. The intention was that this would encourage parents who

may be at risk of postpartum depression, but who may not have otherwise sought support for their own mental health due to the potential cultural stigmas which may be attached. The findings showed how the clinic did identify mothers who may be at risk of postpartum depression, as 36% (9/25) of mothers who completed the EPDS had a score of more than 13, signalling the threshold for a diagnosis of depression. This presents a potential opportunity to target mental health support at those caregivers who perceive their infants to be crying excessively, as evidence suggests depression is more prevalent among this population.

In relation to the intervention effect, six of the studies (Akbarzadeh et al., 2016; Fisher et al., 2016; McPherson et al., 2022; Montazeri et al., 2022; St James-Roberts et al., 2019; Powell et al., 2018; St James-Roberts et al., 2024) were shown to improve anxiety symptoms, and six (Hiscock et al., 2014; McPherson et al., 2022; Wener et al., 2016; Grubb et al., 2024; St James-Roberts et al., 2019; Powell et al., 2018; St James-Roberts et al., 2024) improved depressive symptoms. For those interventions which consisted of a control group (Akbarzadeh et al., 2016; Fisher et al., 2016; McPherson et al., 2022; Montazeri et al., 2022; Wener et al., 2016; Grubb et al., 2024), these findings were statistically significant. This means that, whilst IEC is closely linked with poor parental mental health, there is potential value in social support interventions to reduce these symptoms. Moreover, an improvement in mental health can sometimes occur without a requirement to improve infant crying severity (McPherson et al., 2022; Montazeri et al., 2022).

2.6.3 Social Factors

Following the introduction of the allostatic load framework by McEwen and Stellar (1993), many theorists have since investigated the role of potential characteristics and individual demographics which could place an individual at heightened risk of increased allostatic load (Szanton et al., 2005; Sturge-Apple et al., 2011; Seeman et al., 2002). Szanton et al (2005) was one of the first studies which explored this potential relationship and found that lower socioeconomic status is a key indicator for increased allostatic load. More recently, a systematic review by Johnson et al. (2017) found that 23 of the 26 papers reviewed reported associations between increased allostatic load and lower socioeconomic position. Therefore, it can be said with confidence that an individual's socioeconomic status, which includes education, employment, income, and social class (Salem & Robinson, 2025), may all influence how an individual responds to stress.

Therefore, with focus returned to the twelve studies selected for review, the socioeconomic status of the participants recruited could be a key determinant in how they responded to the crying (Johnson et al., 2017; Szanton et al., 2005). However, discrepancies were noted

between some of the studies, whereby individuals appeared with varying characteristics. An example of this was participants within Missler et al (2020), where most participants were well-educated individuals with high incomes, and Hiscock et al (2014), where 70% held a tertiary degree or higher. These figures are different from those recruited by McPherson et al (2022), where one quarter of participants fell into the most deprived category. Therefore, given that circumstantial pressures can place additional load on an individual, the recruitment of those with higher levels of education or income may have reduced the prevalence of IEC or poor parental mental health. Thus, participant demographics among studies recruiting individuals with higher socioeconomic status could have acted as a protective factor for the development of mental health concerns.

Within all three universal studies reviewed (Akbarzadeh et al, 2016; Missler et al., 2020; Hiscock et al., 2014), the rates of those married or cohabiting were higher than the other studies included within the review (Fisher et al., 2016; St James-Roberts et al., 2019; St James-Roberts et al., 2024; Powell et al., 2018; Salisbury et al., 2012; Montazeri et al., 2022; Grubb et al., 2024; Werner et al., 2016; McPherson et al., 2022). Notably, every participant within Akbarzadeh et al (2016) was married, as this was part of the recruitment criteria. This figure is vastly different from the number of intervention participants within McPherson et al (2022), where only 61.5% were married or cohabiting. As stated by Alexander et al (2017, p.692), who explored the role of fathers within the management of 'infant colic', it was found that 'extremely happy or perfect' and 'happy or very happy' partner relationships were a protective factor for the occurrence of IEC. Therefore, whilst the interventions by Akbarzadeh et al (2016) and Hiscock et al (2014) were shown to have a positive impact on parental wellbeing, considerations should be made as to the potential impact of recruiting married couples who have the support of a partner, compared to Salisbury et al (2012), where fewer participants were married. However, whilst the involvement of a partner may act as a protective factor for some families, this does not appear to be universally applied (St James-Roberts et al., 2019; Brooks et al., 2014). Within St James-Roberts et al (2019), many of the mothers described feeling as though their partner did not understand the extent of their struggles with IEC, which further created tensions within their relationship. This supports a study by Brooks et al (2014), which found that the availability of support may not act as a protective factor, but rather how that support is perceived. Across 949 adults recruited, Brooks et al (2014) found that participants with negative partner support had increased allostatic load, whereas those with positive partner support had lower levels of allostatic load. Therefore, this suggests a targeted approach to caregivers who perceive the support from their partner to be negative, or where issues in the relationship have already been identified.

Overall, the association between increased allostatic load and lower socioeconomic status and perceived support is important, given that families living in areas of deprivation are ten times more likely to be subject to a Child Protection Plan under the Children Act 1989 or be subject to care proceedings (Bywaters et al., 2018). Thus, this suggests that families supported by children's social care are more likely to have lower socioeconomic status and, therefore, be at increased risk of allostatic load. Thus, it presents a clear justification for ensuring a greater awareness of IEC within the social care profession, where existing vulnerabilities and increased allostatic load may result in reduced coping abilities (McEwen & Stellar, 1993;

2.7 Conclusion

To the best of the researcher's knowledge, the incorporation of social workers into the delivery of specialist interventions for families affected by IEC is a relatively new concept, which was only introduced to the literature in 2024 (Sawyer et al., 2024; Grubb et al., 2024). In addition, the evidence presented above advocates for an increase in family and social support (St James-Roberts et al., 2019; Lester et al., 2019; Powell et al., 2018). The findings from this study suggest that social support interventions can improve parental wellbeing (St James-Roberts et al., 2019; Powell et al., 2018; St James-Roberts et al., 2024; Akbarzadeh et al., 2016; Werner et al., 2016; Fisher et al., 2016; McPherson et al., 2022; Grubb et al., 2024; Montazeri et al., 2022; Hiscock et al., 2014) and that this can happen irrespective of IEC severity (Hiscock et al., 2014; McPherson et al., 2022). However, inconsistencies in participant demographics, including high socioeconomic status (Missler et al., 2020; Hiscock et al., 2014; Akbarzadeh et al., 2016; Montazeri et al., 2022; McPherson et al., 2022; Fisher et al., 2016) and being married or cohabiting (Hiscock et al., 2014; Akbarzadeh et al., 2016), were noted among the studies. Through implementing the allostatic load framework, it is possible that these could have been influential factors in how the participants perceived, managed and were supported through periods of increased stress. Therefore, attention should be drawn to one's stress coping abilities to help relieve the emotional pressures associated with IEC and improve how an individual views their own reality.

Despite this, the focus of IEC literature remains on developing specific interventions for families (McPherson et al., 2022; St James et al., 2019; Salisbury et al., 2012) or facilitating support or treatment through health service provision (St James-Roberts et al., 2024; Akhnikh et al., 2014; Sidor et al., 2013). However, no literature has been identified which investigates the potential implications for the social care profession within the management of IEC; an approach that could help increase awareness of the condition so that frontline professionals

feel equipped to appropriately support and assess families who are in their care. Therefore, this thesis aims to fill this gap in the literature and develop this new concept.

The literature has been split into three sections: the biological, psychological and social factors, using the biopsychosocial model to help understand internal (sympathetic nervous system activation) and external influencers (availability of social support), which may affect stress-coping during periods of increased crying (Engel, 1977). This model is useful when investigating the allostatic load framework as it clearly demonstrates how individual's with increased 'load' may have altered responses to their sympathetic nervous system as a **biological** response to stress (McEwen & Stellar, 1993), which can affect a person's **psychological** functioning and stress coping (including increased anxiety or poor cognitive functioning) (McEwen & Stellar, 1993; St James-Roberts et al., 2019). These outcomes may be influenced by **social** determinants (such as an individual's socioeconomic status). Therefore, prolonged exposure to chronic stress could be a high-risk indicator for how one perceives and copes with psychological demands, such as infant crying (McEwen, 1988). This in itself presents a clear rationale for investigating IEC awareness from the perspectives of social care professionals, as involvement with social services often indicates pre-existing vulnerabilities, such as poor parental wellbeing or exposure to domestic violence (UK Parliament, 2021). Therefore, individuals open to statutory services may be more likely to have experienced chronic lifetime stress and increased allostatic load.

Overall, the review of the literature presents a compelling rationale to undertake a study which investigates IEC from the perspectives of social care. If social support interventions can improve parental wellbeing irrespective of crying durations, family support should remain a pivotal focus. Therefore, the next stage will adopt a Participatory Action Research (PAR) approach to explore the potential implications of supporting parents of infants who cry excessively and how this may influence social care practice. Given the limited research connecting IEC to social care practice, this study aims to address a critical gap and provide a timely and necessary foundation for future intervention development.

CHAPTER 3: METHODOLOGY

3.1 Introduction

The literature reviewed provides a comprehensive understanding of contemporary research, investigating approaches which support parents of babies who cry excessively; directly informing the development of this study's research methodology (Paré & Kitsiou, 2017). Within qualitative research, any assumptions, beliefs, and limitations must be identified and addressed at the earliest opportunity through reflexivity. This enables the researcher to focus on issues which may otherwise be taken for granted (Clough & Nutbrown, 2012). This chapter aims to provide a clear rationale for the decisions made throughout the research design process through exploring its methodological and philosophical foundations. The selection of an appropriate and robust method was derived from the exploration of the research question, aims, and objectives, thereby increasing the confidence of readers and strengthening the quality of the data produced (Weng, 2025).

The salient aim of the research is to examine the experiences of caring for infants who cry excessively and the potential implications for social work practice. This is supported by the following three objectives:

1. To conduct interviews with social care professionals to explore their awareness and understanding of infantile excessive crying (IEC).
2. To undertake participatory action research (PAR) groups with caregivers to examine their experiences of IEC and the support available to them.
3. To collaborate with caregivers to co-develop a prototype toolkit to support social care professionals working with families affected by IEC.

These objectives were designed to address the following three research questions;

1. RQ1: How does IEC impact caregivers?
2. RQ2: What informal and formal support is available to caregivers of infants who cry excessively?
3. RQ3: How can social care professionals support families in their care who are affected by IEC?

The three objectives all played varying roles in meeting the overall aim of the study. Objective one explored the awareness and understanding of IEC among the social care profession; objective two investigated caregivers' experience of IEC, including the support they received

at the time, and objective three brought together the data collected from objectives one and two to develop a practical resource as the study's intended outcome.

As the study progressed, several aspects of the original research design were adapted in response to recruitment challenges, participant feedback and emerging findings. These were consistent with PAR principles as they formed part of an ongoing process of reflection and refinement (Baum et al., 2006).

Within this section, the intended research plan is presented first, followed by a discussion of the methodological adaptations that occurred throughout the study and the rationale underpinning these decisions.

3.2 Intended Research Plan

The purpose of a research plan is to clearly define the scope of the study, which is embedded within the research question, its aim and objectives (Weber & Cobaugh, 2008). It is a detailed design which demonstrates effective planning; one which is realistic and carefully considered (Weber & Cobaugh, 2008). Within the present study, the research plan was initially created by utilising existing data, which was collected prior to the study commencing.

The study was initially designed as PAR (Baum et al., 2006). This approach was selected during the planning stage as it aligned closely with the study's aim of exploring the experiences of families, but also with the intended outcome of creating a practical toolkit for social care professionals.

To ensure participants held the relevant experience and knowledge of the social care profession and/or IEC, the following inclusion and exclusion criteria were created during the planning stage, and these are detailed within Table 2.

Table 2: Intended Inclusion and Exclusion Criteria

Participant Group	Inclusion Criteria	Exclusion Criteria
Caregivers	A parent or primary caregiver of a child under the age of two who excessively cried before six months of age.	Parents/carers who are currently being supported by statutory children's social care services. Any individual who cannot provide informed consent.
Social Workers	Qualified Social Workers	Individuals who do not hold a social work qualification. Any individual who cannot provide informed consent.

3.2.1 Methodological Adaptations During the Study

Although a clear research plan was developed prior to the study commencing, several aspects of the design evolved throughout the research process. This was because the study's aims and objectives, potential limitations, and research design were continually reflected upon throughout and amended where it was deemed of benefit to the study (Mukherjee, 2020).

As can be seen in more detail within Table 2, the following changes were made during the research planning stage;

- A change in terms from 'colic' to 'IEC' led to amendments within the objectives and research questions,
- Recruitment difficulties resulted in smaller-than-expected PAR groups and social care professionals being recruited using network sampling,
- Interviews took place before PAR groups to encourage participant engagement,
- Professionals were not invited to attend the PAR groups due to mothers feeling more comfortable in sharing their experience of IEC if the group was restricted solely to individuals who had lived experience of the condition.

Table 3: Study Amendments

Stage	Original Version	Revised Version	Reason for the Change	Methodological Justification
Objectives	1) To examine the experiences and impact of infantile colic on the wider family, relationships and wellbeing. 2) To explore children's social workers' experiences of infantile colic and the support they feel would be necessary to be more effective within their role. 3) To evaluate the findings with colic-experienced caregivers to develop social work policy and practice.	1) To examine the experiences and impact of IEC on the wider family. 2) To explore the availability, accessibility, and perceived effectiveness of formal and informal support systems for families affected by IEC. 3) To investigate the feasibility of support being offered to families outside the remit of health services.	As the literature review developed, it was evident that the term "infantile colic" was not consistently defined within the literature. Rather, it was felt that the use of the term "colic" may exclude families who experienced excessive crying without a formal diagnosis.	Revising the objectives allowed a broader exploration of caregivers' experience, including parents/carers whose infants had not been described as having 'colic'. Thus, this changes the focus from the infants' crying duration to parental perception of the crying. This supported the exploratory nature of the research as it allowed participants to define and describe excessive crying themselves, without the requirement to fit a formal diagnosis. This is supported by findings from Radesky et al (2013), who found that the parental perception of inconsolable and excessive crying is more strongly associated with maternal depression, compared to using Wessel's Rule of Three. Therefore, this approach would encourage the inclusion of every caregiver who may deem their infant's crying to be a problem. This is relevant given that caregivers may experience the same psychological outcomes (such as worry, frustration or anxiety), regardless of infant crying duration (St James-Roberts et al., 2019; Barr, 2014).
Research Questions	RQ1: What are the experiences of families affected by infantile colic, and how did they perceive	RQ1. What are the experiences of families affected by IEC, and how did they perceive	As the literature review developed, it was evident that the term "infantile colic" was not consistently defined within the	As per the changes to the objective wording of 'colic', the revised research questions enabled a broader exploration of caregiver experiences.

	the support offered to them at the time? RQ2: What would be required within the social care profession to improve the experiences of families with an infant with infantile colic?	the support offered to them at the time? RQ2. What would be required within the social care profession to improve the experiences of families with an infant who cries excessively?	literature. Rather, it was felt that the use of the term “colic” may exclude families who experienced excessive crying without a formal diagnosis.	
Recruitment	Professionals were recruited online through social media.	Professionals were recruited through network sampling.	Recruitment difficulties were experienced using social media, and concerns were suspected regarding ‘imposter participants’ (Mirekuwaa Darko et al., 2022). Therefore, network sampling using the researchers’ known professional contacts and networks was adopted as the study’s recruitment strategy.	The use of social media recruitment may have enabled access to a wider participant group; however, “imposter participants” were suspected when using this method (Mirekuwaa Darko et al., 2022). Therefore, network sampling offered greater confidence that participants met the inclusion criteria and had the appropriate professional experience. Therefore, strengthening the credibility and trustworthiness of the data collected.
Sampling	The recruitment of social workers.	Recruitment of social care professionals.	Recruitment difficulties limited the number of qualified social workers who came forward to participate. Therefore, amending the inclusion criteria to social care professionals enabled the study to include individuals working in a range of social	This provided a broader understanding of the awareness and support available to families across multiple professions and organisations.

			care roles who may also support families who affected by IEC.	
Data Collection Methods	PAR groups to consist of between 5 and 10 social workers and parents/ carers.	PAR groups only consisted of 3 parents/ carers.	Initial recruitment difficulties resulted in a lower-than-expected sample size. During the first PAR group, participants shared their concerns that they may feel less comfortable discussing their experiences openly if professionals were present. Participants highlighted the importance of having a safe space to discuss their experiences of caring for an infant who cries excessively. Therefore, PAR groups remained solely parents.	Using PAR principles (Baum et al., 2006), the decision was made to initially invite only parents to the first PAR group to explore their preference for who would attend subsequent groups. Due to the mothers' desire for the PAR groups to remain solely for caregivers, this stance was adopted. A smaller sample size enabled a deeper insight to be gained into the experience of families and provided greater opportunities for individual contribution throughout the PAR groups.
Data Collection Methods	Interviews were to take place between PAR groups 2 and 3.	Interviews took place before PAR groups.	There were concerns that delays between the PAR groups could negatively affect participant engagement and retention.	This change strengthened the action element of PAR by allowing interview findings to be shared and reflected upon during the second and third PAR groups (Baum et al., 2006). Therefore, participants were able to use these findings to discuss any potential practice developments which would, in turn, help the co-production of the toolkit during the second PAR group.

3.3 Research Approach

3.3.1 Research Paradigm

With a particular focus on the research paradigm, interpretivism was the philosophical paradigm that steered the research, with some influence from constructivism. Interpretivism and constructivism are sometimes used interchangeably throughout the literature (Newton & Burgess, 2016). However, William (2024) argues that there are differences between the two, and these lie in how the two principles understand the world and its constructs. Despite their similarities, interpretivist researchers believe there is no single truth, and the individual's view of reality is subjective and dependent on their historical experiences (Pulla & Carter, 2018). Whereas constructivist researchers argue that reality is a social construct and therefore the process of knowledge creation itself is deeply influenced by cultural, linguistic, and experiential factors, which extend beyond individual perception and into the production of knowledge in society (William, 2024). Unlike positivism, interpretivism does not generalise one truth across a wider population; however, it asserts that data is representative only of those who participated (Junjie & Yingxin, 2022). Likewise, interpretivist researchers usually carry out inductive research whereby the aim is to develop theory and knowledge, rather than testing a hypothesis (Grix, 2019).

Interpretivism was selected due to its belief that everyone's experiences and knowledge of the world are unique and individual to them (Pulla & Carter, 2018). This principle was central to the research being undertaken, as the focus remained on the experiences of parents/carers and social care professionals. This was also underpinned by the researcher's core value that every perspective is individual and valued (Hesse-Biber & Leavy, 2004). To develop professional awareness of IEC, the research aimed to understand the thoughts, feelings and experiences of those central to it. Such depth of insight would not have been achievable through the positivist paradigm (Wells & Giacco, 2025). As an advocate of the interpretivist paradigm, the researcher shares the belief that individual perspectives and views of the world are developed over time, resulting from external and internal factors, such as an individual's historical experiences and core values (Pulla & Carter, 2018). Furthermore, interpretivism as a paradigm has a particular emphasis on the use of qualitative research, which is required to exclusively understand the perspectives of families and professionals (Junjie & Yingxin, 2022).

The understanding of truth and reality can be best described through the researcher's ontological and epistemological positioning (Junjie & Yingxin, 2022). The ontological position represents the nature of reality, whereas epistemology refers to how truth is developed and understood (Alharahsheh & Pius, 2020). From an ontological perspective, both the

interpretivist and constructivist paradigms are associated with relativism (Junjie & Yingxin, 2022). Relativist ontology refers to the understanding that there is no single truth and, rather, reality is constructed depending on the time and place of the phenomenon (Alharahsheh & Pius, 2020). On reflection, the ontological viewpoint of reality provides a rationale for individualised parenting perceptions which are dependent on both external and internal factors (Baghramian & Coliva, 2019).

Unlike the positivist paradigm, interpretivism benefits from subjective epistemology, which is centred around participant experiences, feelings, and thoughts (Junjie & Yingxin, 2022). Epistemology refers to how knowledge is gained and the methods taken to understand the truth (Audi, 2010). As suggested by Junjie & Yingxin (2022), studies adopting this stance avoid objectivity and focus on adding depth and meaning behind subjective reality. With a particular focus on the research aims, it is clear why this epistemological stance was adopted, as opposed to others, due to its ability to add meaning to the participants' voice (Junjie & Yingxin, 2022). If an objective stance were adopted, the results would seek to retrieve a singular truth about how parents/carers experience IEC. This would preclude the use of collaborative working, as the desire to find one truth would be questionable when working with professionals and caregivers. Not only does this challenge the researcher's core values, but it also conflicts with existing research which argues that the threshold for IEC differs from person to person (St James-Roberts et al., 2019; Landgren & Hallström, 2011).

3.3.2 Research Approach

Qualitative research was adopted throughout the study and was guided by the theoretical framework of allostatic load (McEwen & Stellar, 1993). A qualitative approach enabled the researcher to delve further into the families' and professionals' individual perceptions and beliefs (Choy, 2014). Understanding the perceptions of parents and social care professionals was a critical part of the data collected as it established what the current knowledge base was within the profession and what families felt needed to happen moving forward; further strengthening the rationale for the use of qualitative research methods (Clough & Nutbrown, 2012). In understanding the experiences of parents/carers and professionals, the data collected was subjective and aimed to provide a depth of understanding into the potential role of social care (Hesse-Biber & Leavy, 2004). If a quantitative approach had been selected, this would not have aligned with the interpretivist paradigm, nor provided the depth of data and the voice of those experiencing IEC, which was required to develop social care practice (Salmons, 2022).

The research was considered inductive as it aimed to develop a new understanding about a relatively underexplored phenomenon (Vears & Gillam, 2022), rather than the deductive approach which tests an existing theory (Azungah, 2018). The approach was chosen over the deductive method as it typically stands within the interpretivist paradigm due to its ability to retrieve data which is most reflective of the participant's voice (Byrne, 2022). Furthermore, limited data was identified which linked IEC and the social care profession; therefore, there was a lack of developed theory which could be used to drive the analysis. To further strengthen the argument for its use, the inductive approach is mostly used within qualitative research due to its ability to develop a deeper understanding of the data collected, which was required within the current study (Vears & Gillam, 2022).

3.3.3 Researcher Reflexivity

Historically, researchers were encouraged to remain objective to reduce bias and limit the potential for data contamination (Etherington, 2004). Researchers who were seen as objective were those who did not allow their values or attitudes to have an impact on the research itself or the data it presents (van Dongen & Sikorski, 2021). The challenge for complete objectivity is predominantly associated with the positivist paradigm and quantitative research methods whereby there is a search for the 'truth' (Olmos-Vega et al., 2023). Not only is objectivity a difficult stance to adopt (Khatwani & Panhwar, 2019), but Etherington (2004) suggests that research that remains objective can be uninteresting as readers can experience difficulties connecting with the researcher. Consequently, reflexivity is an adapted concept which was a crucial part of the research and involved encouraging the researcher to reflect on their own positioning throughout (Jamieson et al., 2023). Reflexivity is defined as the researcher's ability to reflect on their judgements and values, focusing on how these could potentially impact the research process (Jamieson et al., 2023). During the process, reflexivity was a continuous action which began during the initial inquiry and continued throughout (Olmos-Vega et al., 2023).

The argument for remaining reflexive throughout the research was further enhanced due to the researcher's experiences as a social worker and having an infant who previously cried excessively. Described as an 'essential' part of the research process, identification and reflection of the researcher's position enables the reader to visualise the journey between the phenomenon and the research process (Watt, 2007). As recommended by Watt (2007), the researcher adopted the use of a reflective journal. Keeping a reflective journal enabled the researcher to reflect on the assumptions and judgements which play a key role in the decision-making process within the design (Olmos-Vega et al., 2023). The researcher needed opportunities to reflect on their values and principles but in a way which limited the potential

impacts on data findings, particularly given the researcher's connection to the topic (Olmos-Vega et al., 2023).

3.3.4 Research Strategy

A decision was made at the start of the research planning stage to implement Participatory Action Research (PAR) (Nix et al., 2019), and this was instrumental in determining how the research would be undertaken. PAR is defined by Baum et al (2006, p. 854) as an approach used to involve people to develop their own change, with a focus on “reflection, data collection and action”. PAR has been developed as a subset of action research with the inclusion of participants as the driving force (Fogg et al., 2022). It acknowledges a continual learning process whereby the methods and research content are constantly being analysed, and as a result evolve (Baum et al., 2006). There were no planned beginning and end dates for data collection, with the process being dependent on the views of PAR group members and their intended outcomes (Fogg et al., 2022). The initial attraction to the approach was that it prioritises the voice of parents and places significant value on an individual's lived experiences (Cornish et al., 2023). These values align with many of the core social work principles, which include working in partnership with service users, using and recognising potential power imbalances, as well as encouraging and enabling service users to be central to their own decision-making (Social Work England, 2024).

Table 4 demonstrates how the PAR principles of *collaboration*, *reflection* and *action* have been implemented throughout the study's design (Baun et al., 2006).

Table 4: The Implementation of PAR Principles

PAR Principle	The Implementation of PAR Principles
<i>Reflection</i>	The format of each PAR group was not finalised throughout the process but was rather left to the PAR group members to decide. This included not finalising a set number of PAR groups and not inviting professionals to the PAR groups until a decision was made by the mothers. The process of ‘member reflection’ was incorporated into the research process to enable the mothers to reflect on and amend what they had said in previous sessions.

	The interview data was discussed with the mothers during the PAR groups. This enabled the mothers to identify and reflect upon emerging themes.
Collaboration	Participants were informed of what PAR entails within the Participant Information Sheet (included within Appendix 8 and 10). This was also reiterated at the start of each PAR group. In addition, all of the participants were made aware of the researcher's role as an observer and facilitator of the groups (Mackay, 2016). This included how the researcher disseminated existing research findings to the mothers and encouraged them to collaboratively identify their own priorities and decide on the subsequent actions to take.
Action	Participants co-created a training toolkit for social care professionals based on their priorities and desire to change.

Overall, PAR offered a framework that fit with the study's focus on participation, collaboration and producing an outcome which can be used to help develop professional practice. Furthermore, it allowed the research to remain flexible and responsive, whilst keeping participants involved in shaping both the findings and the development of the social care toolkit.

3.4 Research Design

3.4.1 Sampling and Recruitment

Social care professionals were recruited using network sampling. This method sits under the umbrella of non-probability sampling, which is traditionally connected to qualitative research (Onwuegbuzie & Collins, 2007). This method was chosen following challenges in recruiting through social media, which are detailed within Table 3. The main concern with network sampling as a non-probability method is selection bias as those from the same network as a researcher may share similar values or experiences (Andrade, 2020). Therefore, the experiences of participants may not represent the voice of the wider population (Andrade, 2020). However, following initial difficulties with 'imposter participants' (Mirekuwaa Darko et

al., 2022), this method successfully recruited genuine professionals who the researcher knew met the inclusion criteria set out in Table 5.

All three PAR members were recruited through social media support groups. During recruitment, one parent contacted the researcher to thank them for carrying out the research and to reinforce the need for additional support. However, explained that she could not take part as she had been diagnosed with Post-Traumatic Stress Disorder following her infant's excessive crying. She described how she continued to experience flashbacks of this period; therefore, her therapist had discouraged her involvement in the study due to the impact this could have on her recovery. This left a relatively small participant group which allowed for deeper engagement and more meaningful contributions from each participant, ultimately enhancing the quality of the research's outcomes. The stringent recruitment criteria detailed within Table 5 were necessary to limit the possibility of recall bias (van Giezen et al., 2005). However, recruitment challenges were predicted as the population was relatively restricted. In preparation for recruitment, the Infant Feeding Team at *Manchester University NHS Foundation Trust* disseminated the study information to all their staff via email, two organisations (Parents as First Teachers, and Lancashire Country Council Youth Zone) shared the recruitment information on their social media page, and two administrators for infantile excessive crying/colic social media support groups (UK Baby Colic And Reflux Support, and Baby Crying & Colic Clinic) consented to the information being shared on their social media pages. Any interested individual was asked to email the researcher for more information.

Below are the inclusion and exclusion criteria that were used during the recruitment stage of the research.

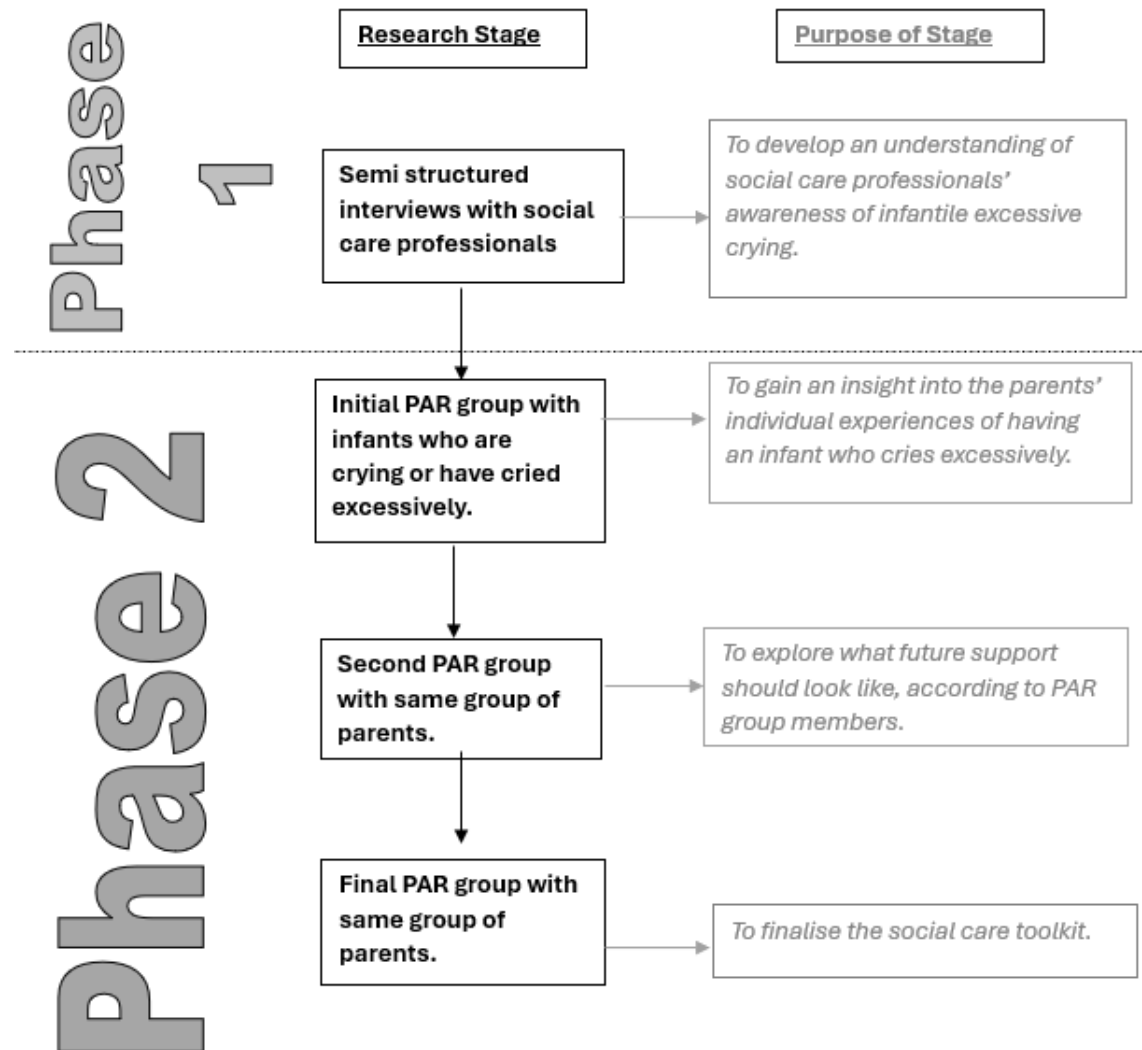
Table 5: Participant Inclusion and Exclusion Criteria

Participant Group	Inclusion Criteria	Exclusion Criteria
Caregivers	A parent or primary caregiver of a child under the age of two who excessively cried before six months of age.	Parents/carers who are currently being supported by statutory children's social care services. Any individual who cannot provide informed consent.
Social Workers	A current practising professional working within social care who has experience working in children's social care.	Anyone who is not currently working within the social care field. A professional who does not have experience working within the children's social care. Any individual who cannot provide informed consent.

3.4.2 Data Collection Methods

Semi-structured interviews were undertaken at the first instance to understand the views, knowledge and experience of social care professionals. The purpose of carrying out interviews before the PAR groups was to enable the interview data to be disseminated to mothers in preparation for a toolkit to be developed. Semi-structured interviewing was used as it enabled the main topics to be discussed (Salmons, 2022) whilst providing the researcher with some flexibility to delve deeper into specific areas to strengthen the richness of the data collected (Wisker, 2001). The format and purpose of each stage of data collection are included in Figure 3.

Figure 3: The Study Process



The interview schedule is included in Appendix 13. These questions were developed using the findings from the literature review. As Kallio et al (2016) suggest, the development of a quality interview schedule can result in enhanced rigour and data. Throughout the literature review, the researcher identified limited research available which linked the social care profession to IEC. Therefore, a key area for exploration was investigating the awareness and understanding of IEC among those interviewed, whilst also determining whether this experience was gained personally or professionally. It was envisaged that an understanding of current practice within the interviewee's professions could identify areas of good practice, or any gaps in knowledge, skills or training. These findings would be key in addressing the 'action' element of the research and the development of a resource for future development.

One of the challenges of research is ensuring data validity whilst accounting for and acknowledging any potential bias (Noble & Smith, 2015). Remaining a reflexive researcher throughout the interviewing process was imperative to ensure that all participants felt comfortable and the data retrieved was representative of their authentic thoughts and experiences (Wisker, 2001). The researcher made attempts to establish a positive rapport with the participants, responding to any questions and being responsive to their needs or wishes before and throughout the process (Bell et al., 2014). All participants had the researcher's university email address, and this was the main form of communication outside of the PAR groups. Rapport building commenced before interviews as regular communication took place via email to ensure that the participants fully understood their role and rights. Furthermore, the researcher shared personal details about themselves, including their role as a mother and social worker. As reported by Charmaz (2006), researcher openness can reduce power imbalances and enable participants to feel more comfortable within the research setting, and therefore this was felt to be a positive action to take.

Nevertheless, miscommunication is a possibility throughout qualitative research as verbal communication can sometimes be misinterpreted or misunderstood (Wisker, 2001). This risk could be further increased using online platforms, as non-verbal communication can be harder to identify during video calls, where the whole body cannot be seen (Flayelle et al., 2022). To help minimise this risk, participants were informed of their right to omit any question they did not wish to answer. They were also encouraged to ask for the question to be repeated or paraphrased if they experienced any uncertainty or confusion, as well as being advised of their right to remain silent or use the written chat function, if preferred. Despite the potential risks that participants may remain silent and no data would be collected, it was envisaged that the benefits of everyone feeling comfortable would outweigh these.

3.4.3 Data Analysis

Thematic analysis was used throughout the data analysis process, including both interview and PAR group transcripts. Thematic analysis refers to a system of analysing written text by identifying common themes and codes (Braun & Clarke, 2023). Coding within research is common throughout other data analysis methods, including content analysis and grounded theory (Auerbach & Silverstein, 2003). Sometimes used interchangeably, thematic analysis was chosen over content analysis as it provides the ability to break down chunks of data without having predetermined ideas of the content being analysed (Brough, 2018). The advantage of thematic analysis is its ability to be flexible, responding to the format and needs of the research (Braun & Clarke, 2023). Differing from other methods, such as interpretive

phenomenological analysis, thematic analysis can be used regardless of the epistemological stance of the research (Braun & Clarke, 2023). Braun and Clarke (2023) have created a six-stage process to analyse data, which includes familiarisation with the findings, creation of initial codes, searching for possible themes, a review of these themes, defining the themes, and writing up the report. This process was used by the researcher throughout the data analysis stage.

More specifically, under the umbrella of thematic analysis is latent thematic analysis. Latent thematic analysis is considered an interpretivism/constructionism approach to analysis as it encourages a deeper focus on the meaning behind what is being said, rather than taking the information at 'face value' (Braun & Clarke, 2023). This approach was chosen over semantic coding methods as it goes beyond analysing the data at face value and enables the researcher to analyse the findings using patterns in the research through identifying underlying assumptions and ideologies (Espedal et al., 2022). Analysing data using the latent thematic analysis method was particularly advantageous throughout the social work interviews, as the researcher observed some confusion and uncertainty about the impact of IEC, despite verbal answers being provided by the professionals. Using this method of analysis added another layer of insight and further strengthened how the information was understood and analysed (Espedal et al., 2022).

A two-tiered approach was adopted when identifying themes, which included first-level and second-level codes. During the transcription process, initial themes were identified and therefore grouped as the first-level codes. First-level codes (Appendix 5 and 6) demonstrate how the data were initially captured. Developing emerging themes and high-quality codes relied on the researcher continually re-reading and reflecting on the data collected to ensure both verbal and non-verbal communication was considered, and the codes were representative of the participants' truth (Fereday & Muir-Cochrane, 2006). These emerging codes were 'inductive' as they were created solely on the data provided within the interviews, rather than any pre-existing concepts (Braun & Clarke, 2023). NVivo was used to select relevant text from the interview transcripts to help identify the 'first-level codes'. Using Computer Assisted Qualitative Data Analysis Software (CAQDAS) within the research helped to assist the researcher identify common messages and emerging themes (Zamawe, 2015).

Ensuring the validity and credibility of collected data is a fundamental principle in all research. Interpretative validity ensures that what participants shared during the research process was interpreted in a way which is reflective of this (McKim, 2023). During each subsequent PAR group, a practice referred to as 'member reflection' was used to add validity to the data

collected (Olmos-Vega et al., 2023). The term 'member reflection' has been adapted from 'member checking', which was often seen in earlier qualitative research papers (Olmos-Vega et al., 2023). 'Member reflection' is a way of presenting the data back to participants to provide them with an opportunity to reflect on what was recorded and how this was interpreted (Birt et al., 2016). 'Member reflection' rather than 'member checking' was chosen due to the assumption that participant experience is continually evolving; therefore, participants may offer other interpretations or have changed their viewpoint by the time of reflection (Olmos-Vega et al., 2023). As suggested by Knapik (2006), this is a particularly valuable step to take within research as it is based on the underpinning values of qualitative research that the participant is the expert. This is pertinent within participatory research where participants play a key role in data collection and study outcomes (Baum et al., 2006). Using 'member reflection' provided participants with the opportunity to reflect and add to the first-level codes collected at each subsequent PAR group. This encouraged further group discussion and amendments, where necessary. Sharing full transcripts with participants is a practice which is sometimes used in research; however, the decision to solely share first-level codes was due to several factors. As Thomas (2017) states, full transcripts, which are shared with participants, usually go unread and therefore little feedback or amendments are received. Furthermore, where discussions are based on more sensitive topics, such as when parents are recalling a distressing period, individuals are less likely to read the transcript back to them as they feel they are reliving the trauma again (McKim, 2023).

3.5 Theoretical Framework

The theoretical framework guiding this study was allostatic load (McEwen & Stellar, 1993). The study's theoretical framework was heavily influenced by the research aims, as well as the researcher's values and core beliefs (Junjie & Yingxin, 2022). The interpretivist paradigm underpins the allostatic load framework due to the understanding that perception is individual to the person and dependent on their own experiences (Nickerson, 2024).

Fundamental to the allostatic load framework is the notion that cumulative events can have an impact on an individual's biological, psychological and social functioning over time. Biologically, this can affect someone's sympathetic nervous system which is responsible for sympathovagal functioning (Sturge-Apple et al., 2011). Sympathovagal functioning is the involuntary reaction to stimuli which results from the balance of one's sympathetic nervous system (the nerves which trigger the fight or flight response) and the parasympathetic nervous system (the nerves which are responsible for calming the body) (Goldberger, 1999). When a person functions with increased allostatic load due to cumulative lifetime stressors they have

experienced, the impact on their sympathovagal functioning can also have psychological and social outcomes, such as reduced emotional regulation and increased irritability (McEwen, 1988). Therefore, with increased allostatic load, an individual can experience external stressors differently due to an increased likelihood of struggling with emotional regulation.

Through this ideology, it is possible that social support could be fundamental in supporting caregivers to cope by providing parents with strategies to help improve emotional regulation and, thus, reduce overactivation of the sympathetic nervous system (McEwen & Stellar, 1993). In turn, this would improve the caregiver experience and reduce the negative risks associated with IEC (such as poor parental wellbeing and increased risk of infant abuse) (St James-Roberts et al., 2019; Türkmen et al., 2022; Barr, 2014). Furthermore, the idea that social support may have a positive impact on families, irrespective of infant crying severity, strengthens the argument for more services being available outside of paediatric health services. Implementing this theoretical framework provides a rationale for how individuals can be supported to a place of homeostasis, regardless of external factors. This further strengthens the argument for the inclusion of social care within the remit of IEC.

The implementation of the allostatic load framework was consistent throughout every part of the research process, including how the data was analysed. When reviewing the collected data and identifying themes, the researcher continually reflected on how the data relates to the allostatic load ideology. Thus, the findings support or conflict with the notion that biopsychosocial perspectives, including an individual's social support systems and learned coping patterns, may affect how they perceive and manage during periods of increased crying.

3.6 Ethical Considerations

As with all research, considerations must be made to ensure participants are protected from harm and feel comfortable when taking part (Hasan et al., 2021). Ethical approval was received by The University of Central Lancashire's Business, Arts, Humanities, and Social Sciences (BAHSS) Ethics Review Panel (BAHSS2 0363) (Appendix 7).

Power imbalance is a much-discussed topic within literature and something which requires consideration in all research (Torre & Fine, 2021; Mackay, 2016). Described as a crucial concept in PAR (Baum et al., 2006), it encourages an open discussion about power dynamics and emphasises the need to take action to reduce power imbalances, wherever possible (MacKay, 2016). Therefore, a strength of PAR is that participants are empowered as they are

encouraged to take a researcher's position, reducing potential power imbalances between the traditional 'participant – researcher role' (Torre & Fine, 2021; Baum et al., 2006). This step was taken throughout the process as PAR group members were consulted about including other societal members within the group, the format and running of the three PAR groups, and providing feedback on the training package. As suggested by Torre & Fine (2021), PAR can be successful at empowering societies that may be disadvantaged within society (such as new parents or young adults) by actively involving them in the development. This is extremely pertinent when discussing the research being undertaken, which focuses on implementing PAR groups with new parents. Furthermore, social care professionals were informed that parents/carers will be reviewing their anonymised data during the PAR group sessions. These steps were taken deliberately to place parents/carers in a role where families are analysing professionals' ideas and understanding, rather than vice versa. It was hoped that this would further empower those central to the research.

To uphold participant confidentiality and comply with data protection and GDPR, all PAR group discussions and interviews were transcribed at the earliest opportunity and stored on the University of Central Lancashire's Network (password-protected OneDrive folder). During this stage, all names and identifiable data were anonymised. Electronic copies of consent forms were provided to all participants (Appendix 9 and 11). Participants were also able to consent verbally during the recorded interview or PAR group, and therefore, no physical consent forms were collected. All personal data and study data were transferred through the University's OneDrive account only, and from off-campus to a location on the University network using VPN (an encrypted channel). All data generated by this project will be securely stored in electronic form at The University of Central Lancashire for 7 years from the end of the project, as per ethical guidelines.

Participation was voluntary, and every potential participant was emailed a participant information sheet (Appendix 8 and 10). The participant information sheet provided participants with their rights to withdraw at any time with no detriment. Participants were informed within the information sheet that the data they provided up until they withdrew from the study could be used; however, no further details would be requested. Participants could also choose to keep their cameras off if they wished to and opt not to answer any questions that they deemed sensitive or risky. The decision to inform participants that they could keep their cameras off was felt to be a positive action as it enabled participants to remain within the group even when they did not wish to be seen; this involved times when the parents were breastfeeding and felt more comfortable with their cameras off.

During the PAR groups, there was no requirement for parents/carers to disclose whether they had been previously supported by children's social care. For safeguarding purposes, participants were informed within the consent form that they must not be involved with children's social care at the time of invitation and throughout the duration of the study until after the final PAR group. This condition was based on research indicating potential safeguarding concerns associated with IEC (Barr, 2014) and therefore, not wishing to involve participants whose children had already been assessed as being at risk of harm. Additionally, parents or carers with infants experiencing excessive crying at the time of the initial PAR group were provided with the Crisis Helpline number and ICON: Babies Cry, You Can Cope resources for further support (details of which can be found in Appendix 12) (ICON, 2023). Overall, these measures ensured that the research was conducted with the highest regard for ethical standards, prioritising the safety, dignity, and autonomy of all participants and the researcher throughout the study.

3.7 Strengths and Limitations

3.7.1 Strengths and Limitations of the Research Approach

Parents and carers were recruited through social media support groups for IEC. Utilising social media groups was a cost-effective way of reaching as many people as possible (Mirekuwaa Darko et al., 2022). The approach was beneficial for this research as the inclusion criteria for PAR group members significantly reduced who could consent to take part. However, the use of social media to recruit participants could have also contributed to the findings, acting as a potential limitation. From the interpretivist viewpoint, it could be argued that their experiences did not reflect the wider population of parents and carers with an infant who cries excessively as those who are managing their infants' crying bouts may not necessarily seek support from an online social media group. Further wider-scale research would be required to understand the experiences of those individuals who did not seek support online from parents in similar situations.

'Network sampling' was used to recruit all five social care professionals. This was a successful method to recruit participants who genuinely met the inclusion and exclusion criteria, and reduced risks of 'imposter participants'. However, it may have affected the findings' validity as network sampling has been criticised by Andrade (2020) due to a higher likelihood of recruiting individuals who share similar interests and values of the researcher. Nevertheless, a key strength is the recruitment of social care professionals from varying backgrounds and professions. Therefore, this approach reduces the impact of the limitation by exploring awareness and support availability within various organisations.

As an advocate for understanding individual experiences, the recruitment of participants needed to be focused on their perceptions of the crying, rather than the crying itself. Consequently, there were no agreed-upon definitions of IEC used throughout the recruitment process. This could act as a limitation for the study as PAR group members did not provide measurable durations of their infants' crying and therefore cannot be comparable to other research, which used defined IEC parameters. However, it can be suggested that those recruited to the study perceived their infants' crying as excessive, which was equally meaningful, as evidence does suggest that most individuals who perceive their infants' crying to be excessive do reach the threshold for Wessel's 'Rule of Three' (St James-Roberts et al., 2019). Considering the studies' theoretical framework, this research argues that the critical factor is the caregiver's perception of the crying, rather than the crying itself. Therefore, this will remain a key focus within the study.

Furthermore, the study's exclusion criteria stipulated that families open to children's social care at any time throughout the research process were unable to take part. This decision was made on safeguarding grounds due to a link between IEC and an increased risk of abuse (Barr, 2014). Therefore, the researcher did not feel it was ethically appropriate to recruit families whose infants may already be classed as being at risk of harm or significant harm under the *Children Act 1989*. However, this does act as a potential limitation as the experiences of caregivers and the support they received were those of universal provision, rather than an investigation into specialist social care intervention and the needs of parents/carers who are likely to have experienced increased chronic stressors (UK Parliament, 2021).

'Microsoft Teams' was used for both the interviews and PAR groups. Poliandri et al (2023) criticise this approach due to a belief that this can pose difficulties for building a trusted relationship and rapport with participants. That being said, the mothers conflicted with these findings by describing how they felt able to be open and honest because every member of the PAR group had experienced IEC and so could empathise with them. Furthermore, this approach was successful in recruiting parents from differing geographical areas, enhancing the findings by providing data from various areas of the UK, including England, Scotland and Wales.

3.8 Conclusion

The research journey has been encapsulated throughout the chapter and presents why decisions, such as the use of PAR, were made (Brough, 2018). The adoption of PAR and qualitative methods was grounded in an interpretivist philosophical approach, aligned with the study's focus to understand the voices and experiences of those affected by IEC by placing those affected by the issue central to creating this change (Baum et al., 2006). This was particularly useful in understanding their experiences, identifying their wishes and acting on what they felt needed to happen (Vaughn & Jacquez, 2020).

Furthermore, the study's theoretical framework, allostatic load, provides context for why the research area may add value to the support provided to families who are already in receipt of social care provision (McEwen, 1998). Adopting a relativist approach to the study enabled the researcher to understand how there is no single truth and therefore it is individual to the person (Alharahsheh & Pius, 2020). To further reinforce this point, the allostatic load framework presents an idea for how stress is managed and is individual to the person; dependent on several factors, including the experience of chronic lifetime stress (Sturge-Apple et al., 2011). Ultimately, this methodology positions social support as a key factor in helping families manage the challenges associated with IEC, and lays the foundation for the development of effective, participant-informed interventions.

CHAPTER 4: RESEARCH FINDINGS

4.1 Introduction

This chapter presents the findings from the social care interviews and PAR groups. The study explored the experiences of parents whose infants cry excessively and examined the potential implications for social work practice.

The findings within this chapter have been separated into three sections; the Biological Factors, Psychological Factors and Social Factors. This is because the biopsychosocial perspective provides a framework for understanding how these different aspects interact with one another. Throughout this study, the allostatic load framework informed the interpretation of participants' accounts of stress and coping. However, the mothers' allostatic load was not measured directly within this study and is therefore used as a metaphor to help understand how a cumulation of stress influences how an individual perceives and copes with the cumulation of stress associated with persistent and recurrent crying (McEwen & Stellar, 1993).

4.2: Findings from Interviews with Social Care Professionals

The data collected from five social care professional interviews are presented within this chapter to demonstrate the understanding of IEC amongst those participants. The interviews were semi-structured, as this enabled the data to be comparable, whilst also allowing flexibility for the interviewer to delve into any aspect which required further exploration (Salmons, 2022).

The professionals varied in qualifications, job roles and sectors. All five professionals held a bachelor's degree in childcare, social care or psychology.

The following pseudonyms have been used to identify each interviewee.

- **Katie:** *Qualified Social Worker (SW) currently working within statutory child protection services*
- **Beverley:** *Social Work Apprentice (SWA) currently working within statutory child protection services*
- **Carla:** *Qualified Social Worker (SW) currently working part-time within children's social care with children looked after by the local authority. Previous experience working within a domestic violence organisation*
- **Kaya:** *Social Care Assistant (CA) working within an adult social care setting and with previous experience working as a manager for a children's charity*

- **Mia:** *Qualified Social Worker (SW) currently working within statutory fostering and adoption services.*

Through thematic analysis, seven overarching themes have been identified, which are included below.

Biological Factors

- Theme 1: Sleep Deprivation and Physiological Stress
- Theme 2: Hyperarousal and Escalating Stress Responses

Psychological Factors

- Theme 3: Emotional Distress and Psychological Burden
- Theme 4: Stress Coping, Adaptation and Resilience

Social Factors

- Theme 5: Family Structure and Social Circumstances
- Theme 6: Support as a Protective Factor
- Theme 7: Professional Recognition and Awareness of IEC

Each theme has been summarised within Table 6, including key points and the implications for practice.

Table 6: Findings Summary Table: Experiences of Social Care Professionals in Relation to Infantile Excessive Crying (IEC)

THEME	KEY POINTS	ILLUSTRATIVE QUOTES	IMPLICATIONS FOR PRACTICE
Sleep Deprivation and Physiological Stress	Sleep deprivation is a biological need with psychological outcomes.	<i>“Of course it must be hard for them; they must be tired really, really tired and we all know that sleep deprivation has a massive impact on somebody, massive impact on somebody’s, kind of, stress levels, how they’re able to manage things in life” (Katie SW).</i>	Professionals should consider sleep deprivation as a biological need which can influence psychological and cognitive functioning and increase allostatic load.
Hyperarousal and Escalating Stress Responses	Within an allostatic load framework, recurrent activation of the sympathetic nervous system can significantly impair a parent’s ability to cope with the stress associated with IEC.	<i>“She was struggling to the point where she rang the dad at like early in the morning saying that she was gonna murder her baby. That’s how stressed out she was, which is obviously, it’s upsetting...” (Mia; SW).</i>	Professionals to have an awareness of the allostatic load framework to help them understand how best to support families who are experiencing multiple stressors.
Emotional Distress and Psychological Burden	IEC may increase psychological distress with feelings of worry, frustration and self-blame.	<i>“I’ve not been in that situation, but I’ve, I’ve had a bit of like, say from my sister. It almost feels like it’s unbearable” (Beverley SWA).</i>	Multi-disciplinary training and improved awareness of the condition to help improve the support available to families.

	Distress associated with IEC is further compounded by a lack of information and uncertainty around why their infant may be crying excessively.		Professionals should provide families with information about IEC to relieve feelings of self-blame.
Stress Coping, Adaptation and Resilience	An individual's stress-coping abilities and resilience may be improved with more information on IEC. This information can reassure parents and reduce feelings of self-blame.	<i>"...when I realised I thought it was kind of like, oh, that's what it is...It's not just, it's not just me... It's not just, it's not, it's not his fault. That's why he's crying. Like there's nothing that I'm doing wrong, it is genuinely just him." (Kaya).</i>	More information should be provided to families informing them of IEC.
Family Structure and Social Circumstances	IEC can have negative impacts on a family's relationship and wider family functioning. IEC, within an already complex family situation, can further exacerbate presenting concerns	<i>"I think if there's already violence within the home that that violence could start to increase. Could the baby then become harmed because they're at that stage of frustration and can't calm the baby down?" (Katie; SW).</i>	Professionals should consider IEC within a wider family context. Professionals should assess the impact of IEC based on how this may interact with other adversities, such as substance abuse or domestic violence.

Support as a Protective Factor	Support may act as a protective factor for increased distress. Support may include emotional support and reassurance, informational support, and a respite from the crying.	<i>“That check-in with Mum, you know, how are you kind of coping? How are you kind of doing? And dad and carers.... I think parents need a lot of reassurance that they are actually doing the right thing” (Katie SW).</i>	Multi-disciplinary IEC training so that professionals feel more equipped to offer social support to families.
Professional Recognition and Awareness of IEC	Professionals demonstrated a lack of IEC awareness. Opportunities to intervene with families that the professionals had previously supported had been missed.	<i>“I would feel, I suppose slightly unequipped really, Um, on the topic. I would try my damndest, but I wouldn't feel an expert in the topic, by any means” (Carla SW).</i>	Multi-disciplinary IEC training so that professionals feel more equipped and able to recognise the signs of IEC and offer appropriate support.

4.2.1 Biological Factors

(i) Theme 1: Sleep Deprivation and Physiological Stress

Theme 1 discusses sleep deprivation as a physiological stressor from a biopsychosocial perspective (Engel, 1977). The impact of sleep deprivation as a new parent was discussed on several occasions throughout the interviews with professionals, with them demonstrating an awareness of how a lack of sleep may be associated with psychological concerns.

Beverley shared how her niece and nephew had cried excessively as babies and described how the combination of crying and sleep deprivation impacted her sister's mental wellbeing.

"I could really see the impact of her emotionally, having not been able to sleep and then the crying going on in the day" (Beverley SWA).

Beverley also suggested how sleep deprivation could affect an individual's ability to cope with stress.

"I know I'm going back to how they're coping, but I just think if they've got, it's the continued sort of crying and things that this might lead to them getting like a really short temper and things. So I'll be checking how they're managing that, how that's then with the little sleep and how it's impacting their mental health, and how they're dealing with it" (Beverley SWA).

This viewpoint was also shared with Katie, who described how being tired can have a "massive impact" on an individual's ability to manage stress.

"Of course it must be hard for them; they must be tired really, really tired and we all know that sleep deprivation has a massive impact on somebody, massive impact on somebody's, kind of, stress levels, how they're able to manage things in life" (Katie SW).

Across these quotes, Beverley and Katie referred to sleep as a physiological need which can intensify the stress associated with IEC, whilst also affecting their ability to cope. Thus, this suggests that the extent to which a person struggles with IEC may extend further than the crying itself to other factors, such as sleep deprivation. Together, this can impair psychological and cognitive functioning (Engel, 1977). From an allostatic load perspective, these quotes

suggest that sleep may have contributed to a cumulation of stress, therefore increasing a person's allostatic load (McEwen & Stellar, 1993).

(ii) Theme 2: Hyperarousal and Escalating Stress Responses

Within the context of allostatic load, a biological response to a stressor is the activation of the sympathetic nervous system which can provoke a hyper- or hypo-arousal state. With these states, individuals may become increasingly angry, frustrated or anxious (hyperarousal) or become withdrawn or disassociate (hypoarousal) (Sturge-Apple et al., 2011). Therefore, this theme presents the interview findings, where the mother's responses to the crying appear to surpass those within the range of a 'normative arousal state'. This signals a possible heightened sympathetic nervous system response to the crying (McEwen & Stellar, 1993).

Mia described how she had previously supported a mother whose daughter had cried excessively; however, professionals had not recognised this at the time. She shared how the level of stress intensified one evening when the mother made threats of harm towards her infant. Within the context of allostatic load, opportunities to intervene and offer support may have been missed; therefore, potentially contributing to the cumulation of stress she experienced (McEwen & Stellar, 1993).

"She was struggling to the point where she rang the dad at like early in the morning saying that she was gonna murder her baby. That's how stressed out she was, which is obviously, it's upsetting..." (Mia; SW).

Similarly, Katie also shared how her brother and sister-in-law experienced panic, frustration and worry when their infant cried excessively. The uncertainty surrounding the crying led her family members to question *'Why is the baby not crying? 'Why is the baby not calming?'* This appears as a heightened emotional response with feelings of helplessness and desperation noted.

"Mum and dad passing the baby from each other and trying to calm the baby down, that panic of 'Why is the baby crying?' 'Why is the baby not calming?' 'What, what can we do about it?'" (Katie SW).

These quotes suggest that activation of the sympathetic nervous system can leave parents feeling worried, frustrated, helpless and experiencing intense distress. Within the context of allostatic load, Mia's description also suggests that continual activation of the sympathetic nervous system can lead to increased distress over time, where individuals do not fully return to their normative arousal state. If individuals are unable to return to their normative arousal

state between each crying episode, this could accumulate over time and may result in emotional overwhelm.

4.2.2 Psychological Factors

(i) Theme 3: Emotional Distress and Psychological Burden

Whilst Themes 1 and 2 have explored the biological factors associated with stress and IEC, Theme 3 focuses on how IEC may affect an individual's psychological function. Over the course of the interviews, all five professionals demonstrated varying degrees of awareness; with those with personal experience showing a deeper insight.

Beverley described how she could see the impact of IEC on her sister's emotional wellbeing, describing the situation as 'unbearable'.

"I could really see the impact of her emotionally" (Beverley SWA).

"I've not been in that situation, but I've, I've had a bit of like, say from my sister. It almost feels like it's unbearable" (Beverley SWA).

Similarly, Katie witnessed her brother and sister-in-law experiencing frustration and worry that something could be wrong with their infant. Within the context of the allostatic load framework, self-blame and uncertainty around why their infant may be crying excessively appeared to act as an additional contributor of stress (McEwen & Stellar, 1993).

"But I could see it was very, very frustrating for them. And, and worrying, they worried that they were doing something wrong or there's something wrong with the baby" (Katie SW).

From these quotes, it demonstrates how IEC may increase psychological distress with feelings of worry, frustration and self-blame reported. Notably, feelings of self-blame were associated with uncertainty and worry about why their infant may be crying. With no definitive answers, individuals appeared to internalise this, placing themselves as the possible reason. Therefore, the cumulative burden of stress appeared to extend beyond the crying, with perceptions of the crying and its underlying cause being a key determinant of how the crying was managed.

(ii) Theme 4: Stress Coping, Adaptation and Resilience

Whilst Theme 3 has discussed the psychological impacts of IEC, Theme 4 focuses on how parents may adapt to the situation and manage the stress associated with the condition.

Kaya's own child cried excessively two years prior to the interview taking place, and she described how she coped better when she was able to recognise IEC as a condition that she had little influence over. The reframing of the condition, which was gained through an increased understanding of IEC, enabled Kaya's perspective to change from self-blame to relief and reassurance.

"...when I realised I thought it was kind of like, oh, that's what it is...It's not just, it's not just me... It's not just, it's not, it's not his fault. That's why he's crying. Like there's nothing that I'm doing wrong, it is genuinely just him." (Kaya).

Furthermore, the experience of IEC appeared to have long-lasting effects on Kaya's resilience, noting that this experience has made her 'more relaxed'. This demonstrates how successfully overcoming a stressful period of her life increased her long-term resilience and stress-coping abilities.

"I think actually on the whole, I think it's made me more relaxed in a way, because I've learned to just let the little things go... I think as a parent now I just, I just have to let things go a little bit because I can't do everything and, and I can't constantly, I can't constantly stimulate him, I can obviously just do my best" (Kaya CA).

Whilst Kaya's quote has demonstrated how increased resilience and stress-coping abilities may be improved through lived experience and more information on IEC, Mia suggests that some caregivers may require additional support to reach this point. Therefore, Mia highlighted the potential value of professional support in working in partnership with parents to improve their stress-coping abilities.

"...like I say, for parents; let's help you get there, let's help you get to the point where you're able to manage this a little bit better" (Mia SW).

Overall, these quotes suggest that an individual's stress-coping abilities and resilience may be improved with more information on IEC. In doing so, caregivers can reframe the condition as being something which they are not responsible for, reducing feelings of self-blame and increasing parental confidence.

4.2.3 Social Factors

(i) Theme 5: Family Structure and Social Circumstances

Underpinned by the allostatic load framework, Theme 5 explores how family structure and wider social circumstances may influence how an individual experiences and manages periods of increased stress, such as IEC (McEwen & Stellar, 1993).

Mia described several factors which she believed may increase the challenges associated with IEC, including being a single parent, substance misuse, and having multiple young children. Within the context of allostatic load, an activation of the sympathetic nervous system may be more likely where there is a cumulation of stressors. In this situation, having multiple children alone may not necessarily result in increased allostatic load; however, when it is combined with poor parental mental health, alcohol use, and being a single parent, the psychological effects may be much more complex.

“Um, two other babies, like a toddler age and I think that’s difficult in itself because you know if one cries, then another one can cry. And if you’re a single parent, that’s just, it’s so stressful....So, I don’t think taking into account her mental health, her alcohol use, possible drug misuse and then obviously lack of sleep. It all has a massive effect, doesn’t it?” (Mia; SW)

In addition, Katie described the impact that IEC had on her brother’s circumstances, with significant challenges experienced within the marital relationship. She described her view that IEC increased conflict within the marital relationship which eventually led to the couple’s separation.

“Yeah... so they separated, and I do feel that that was massively down to, kind of, that. That was a stressful time that, you know, my brother maybe looking at my sister-in-law kind of saying, well, your mum, why can’t you stop the baby crying? Maybe my sister-in-law was looking at my brother and saying, well, your dad, why can’t you stop it?... I think then that caused the arguments in the relationship and causes the relationship to then start to break down when they started blaming one another” (Katie SW).

In addition, Katie suggested that violence within the partner relationship may also pose a safeguarding risk to the infant. Underpinned by the allostatic load framework, perpetrators of violence may present in a hyperarousal state with frustration and anger present. In this

scenario, the presence of IEC may act as an additional stressor among individuals who struggle to regulate their emotions.

“I think if there's already violence within the home that that violence could start to increase. Could the baby then become harmed because they're at that stage of frustration and can't calm the baby down?” (Katie; SW).

Meanwhile, Kaya reflects on a previous experience she had professionally, where an older sibling had been removed from their mother's care shortly after the birth of his brother. Although IEC was not recognised by professionals at the time, Kaya now feels the presence of crying had a negative impact on neglect of the older sibling. Within the context of allostatic load, a cumulation of stress further compounded by IEC may have affected the parents' ability to cope with other daily tasks, such as ensuring her eldest son was adequately cared for. Thus, Kaya's account supports Katie's early quote that IEC may intensify pressures for the family and present a safeguarding concern. Where families require the involvement of children's social care due to adversities that they may be experiencing, IEC may act as an additional stressor in an already complex family situation (McEwen & Stellar, 1993).

“No, so in terms of, I mean, the child actually was removed in the end...there was a lot of arguments in the house, and obviously, a baby crying isn't going to help that...I felt like there was an increase in the child displaying erm, more unkempt...and they, yeah, they were getting behind at school...Erm, they, it was more neglect” (Kaya CA).

In addition, Kaya shared how she had her own child who cried excessively and described how this influenced her social interactions with peers. She explained how she would ‘*dread*’ seeing her friends as they would be speaking together, and she would not be able to join in with the conversation. This quote demonstrates the potential impacts of IEC on isolation and social connections. As social support may act as a protective factor for increased distress, the absence of this support may increase the risk of allostatic load (McEwen & Stellar, 1993).

“They could go to, we'd go for “Oh, let's go for a coffee and a cake”. And would think, I used to dread it. And I used to think, oh, we've, I've got to go. I've got to go sit and entertain him, and we never, I never used to get to speak” (Kaya).

Overall, these accounts suggest that IEC can have negative impacts on a family's relationship and the wider family functioning. In addition, the experience of IEC within an already complex family situation can further exacerbate presenting concerns. This supports the allostatic load framework by demonstrating how IEC can have detrimental impacts on the family when it is

combined with an existing cumulation of stress; such as arguments within the home, domestic violence, poor parental mental health, and substance misuse.

(ii) Theme 6: Support as a Protective Factor

Whereas Theme 5 has demonstrated potential risk factors associated with IEC and the impact that IEC could have on existing vulnerabilities, Theme 6 highlights the importance of support as a protective factor to reduce these risks and improve a parent's ability to cope during this period of increased stress.

Beverley shared how she provided support to her sister by providing her with respite from the crying. For families who are struggling emotionally with the challenges of IEC, this break could enable them to recover and return to a normative arousal state. This recovery is important as McEwen & Stellar (1993) suggest that allostatic load occurs when a cumulation of stress compounds one another, with little opportunity to psychologically reset.

"I felt for my sister more because she was going through a lot. You wanna support her and give her a break because I think I could really see the impact of her not being able to sleep and then the crying going on in the day. It was sort of like we were trying to be there for her as a family and make sure that we were checking in on her, supporting her as much as we could and giving her little breaks when we could as well to give her a break" (Beverley SWA).

Using her personal experience, Beverley shared how important social support is when assessing a parent's ability to cope. Beverley suggested that receiving emotional support and "offloading to others" could enable a person to cope and overcome periods of distress.

"I think I'd wanna be assessing like how the mum is coping with it and how she's offloading to others" (Beverley SWA).

With Beverley placing value on a family's social support, she explained how developing a clear family plan could ensure that caregivers have access to support through their network of family and friends. Beverley suggested that professionals are key to facilitating this support.

"And I suppose like creating that, that family plan, as well of who they can go to and lean on when needed kind of thing" (Beverley, SWA).

Similarly, Katie described how emotional reassurance could also strengthen an individual's capacity to cope. Katie's account suggests that reassuring parents may alleviate self-doubt and improve parental confidence.

"That check-in with Mum, you know, how are you kind of coping? How are you kind of doing? And dad and carers.... I think parents need a lot of reassurance that they are actually doing the right thing" (Katie SW).

In addition to emotional support and respite from the crying, Beverley discussed the importance of informational support to provide families with hope and reassurance that IEC is a short-term condition.

"Educate them of why it is and because I think that's really important that they understand that it's not always like that" (Beverley SWA).

Through offering this support to families, Katie highlights how this can reduce feelings of isolation and offer reassurance to parents that they are not on their own.

"I think they wouldn't feel they're alone. I think they'd understand that, actually, they're not alone, and other parents have experienced this. It doesn't mean they're bad parents...It doesn't mean that they're doing absolutely anything wrong. It just means that they have got, you know, they have got a baby that does excessively cry" (Katie SW).

Overall, these accounts highlight the potential benefits of social support. In addition, it emphasises the value of offering varied support to families, including emotional support and reassurance, informational support, and a respite from the crying. Together, these may enable parents to feel more informed about the condition, reassured that the crying will not last long-term, and less alone in their struggles. In addition, providing parents with respite from the crying may reduce risks of increased allostatic load by providing them an opportunity to emotionally recover and reset (McEwen & Stellar, 1993).

(iii) Theme 7: Professional Recognition and Awareness of IEC

Despite the potential value of social support which has been described within Theme 6, Theme 7 explores the professional awareness and recognition of IEC.

The consensus among all five professionals was that they did not have the knowledge or awareness to support families affected by IEC. As stated by Carla, she felt “*unequipped*” and not an “*expert*” on the condition, despite her desire to provide support to families.

“I would feel, I suppose slightly unequipped really, Um, on the topic. I would try my damndest, but I wouldn’t feel an expert in the topic, by any means” (Carla SW).

This perceived lack of awareness and information may have contributed to social care professionals leaning heavily on healthcare services. This suggests that social care professionals view the condition as a health issue, demonstrating a lack of awareness of how the condition may affect wider family functioning.

“I think sometimes they [social workers] lean heavily on health and specialists” (Carla: SW).

By social care professionals feeling “*unequipped*” to support families and depending on health care professionals to lead on decision-making, this could act as a barrier to identifying families who may need support. This is supported by Kaya’s account, where she observed previously missed opportunities for intervention.

“I think looking back now from when I was working with the families, I can see actually, that there was families that I was working with that had children with excessive crying, and it wasn’t picked up” (Kaya, CA).

Similarly, Katie described how she had not picked up the possible signs of IEC previously when working with families. In these situations, Katie observed an infant crying; however, she viewed these as individual episodes, rather than considering the crying as a regular occurrence. From an allostatic load perspective, Katie identified an individual stressor but did not assess the impact of the cumulation of stress on a family’s psychological functioning (McEwen & Stellar, 1993).

“I tend to find that when I go in as a social worker, erm.. You don’t maybe see it as much, you don’t maybe pick up on it as much. You know you’ll have, kind of, parents saying ohh, you know, they’ve been crying and you’re trying to kind of support them to kind of, you know, comfort the baby, calm the baby down. Erm.. then normally after, when the baby’s calm, you kind of think that you’ve done, your, kind of, job and, kind of, walked away, but really thinking about it that, that isn’t the case, no” (Katie SW).

When exploring potential barriers to families accessing support for IEC, Katie shared how she feels families are not always honest with her about their experiences as they may be fearful of the outcome if they were. This fear could leave families isolated, feeling unable to speak about the extent of their struggles with professionals. As discussed within Theme 6, the absence of emotional support, reassurance or information on IEC could further increase allostatic load (McEwen & Stellar, 1993).

"Yeah, I do think kind of, yeah, that families, kind of, families sometimes keep that information from us out of fear. I think it's absolute fear that they don't want to kind of tell us" (Katie SW).

However, Kaya, whose own child cried excessively, stated that she did not initially seek support for her infants' crying as she did not recognise the condition as IEC or 'colic'.

"I kind of dealt with it for quite a while without realising what it was" (Kaya).

This suggests that a lack of awareness raising may not solely be an issue within children's social care, but rather a wider professional development need. Whilst earlier discussions have placed reliance on the health sector to lead on the management of the condition, Katie's experience is that it is still not spoken about.

"There doesn't seem to be much kind of information from health visitors as well, they very much touch on safe sleep, the weaning, the bottle feeding, the breastfeeding but I very, never hear a health visitor ever speak about what to do if a child is excessively crying" (Katie; SW).

In addition, Kaya's earlier quote within Theme 4 suggests that she instead internalised her infants' crying episodes as something that she was doing wrong by explaining *"when I realised I thought it was kind of like, oh, that's what it is...It's not just, it's not just me"*. This suggests that more information and societal awareness of IEC could reduce parental self-blame and encourage families to access support.

Overall, Theme 7 has demonstrated a perceived lack of awareness of IEC among social care professionals. Rather, instances have been shared where opportunities to intervene and support families may have been missed. Within the context of the allostatic load framework, unsupported or unrecognised needs may enable the cumulation of stress to continue, thus increasing the risks of allostatic load (McEwen & Stellar, 1993).

4.3: Findings from Participatory Action Research Group with Parents/Carers

In this section of the chapter, findings from the PAR groups are presented. The purpose of the PAR groups was to explore and understand the experiences and perspectives of parents who have recently cared for an infant who cries excessively. This action would promote the development of a toolkit for social care professionals. Three PAR groups took place between January and March 2024. The babies of all three participants were singleton births and were exclusively breastfed at the time of their excessive crying. All three PAR group members were married or cohabiting with the father of their child.

The pseudonyms below have been used throughout the chapter to identify each PAR group member anonymously:

Erin: *mother of one (son – 13 weeks during the first PAR group) who continued to cry excessively during the first two PAR groups (Scotland)*

Kylie: *mother of one (daughter- 10 months old during the first PAR group) who no longer cried excessively (England)*

Melissa: *mother of two (youngest son- 11 months old during the first PAR group) who no longer cried excessively (Wales)*

Thematic analysis of the PAR group discussions identified six key themes, which are presented below;

Biological Factors

- Theme 1: The Physical Toll of IEC
- Theme 2: When Stress Reaches ‘Breaking Point’

Psychological Factors

- Theme 3: Living with Guilt and Self-Blame
- Theme 4: Searching for Answers and Regaining Control

Social Factors

- Theme 5: The Value of Support Networks
- Theme 6: Gaps in Professional Support

Each theme has been summarised within Table 7, including key points and the implications for practice.

Table 7: Findings Summary Table: Experiences of Parents in Relation to Infantile Excessive Crying (IEC)

SUBTHEME	KEY POINTS	ILLUSTRATIVE QUOTES	IMPLICATIONS FOR PRACTICE
The Physical Toll of IEC	Sleep deprivation may disrupt cognitive functioning, impair emotional regulation, and reduce tolerance to crying.	<i>"I think especially when you're sleep deprived and like completely exhausted and overwhelmed and emotional, it's quite hard to think logically and come up with a plan" (Kylie).</i>	Professionals should consider any wider circumstantial contributors to stress (including sleep deprivation) to help understand how these may further intensify parental distress.
When Stress Reaches 'Breaking Point'	Caring for an infant who cries excessively can activate the sympathetic nervous system and place caregivers in a state of hyperarousal.	<i>"I myself can't even cope with the crying" (Melissa).</i>	Professionals should have an awareness of the allostatic load framework to help them to understand how persistent crying may activate a sympathetic nervous system response.
Living with Guilt and Self-Blame	IEC can affect an individual's psychological functioning, with feelings of guilt and self-blame.	<i>"You do just constantly sit there and go, ' What have I done wrong? What am I doing differently to other people? Why? Why is my baby not happy? Why does my</i>	More information on IEC to reassure parents that the condition is self-limiting

	Feelings of guilt and self-blame may stem from the perceived reason for the crying, rather than the crying itself.	<i>baby not like me? You know, all these things that go through my head on a regular basis right now” (Erin).</i>	and not a reflection of their capabilities. Professionals should offer reassurance to parents, highlighting their strengths and what they are doing well.
Searching for Answers and Regaining Control	Parents felt unprepared and ‘flabbergasted’ by the onset of crying. A parent’s search for answers extended beyond locating a cause for the crying and could have acted as a coping strategy. Parents devised their own strategies for coping.	<i>‘cause I’ve literally, I’ve just spent like hours and hours and hours researching it (Melissa)</i>	A greater awareness of IEC across multi-agency settings to encourage caregivers to seek support from trained and knowledgeable professionals. Professionals to provide details to families on coping strategies.
The Value of Support Networks	All three mothers appreciated the support of their partners.	<i>“I have to give him to his dad and get him to take him away and settle him for a bit because I, it just gets to the point where I’d literally just, I can’t even bear it”. (Melissa)</i>	Families to be encouraged to develop a close support network through family group conferencing.

		The mothers described the value of social media. Emotional support and informational support provided different benefits to different parents.		Professionals to view IEC as a condition which affects the whole family. Professionals to offer both emotional and informational support to families affected by IEC.
Gaps in Professional Support	Professionals did not understand the extent of families' struggles. All three mothers desired more support from professionals. Using PAR principles, a toolkit was co-developed focused on increasing awareness and understanding among social care professionals.	<i>"You know the amount of, you know, doctors, health visitors, you know various people now that we've spoken to that said, "oh, it's just colic" or "he's just a colicky baby" and it, it really it really grates on me a little bit now because it just, I feel like it totally diminishes everything that he's going through and the impact it has on him and the impact it has on us" (Erin).</i>		A need for improved professional awareness and training to ensure that the impact of IEC on families is recognised and appropriately supported.

4.3.1 **Biological Factors**

(i) Theme 1: The Physical Toll of IEC

From a biopsychosocial perspective, sleep is a physiological need and thus, sleep deprivation could act as a physiological stressor with potential implications on psychological functioning (Engel, 1977).

Kylie described how sleep deprivation affected her ability to think 'logically'. Within the context of allostatic load, this may suggest that Kylie was experiencing increased allostatic load, as this can impair cognitive functioning (McEwen & Stellar, 1993).

"I think especially when you're sleep deprived and like completely exhausted and overwhelmed and emotional, it's quite hard to think logically and come up with a plan" (Kylie).

In addition, Kylie also described sleep deprivation as affecting her emotional regulation. Within the context of the allostatic load, this quote demonstrates how stress response systems can affect psychological outcomes (McEwen & Stellar, 1993). Furthermore, Kylie's account that tiredness "*definitely affects [her] more*" suggests that exhaustion may have intensified her emotional reactions to the crying.

"When I'm tired, my emotions go out of the window. I can't really control emotions if I've not had enough sleep, so that definitely affects me more" (Kylie).

Overall, sleep deprivation may have acted as a physiological stressor for Kylie. This demonstrates how psychological outcomes could be compounded by physiological need. Within this situation, Kylie suggests that she cannot "*control emotions if [she's] not had enough sleep*". Thus, a lack of sleep may disrupt cognitive functioning, impair emotional regulation, and reduce tolerance to the crying.

(ii) Theme 2: When Stress Reaches 'Breaking Point'

Whilst Theme 1 has examined sleep deprivation as a biological need, Theme 2 explores situations where physiological responses to stress appear to surpass those expected within a normative arousal state. This suggests that the cumulation of stress activated a strong sympathetic nervous system response (McEwen & Stellar, 1993).

Kylie's use of the phrase "*complete mental overwhelm and overload*" shares similarities with 'allostatic overload'. This is because the activation of Kylie's stress response appeared strong

and persistent with minimal opportunity for full physiological and psychological recovery (Fava et al., 2019; McEwen et al., 1993).

“I don't think in my whole life, and I've had difficult things happen to me as everyone has. I don't think I've ever felt that intense despair. Like complete desperation and despair. Like it's just complete mental overwhelm and overload, and it's so intense” (Kylie).

Similarly, Melissa and Kylie both described how they cannot manage or cope with the crying. Both quotes suggest that the crying may contribute to ‘allostatic overload’ where the cumulative burden of stress is at its peak, and physiological and psychological recovery between each crying episode is minimal or absent (McEwen & Stellar, 1993; Fava et al., 2019).

“I myself can't even cope with the crying” (Melissa).

“I can't. I can't manage this. Like, I just want it to stop” (Kylie),

Activation of the sympathetic nervous system was further supported by Kylie's metaphor of feeling as though she was “getting fired at with machine guns”. This metaphor may suggest that Kylie was based in a hyper state of arousal where she experienced fear and was hypervigilant to her surroundings (Sturge-Apple et al., 2011).

“Yeah it's like you're in the trenches getting fired at with machine guns, like ahh ‘I don't know what to do’” (Kylie).

Overall, the accounts by Kylie and Melissa suggest that caring for an infant who cries excessively can activate the sympathetic nervous system and place caregivers in a state of hyperarousal. Furthermore, their accounts of being unable to manage the crying suggest that this may have contributed to ‘allostatic overload’, in which their capacity to cope exceeded their resources (Fava et al., 2019).

4.3.2 Psychological Factors

(i) **Theme 3: Living with Guilt and Self-Blame**

Theme 3 explores the psychological implications of IEC. Using a biopsychosocial perspective, this theme demonstrates how Theme 1 (the impact of sleep deprivation) and Theme 2 (activation of the sympathetic nervous system) closely interlink with the mothers' psychological functioning (Engel, 1977), with feelings of guilt and self-blame noted.

Erin described constant thoughts of self-blame, questioning her own capabilities and what she was doing wrong.

"You do just constantly sit there and go, 'What have I done wrong? What am I doing differently to other people? Why? Why is my baby not happy? Why does my baby not like me? You know, all these things that go through my head on a regular basis right now" (Erin).

Similarly, Kylie also experienced these thoughts. Kylie's account highlights how the emotional burden of IEC may have been compounded by her perceived failure to fulfil the role of a 'mother'. This suggests that caregivers may experience IEC differently depending on their parenting role, and mothers may experience more feelings of failure and guilt due to not fulfilling their stereotypical gender role.

"I thought, sort of, felt like I was failing her and that, that she was gonna hate me 'cause I wasn't... I wasn't solving the problem. And I think, I don't know if it's the same for fathers, but I felt particularly as a mother, that like it was... It's like my only job to sort of like... is to, like, comfort her and feed her, and, and when I stopped breastfeeding, I felt a similar way... I was like, oh, it was, it was my job to feed her, and I failed" (Kylie).

Similarly, Erin suggested that being a first-time parent also contributed to the cumulative burden of stress she experienced. Having had no previous children and doubting her own parental abilities, Erin internalised the crying and viewed this as something she was doing wrong. In this situation, information on IEC may have reduced these feelings by reassuring her that IEC was self-limiting and she was not doing anything wrong.

"The thought of what have I, what have I done to 'cause this? What? What have I done? What have I not done? What am I doing at the moment? Why? You know, I've

got lots of nieces and nephews, and he is the first one that has suffered with colic in this way. What have I done differently?” (Erin).

Kylie experienced long-term guilt due to experiencing thoughts of harm towards her daughter. This suggests that Kylie’s physiological responses discussed within Themes 1 and 2 may have contributed to her experiencing unwanted thoughts of harm, which, in turn, resulted in feelings of guilt (Engel, 1997). Within the context of allostatic load, this suggests that the unwanted thoughts of harm may have acted as an additional source of stress in themselves.

“And being completely honest, before I had a baby, I think I’d, I’d see stories in the news as you do about, you know, a mother that shook her baby and, and all this sort of thing.... And you think like, ‘what an awful person, like, how could you do that?’ Like you just don’t have the empathy or the understanding of, you know what that situation’s like... And I think it would, yeah, if you can have more empathy and understanding, it might feel a bit less judgement-based. I never shook Daisy. I keep bringing this up, but it just scared me so much when I wanted to shake her. It’s really traumatising, even having that feeling, and I felt like an awful person for even thinking of doing it, if that makes any sense” (Kylie).

Overall, this theme has demonstrated how IEC may affect an individual’s psychological functioning, with feelings of guilt and self-blame experienced by Erin and Kylie. On reflection, it is evident that these feelings may stem from what the parents believed was causing the crying, rather than solely the crying itself. From an allostatic load perspective, Kylie and Erin’s perception of the crying, which they translated as something they were doing wrong, appeared to act as a burden of stress in itself (McEwen & Stellar, 1993).

(ii) Theme 4: Searching for Answers and Regaining Control

Theme 4 highlights the process that all three mothers took to try to make sense of their infants’ crying and regain control. Within the context of cumulative stress and the allostatic load framework, this follows on from the earlier three themes, as the act of searching appeared as an attempt to regain a sense of control during uncertain and flabbergasting circumstances (McEwen & Stellar, 1993).

Kylie shared how she first felt when IEC initially started, describing an uncertain situation which she did not feel prepared for. Within the context of allostatic load, the quote suggests that a lack of information about IEC may have compounded the level of stress she experienced (McEwen & Stellar, 1993).

"I didn't really know what it was. I didn't really know what to do. It kind of hit us really hard, and we just felt like, flabbergasted. It was like we're in a warzone, just like, not... Yeah, not feeling prepared at all" (Kylie).

Similarly, Erin's account also suggests that more information would have enabled her to feel more mentally and physically prepared for the potential occurrence of IEC, which would have enabled her to cope better, rather than feeling as though they were "thrown into" it.

"I think it would have been reassuring knowing that it wasn't completely... expected, to expect it or the possibility that it could happen... rather than being prepared for the nice sort of fluffy newborn stage, and then suddenly being thrown into colic and excessive crying" (Erin).

Rather, all three parents had been informed by a health professional that their infant was healthy, and there was no underlying cause; however, this did not appear to deter the mothers from searching for answers themselves. This suggests that the search could extend further than reducing the crying and may have acted as a coping strategy for the parents to regain some control through an uncertain period.

"Cause I've literally, I've just spent like hours and hours and hours researching it (Melissa)

"I think that's where you end up going down a bit of a rabbit hole with the internet because you start looking for all these things, you start looking for a solution yourself" (Erin).

"...we'd, we'd researched the heck out of it" (Kylie)

Kylie described how she would rather try a possible treatment, even if there was no clear evidence of its effectiveness. This suggests that remaining proactive in a search may have benefitted Kylie and acted as a distraction or coping strategy.

"Even, even if they can't say like, "oh, we don't know if this exists or if this works", at least it just gives you something to try, rather than just listening to screaming for hours on end" (Kylie).

However, this search for answers provided some psychological relief to Kylie when she was able to identify her daughter's crying as 'colic'. This quote supports earlier discussions that the

distress associated with IEC may extend further than the crying itself. Within this situation, Kylie's daughter likely continued to cry at the same rate and severity; however, reframing the condition as 'colic' reduced her fears that she was being rejected by her infant.

"But I think there was a bit of a turning point for me when we were able to like label it as 'colic' and label it as something's wrong with or whatever that we then had, like a common enemy. And then I felt more, more sympathy. I mean, I felt sympathy in the 1st place, but I don't know if I'm making any sense. But I felt less like she was rejecting me. And it was between me and her and more that, like, I'm so sorry for you; we have this common enemy that we're, we're trying to, to beat here" (Kylie).

Evidently, the search for answers was not solely focused on reducing crying duration, but also on identifying strategies that they could use to help manage better with the burden of stress that they experienced. In doing so, Kylie and Erin both sourced strategies that they could use. Whilst the crying's intensity may have remained the same, Kylie's strategy of listening to music and singing could have acted as a distraction, providing her with respite from listening to the crying and therefore, emotionally recover. The opportunity to emotionally recover is important as it reduces the risk of 'allostatic overload' (McEwen & Stellar, 1993).

"I felt like I was missing some of the practical strategies that I worked out myself to just cope with it. So, I don't know if this is recommended, but I found having earphones and just listening to some nice music and jiggling her to music and singing.... Like I probably looked absolutely mental, but it just helped me get through that, through that, like really critical point of just, yeah, getting, getting through that bit" (Kylie).

"we've got techniques, but in terms of you, bouncing about... my husband's bouncing him about right now actually" (Erin).

Overall, Theme 4 has demonstrated a journey that parents may go through when caring for an infant who cries excessively. Initially, parents felt 'flabbergasted' by the onset of crying, and this appeared to prompt them to search for answers themselves. Evidently, the search for answers may not have been focused on the reduction of crying, but rather a coping strategy used to help the mothers regain control during an unsettling period. For Kylie, one source of stress appeared to reduce when the situation was reframed as 'colic'. Thus, whilst it is likely her daughter's crying remained the same intensity, Kylie's perception of the cry changed, which reduced feelings of guilt and failure. Nevertheless, over time, both Kylie and Erin described coping strategies that they had developed to increase their capacity to cope. These

strategies may be essential for psychological recovery and reducing the risk of 'allostatic overload' (McEwen & Stellar, 1993).

4.3.3 Social Factors

(i) Theme 5: The Value of Support Networks

Theme 5 explores the potential value of support networks within the management of IEC. These findings are closely linked to the allostatic load framework, as social support could be critical in how a person perceives and responds to stress (McEwen & Stellar, 1993). Where individuals have a negative or absent support network, there is a greater likelihood for them to experience increased allostatic load (McEwen & Stellar, 1993; Brooks et al., 2014). Thus, a positive support network may act as a protective factor from the cumulative burden of stress associated with IEC.

All three mothers described how the presence of a supportive partner enabled them to take short breaks from their caregiving responsibilities when the emotional demands became too overwhelming. These accounts suggest that partner support provided the mothers with temporary relief from IEC to enable them to emotionally recover, as per the allostatic load framework (McEwen & Stellar, 1993).

"I have to give him to his dad and get him to take him away and settle him for a bit because I... I can't even bear it" (Melissa).

"We take it in turns when each of us needed to duck out" (Kylie).

In addition to partner support, the three mothers described how valuable social media support groups were. Melissa and Erin described how they would use Facebook groups to search for information, with Erin perceiving this support as being more helpful than healthcare professionals.

"I totally, I found so much comfort in the Facebook groups...But I think, erm... you know a lot, well, everyone in there is usually a mum and there's, there are some mums that seem more knowledgeable" (Melissa).

"...that's where I'm finding my information from, rather than the healthcare staff themselves" (Erin).

Whilst all three parents initially focused on trying to locate a cause for the crying, Kylie's approach appeared to shift focus to identifying strategies and emotional support which may improve her capacity to cope. This signifies how parents may access support for varying reasons; some may seek reassurance to improve psychological coping, whereas others may benefit from informational support. Notably, Erin and Melissa had both paid privately for private support in an attempt to reduce their infants' crying, whereas Kylie had not. This suggests that, whilst Erin and Melissa continued to see value in identifying an underlying cause for the crying, Kylie appeared to focus more on strategies she could use to improve her stress-coping abilities.

"It was just that old, like sad thing that if everyone else is having a difficult time, you feel better...If you're having a difficult time, it's like bringing together like, it's the wrong way, it should be, isn't it? But it's just, everyone else is miserable and having the same thing, and it makes you feel better somehow" (Kylie).

Overall, all three mothers shared the benefits of accessing social support from individuals who could empathise with them and held an understanding of what it was like to care for an infant who cries excessively; this included their partner and other parents on social media. Across the three mothers, it was evident that the rationale behind accessing this support varied; with Melissa and Erin appearing to focus primarily on locating a cause for the crying, whereas Kylie's focus appeared to shift towards a need for reassurance, understanding and empathy. This suggests a need to provide emotional and informational support to families, which may alleviate one source of stress.

(ii) Theme 6: Gaps in Professional Support

While Theme 5 has described the potential value of a positive support network, Theme 6 explores the gaps in professional support noted by all three mothers. The theme also includes recommendations for practice and for the development of the social care draft toolkit, which became the study's outcome.

Melissa reflected on the hidden nature of IEC, particularly its occurrence during the night, which meant that professionals were rarely present during most periods of distress. Therefore, this quote demonstrates how Melissa perceived professionals as not always considering or appreciating how difficult her situation was. From an allostatic load perspective, this may suggest that professionals may not consider the impact of the cumulative burden of stress associated with IEC but rather base their assessments on individual crying episodes they observe during the day (McEwen & Stellar, 1993).

"I don't think healthcare professionals, or anyone really understands until you've actually been through it yourself. And it's those times where, like normally you see the doctors or whoever in the day and that, that screaming normally happens at night. And it's normally when you're on your own and you're very isolated and, and yeah, I just think, yeah, that, that I think the healthcare professionals, they don't always really understand. They don't actually ever really see the baby at their peak like, until you've had a baby screaming for hours, you can't really understand what that's like" (Melissa).

Meanwhile, feedback from Erin and Kylie was that the use of the term 'colicky', which was used by professionals, undermined their struggles and the extent of what they had experienced as a family. Whilst the reframing of 'colic' had positive psychological implications for Kaya and Kylie (as discussed earlier in Theme One), the use of the phrase 'just colic' or 'colicky' was interpreted by Erin as dismissive and appeared to further compound the stress she experienced.

"Oh, it's just colic", or "he's just a colicky baby" it really diminishes everything that he's going through and the impact it has on us" (Erin).

In addition, all three mothers described how professionals would focus primarily on the health of their baby but overlooked their needs or struggles as parents. Kylie shared how no one considered or asked her how she was managing.

"Nobody ever said like, are you coping?" (Kylie).

Whilst understanding and emotional support were perceived to be limited, all three mothers also regarded professionals' informational support to be conflicting, which added to the uncertainty they experienced. Notably, the mothers appeared to place the blame on professionals when their advice conflicted with online information, rather than vice versa. This suggests that parents may have had more confidence in the information they read online, rather than what they were advised by a professional.

"Some said try infacol, some said it does absolutely nothing" (Erin).

Rather, mothers perceived professional guidance to be centred around the advice to "not shake their baby".

"And they just say, you know, if your baby does get that, don't shake them" (Melissa).

Erin and Kylie both described how this “unhelpful” advice did not consider the “middle ground” of cumulative stress leading up to the point where someone may be at risk of harming their infant. This suggests that professionals may not consider the potential impact of cumulative stress on biological, psychological, and social functioning, which may lead to crises (McEwen & Stellar, 1993; Engel, 1977). From an allostatic load perspective, mothers perceived the support provided to them as primarily focusing on infant safeguarding advice, rather than considering the impact of sleep deprivation and repeated exposure to persistent and excessive crying on decision-making and emotional regulation (McEwen & Stellar, 1993).

“Well, there’s a massive middle ground there, I think of feelings that you can have and distress that you can go through wanting to help them, before you’re at that point.” (Erin).

“And like for me, I felt like shaking Daisy, throwing her out the window. Like, it’s horrible to say it, but I did. And someone just saying to me, “oh don’t shake your baby”, it wasn’t particularly helpful. Like, I know I’m not supposed to hurt her, and that’s the last thing I want to do. But at the same time, like, I can’t. I can’t manage this” (Kylie).

Rather, Erin and Kylie both desired more emotional support from professionals to enable them to cope better and reduce the risks of a cumulation of stress escalating to crises where safeguarding risks may increase.

Like, I just want it to stop, and nobody’s giving me the tools to help it to stop. I feel emotional talking about it, but it’s like, it’s horrible because you feel like an awful person” (Kylie).

““...here’s a little bit more support for you as well, rather than jumping straight to, of course, babies cry, don’t shake your baby” (Erin).

Consistent with PAR methodology, the lack of professional awareness prompted a discussion around the ‘action’ element of the PAR group, and all three mothers expressed a desire for more support and understanding of IEC. They described how this awareness within the social care profession could be valuable to families.

“I think it’d be good for them to have an awareness of it, because they’re often the people that might be coming face to face with the people, you know” (Melissa).

The mothers took the lead in developing their ideas. Their focus was on improving support availability and increasing professional awareness, understanding and empathy.

“...you know, the sort of training thing where people might hear the crying for like 5 minutes, 10 minutes, whatever.. I actually think it would be really good to see, like, if it was a video to see a baby in that situation” (Erin).

Throughout the toolkit development stage, Kylie discussed how sleep deprivation influenced her ability to emotionally regulate and wanted this to be included within the toolkit to increase professional awareness of how biological and psychological factors may interact with one another (Engel, 1977). This may suggest that professionals who supported Kylie did not demonstrate an awareness of these cumulative effects from a biopsychosocial perspective, which led to her desire to include this for future professionals supporting families (Engel, 1977).

“I think adding into that, maybe as well... how, how differently you react when you had, when you have such little sleep. Like...you could even mention, look... you were up with baby until 4am and then every hour from then on, and then you were having to deal with this for hours on end, sort of thing. its, its like, erm... cause listening to this now you'd be coming at it like fresh, wouldn't you, so it's kind of different when you're, you know, really exhausted and that sort of thing. You don't have to add that I, I just wondered if that was good context” (Kylie).

Erin shared the idea of a group exercise to place professionals in a situation where they are also trying to find a solution or a process for managing IEC. This demonstrates a desire by parents for professionals to gain an insight into the challenges a parent may experience to find a cause for their infant's crying and regain control.

“I don't...I don't know...obviously if it's half an hour I don't know if I'm, kind of, going off on a tangent a little bit... but even...maybe having like some kind of group exercise where actually they do come up with, a sort of, step by step of what they might offer or recommend parents do, step 1. step 2.. step 3.. erm...and actually getting them to come up with it... “ (Erin)

Overall, all three mothers perceived the information and support provided by professionals as limited or absent. A lack of professional understanding, which may be compounded by most crying occurring at night when professionals are not present, resulted in parents regarding

their support as “*unhelpful*”. Rather, professionals focused primarily on the health of the baby, without consideration for the cumulative effects of persistent and recurring crying on parental wellbeing, stress-coping and the wider family functioning. Whilst the parents agreed that advice, such as “don’t shake your baby” was still required, they felt coping strategies may be more beneficial to alleviate their psychological pressure and reduce the likelihood of them reaching crisis. These findings were demonstrated throughout the toolkit development phase, where the focus remained on family support and encouraging professionals to gain a deeper insight into the cumulative effects associated with IEC.

4.4: Summary

The findings presented within this chapter are based on the views and experiences of five social care professionals and three mothers of excessively crying infants.

Throughout this chapter, the findings evidence how IEC can have a detrimental impact on parental mental wellbeing, and this may be determined by how parents perceive the cause and severity of the crying. Furthermore, how the onset of IEC among vulnerable families (including those already supported by the social care provision) can add to the cumulation of stress within an already complex family structure (McEwen & Stellar, 1993).

In addition, the findings from the social care interviews demonstrated a lack of awareness among these professionals. Rather, professionals who had a deeper insight into the struggles of families affected by IEC only gained this understanding through their own personal experience. Likewise, parents shared how they perceived their professional support as insufficient, whilst the involvement of a partner was valued as it provided parents with respite when they felt no longer able to cope. Nevertheless, all three mothers shared a desire for more understanding and empathetic professional support, as well as more information on IEC and guidance on coping strategies.

With a very small sample size of eight participants, the results do not represent the experiences of society. The following discussion chapter provides a comprehensive synthesis of the research findings, critically engaging with existing literature and relevant theoretical frameworks. It also discusses future research and articulates the significant implications these findings hold for contemporary policy development and professional practice.

CHAPTER 5: DISCUSSION AND IMPLICATIONS FOR PRACTICE CHAPTER

5.1 Introduction

This study examined the experiences of caring for infants who cry excessively and the potential implications for social work practice.

The study distinguishes itself from existing literature by making three original contributions. To the best of the researcher's knowledge, this is the first empirical research into IEC from a social care perspective. This has highlighted a potential gap in social care knowledge, as findings suggest how professionals may not consider the wider impacts of IEC, which extend further than the infant's health, including the potential impact on a person's biopsychosocial functioning (Engel, 1997). Furthermore, this is the first study which has investigated IEC through the lens of the allostatic load framework. This has been critical to justifying the study's significance as it demonstrates how existing vulnerabilities, which are likely to be present and require the involvement of the social care profession (UK Parliament, 2021), may be further compounded by the sudden onset of IEC. Therefore, these findings suggest that families in receipt of social care provision may be at heightened risk of increased allostatic load, which could result in reduced tolerance and coping capacity (McEwen & Stellar, 1993). Finally, through collaboration with parents of excessively crying infants, this is the first prototype toolkit to be created which focuses on the development of awareness and understanding of IEC among the social care profession to support practice development. Whilst it requires further testing before dissemination, this could provide a vital opportunity to adequately train social care professionals to support families affected by IEC, which could help to improve future practice.

Overall, the findings from this study highlight a lack of IEC awareness within the social care sector. In addition, parents have shared how they felt unsupported by professionals, with limited guidance or advice on coping strategies to help them manage during periods of increased stress. However, the involvement of a partner to share the caregiving was valued, and there was a desire by parents for increased professional involvement and support. Overall, the mothers felt this would help them feel less alone and more understood.

Within the UK, there is ongoing research to develop an intervention specifically for families affected by IEC (St James-Roberts et al., 2019; St James-Roberts et al., 2024; Sheffield Children's NHS Foundation Trust, 2023). However, this research differs from these studies as it investigates the potential need for wider awareness of the condition among professionals already working with families. By focusing attention on the support provided to families already

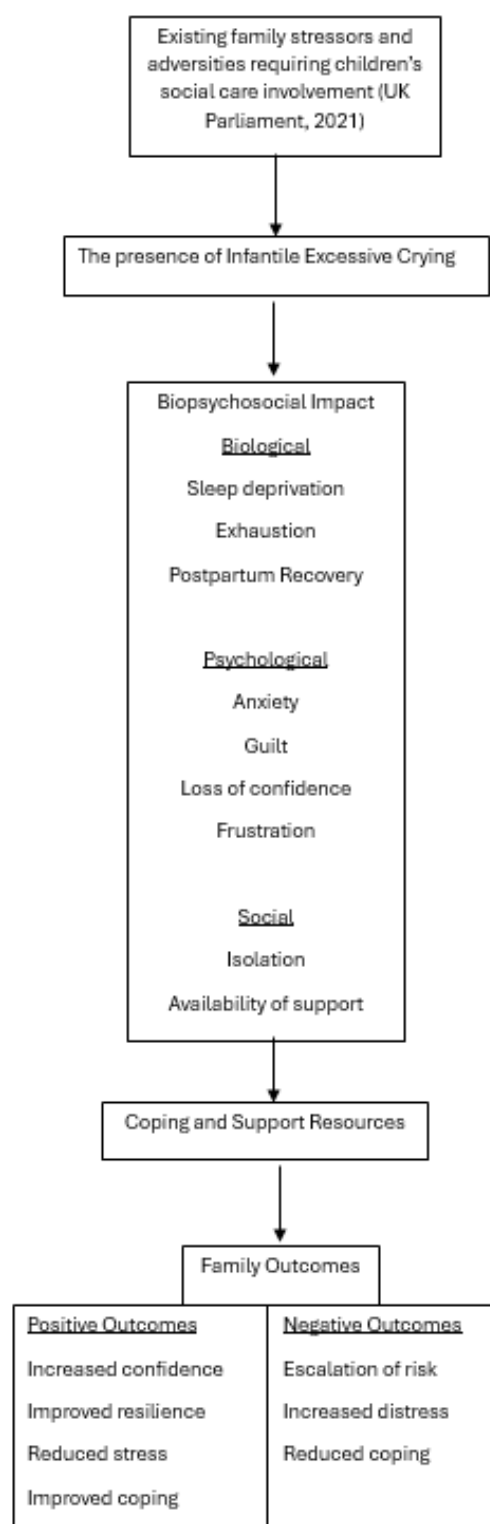
in receipt of social care provision, it highlights the challenges families may face and facilitates earlier identification of support needs. Enhancing awareness of IEC across the social care profession is critical, as social care involvement often indicates pre-existing vulnerabilities, such as poor parental wellbeing or domestic violence (UK Parliament, 2021). With IEC having links to poor parental wellbeing (St James-Roberts et al., 2019), an increased risk of infant abuse (Barr, 2014) and domestic abuse (Songül Yalçın et al., 2010), there is a definitive need for the condition to be understood throughout this profession. In doing so, this would support and encourage evidence-based, holistic and in-depth assessments of the potential strengths, struggles and needs of families which would enable a wider consideration of the family and address a potential gap in emotional and informational support offered.

The chapter discusses the potential value of social care involvement in the management of IEC within the UK, focusing on feasibility and practical implications. The chapter begins by presenting a conceptual interpretation of the findings in Section 5.2, followed by a detailed discussion of the main findings, including A Biopsychosocial Perspective, A Stress-Coping Perspective, and A Social Support Perspective. Together, these sections demonstrate how IEC can impact biopsychosocial functioning, how individuals may respond to the biopsychosocial impacts through stress-coping strategies, and ways to improve a person's capacity to cope with IEC through exploration from a social support perspective. Therefore, demonstrating how all these can interlink with one another to increase the cumulative burden of stress and lead to increased allostatic load (McEwen & Stellar, 1993). Finally, the chapter will conclude by exploring the development of a professional toolkit and wider practice recommendations, including Recommendations for Action, the study's Limitations, and Policy and Practice Implications.

5.2 Conceptual Interpretation of the Findings

Following a presentation of the findings within Chapter Four, Figure 4 presents the data in line with how IEC has a triggering effect on an individual's capacity to cope with IEC. It demonstrates how the cumulative process of IEC, which begins with existing risk factors and adversities, combined with IEC, may impact an individual's biopsychosocial functioning (Engel, 1977). Furthermore, how coping and support services can lead to positive or negative family outcomes.

Figure 4: The Conceptual Interpretation of the Findings



5.3 A Biopsychosocial Perspective

The biopsychosocial perspective can be understood through Engel's (1977) biopsychosocial model. This model suggests that three interrelated factors may be affected when an individual experiences a stressful situation; these are the biological, psychological, and social outcomes. Combined with the allostatic load framework, this presents an argument for how a cumulation of stress can influence multiple aspects of an individual's wellbeing and family functioning, including sleep deprivation, parental distress, and perceived social isolation (McEwen & Stellar, 1993; Engel, 1997).

5.3.1 The Biological Impact of Caring for an Infant Who Cries Excessively

Within the current study, Kylie and Melissa described negative experiences of having an infant who cries excessively. When listening to the crying sounds, the mothers shared how this triggered a *“sense of like panic and hurt”*, with feelings of *“desperation and despair”* leading Melissa to share how she *“can’t even cope with it and [I] have to have just some time away from it because it’s just so intense”*. Similarly, Kylie used a metaphor to describe how the situation resembles her being *“in a warzone”*. The terms used by Kylie and Melissa may represent a state of hyperarousal, with parents feeling under threat and hypervigilant to their surroundings, like those who experience war (Kimble et al., 2013; Sturge-Apple et al., 2011). As a physiological action developed to detect threat, being hypervigilant to detect a potential threat may have amplified Kylie's stress, as Kimble et al (2014) suggest that this response means that the ‘fight or flight’ can be triggered more easily, even in the absence of danger (Kimble et al., 2014). Therefore, the sound of intensified, high-pitched crying could further instigate this threat response and intensify how a person perceives and reacts to the crying.

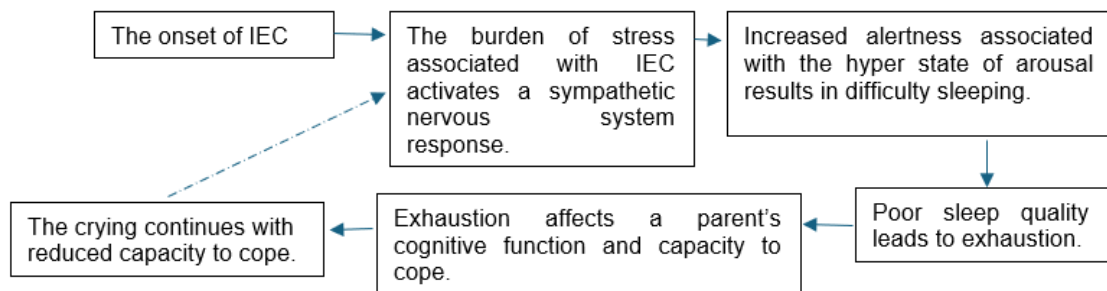
Within the current study, Kylie described a cumulation of stress associated with IEC, which was impacted by sleep deprivation as a physiological need, by explaining how she *“can’t really control emotions if [she’s] not had enough sleep”*. In the context of the allostatic load framework, this lack of sleep appeared to act as an additional source of stress for Kylie, where her capacity to emotionally regulate was impacted (McEwen & Stellar, 1993). In addition, Verma et al (2022), who undertook a narrative review on sleep disorders and biopsychosocial health, found sleep deprivation to be a key contributor to poor psychological health, with poor quality and shorter sleep durations being linked to anxiety and depression. This highlights how physiological needs may have implications for psychological functioning and the potential impact this may have had on Kylie's capacity to cope with the crying (Verma et al., 2022). In addition, a study by Noor et al (2026), which investigated the link between IEC, sleep disruption, and maternal depression, found that caregivers whose infants met the threshold of

'Wessel's Rule of 3' had significantly poorer maternal sleep quality when compared to caregivers of infants who cried less. This suggests that, whilst many new parents may be impacted by a lack of sleep, caregivers of infants who cry excessively may sleep less (Noor et al., 2026). To help understand this association, terms such as being at "*breaking point*" suggest that Kylie may have been functioning within a hyperarousal state (Sturge-Apple et al., 2011). Notably, the symptoms associated with the hyperarousal state, including racing thoughts and increased alertness, are regarded as "key components" for insomnia disorders (Kalmbach et al., 2018, p.193). This suggests that the sympathetic nervous system response could also reduce sleep, meaning that a caregiver's capacity to cope with the cumulative nature of IEC may be further compounded by having even less sleep. Within the context of the allostatic load framework, sleep may also provide parents with an opportunity to emotionally recover from the crying which is key to reducing allostatic load (McEwen & Stellar, 1993). Where parents are unable to sleep, they may have reduced opportunity for recovery, which is associated with 'allostatic overload'. This means that stress may accumulate over time without returning to a normative arousal state (McEwen & Stellar, 1993).

In addition, Kylie described difficulties in thinking "*logically*" to "*come up with a plan*" when feeling "*completely exhausted, overwhelmed and emotional*". This suggests that being exhausted (as a physiological need) and feeling overwhelmed (as a psychological outcome) may have contributed to a decline in Kylie's cognitive functioning. These findings are supported by Verma et al (2022), who state that sleep deprivation is linked to poorer cognition. Furthermore, the hyperarousal state is also associated with racing thoughts and difficulties concentrating (NHS Berkshire Healthcare NHS Foundation Trust, 2026). Therefore, a lack of sleep, combined with functioning from a hyperarousal state, may have influenced Kylie's brain's processing abilities (Verma et al., 2022; NHS Berkshire Healthcare NHS Foundation Trust, 2026). Rather, this strengthens the argument for more practical guidance and advice to be made available to families, as they may experience difficulties creating them themselves during periods of distress and reduced cognitive functioning.

Overall, this section has demonstrated how sleep and activation of the sympathetic nervous system may contribute to the cumulative burden of stress associated with IEC (McEwen & Stellar, 1993). As detailed within this section, Figure 5 highlights how the onset of IEC can be compounded by physiological functioning, which can then lead to poor sleep quality, exhaustion, and a reduced capacity to cope (Verma et al., 2022; McEwen & Stellar, 1993; Kalmbach et al., 2018).

Figure 5: The Cycle of IEC, Sleep and the Hyperarousal State



5.3.2 The Psychological Impact of Caring for an Infant Who Cries Excessively

Throughout the current study, all three mothers described feelings of guilt, failure and self-blame. Erin shared how the unspoken nature of IEC left her questioning, “*What have I done wrong? What am I doing differently from other people? Why? Why is my baby not happy? Why does my baby not like me?*” With Erin describing a lack of prior knowledge of IEC, she appeared to internalise the cries as a sign of rejection and something that she was doing wrong. Parental feelings of guilt and a sense of failure were similar to other studies exploring the experiences of parents with infants who cry excessively (Landgren & Hallström, 2011; Ellett & Swenson, 2005; Leigh and Roos, 2008), with Landgren & Hallström (2011) suggesting that parents blame themselves and feel they are not good enough parents. The notion that a parent may experience guilt when they are unable to soothe their infant could be expected, given that parental advice is to respond to crying as it is a baby's primary way of communicating their need (NHS, 2022). When parents experience difficulties in soothing their infant, this could leave them feeling that they are unable to meet their child's needs, placing the blame on themselves.

Alongside feelings of guilt, self-blame, and a sense of failure, all three mothers described feeling uncertain about what IEC was and how they should respond to it. Erin shared how the information she received was conflicting, and she was left unsure what action to take, whilst Kylie described a level of desperation for the crying to stop but being unsure how to make it stop. This uncertainty shared likeness to the findings from St James-Roberts et al (2019, p.17), where one parent shared how she felt “*no good at it, like you are helpless really, because you try everything . . . But when she carried on crying, you try and feed them, you change them, there is nothing wrong with them you just feel like useless*”. Similarly to the accounts of participants within the current study, focus group parents within St James-Roberts et al (2019) reported how this contributed to feelings of frustration, inadequacy, anxiety and a reduction in

parental self-confidence. Therefore, uncertainty and a lack of clear and concise information, which was described by all three parents, may have intensified the stress experienced as they internalised the crying as a reflection of their failure as a parent (St James-Roberts et al., 2019).

Nevertheless, feelings of parental guilt and self-blame associated with feelings of incapability as a parent appeared to reduce when crying severity improved. Kylie shared how she felt there was a '*turning point*' when she was able to recognise IEC as a 'common enemy' that she shared with her infant; the belief that she and her infant were stronger together. This left her recognising it as a condition, rather than something she was doing wrong. Within this situation, the crying intensity likely remained the same; however, Kylie's perceived meaning behind the crying changed, which appeared to reduce the psychological burden she experienced. This highlights how the psychological impact of IEC may extend further than the crying itself to include how the crying is understood by the parent. However, not all feelings of guilt subsided when the crying reduced. Kylie experienced intrusive thoughts about harming her infant and "throwing her out the window", and this appeared to prolong feelings of guilt. She described how she felt like a "horrible person" who was likely to feel bad about having these thoughts "until she's [her infant] eighteen or something". This suggests that, whilst the psychological impacts among all three parents consisted of guilt and self-blame, the severity and duration of these differed between them.

5.3.3 The Social Impact of Caring for an Infant Who Cries Excessively

The section has so far investigated the impact on biological and psychological functioning; however, findings from the study suggested that it could also have social implications. These include social demographics (including existing vulnerabilities which were discussed throughout the interviews), as well as a potential increased risk of isolation.

Throughout the interviews, two professionals identified families already in receipt of their support who they believe, in hindsight, may have been affected by IEC. In both situations, IEC was not recognised by professionals, and this may have contributed to the removal of both children from their primary carer on safeguarding grounds. Within these contexts, professionals recalled existing risk factors, such as sibling neglect, alcohol use, violence and arguments within the home, with Kaya describing how "*a baby crying isn't going to help that*". These findings are underpinned by the allostatic load framework (McEwen & Stellar, 1993). This is because the allostatic load framework suggests how a cumulation of lifetime chronic stress can influence biopsychosocial functioning (McEwen & Stellar, 1993; Engel, 1977). Using these examples, the occurrence of infant crying could have acted as an additional

stressor alongside other complex factors. Given that families open to children's social care are more likely to have experienced increased chronic stress (such as living in areas of poverty and high crime rates) (Sturge-Apple et al., 2011; Bywaters et al., 2018), this could place families in receipt of social care at increased risk of allostatic load (McEwen & Stellar, 1993). These findings are critical as they demonstrate how important social care professionals may be in the identification, assessment, and support for families in their care who are affected by the condition.

In addition, the findings from the current study have highlighted potential impacts on social isolation. For Kaya, she described a sense of '*dread*' when seeing friends, describing how she "never used to get to speak" due to the requirement to distract her infant. This reduced contact with peers could have wider implications for stress-coping, as Brooks (2014) suggests that support from a friend is associated with reduced allostatic load. Furthermore, a study by McLeish & Redshaw (2017), who interviewed 47 expectant or new parents, found that peer support can have a positive impact on emotional wellbeing. Therefore, the absence of this support in this context may further compound the negative impacts of IEC and increase allostatic load (McLeish & Redshaw, 2017; Brooks, 2014).

5.4 A Stress-Coping Perspective

Within the current study, all three mothers experienced IEC; however, their experiences and ability to cope differed considerably. A possible explanation for this can be found within Lazarus & Folkman's (1984) stress and coping theory, which refers to how an individual views and perceives their stressful situation. An example of this would be how two individuals may view IEC; one parent feels supported and confident that they can manage through their situation, whereas another parent feels unsupported, overwhelmed and unable to cope. Whilst the infant crying may be similar, parents' perceptions of the situation and their ability to cope may differ. In addition, Lazarus & Folkman (1984) argue that there are two coping types: problem-focused coping and emotion-focused coping. Problem-focused coping refers to efforts to address or manage the source of stress, whereas emotion-focused coping refers to attempts to regulate the emotional response to that stress. Within the findings presented in Chapter Four, examples of problem-focused coping included parents searching for information, seeking professional advice and trialling different interventions in an attempt to understand or reduce their infant's crying. In contrast, emotion-focused coping was presented by the participants' efforts to manage the emotional impact of IEC, such as listening to music or taking brief periods of respite. Within this section, parental preparedness and seeking solutions for the crying are included. This is because the data collected within the current

research suggests that a lack of prior warning affected the mother's capacity to cope, which resulted in an extensive search for answers as a potential coping strategy.

5.4.1 Parental Preparedness

An overarching theme throughout all three PAR groups was that mothers did not feel prepared for their infants to be crying excessively; the idea that IEC was uncharted territory that parents were not aware of before having their child. Kylie described how she had never heard of the term 'colic' before having a baby, and this affected how she coped during the initial stages, as she felt 'flabbergasted' by what was causing it. When antenatal classes were discussed throughout PAR groups, the consensus was that these were primarily focused on the birth process. On the rare occasion that postnatal life was discussed during antenatal classes, there was a sense that this only prepared them for the "fluffy newborn stage", as described by Erin. The findings within the current research echoed those of Leigh & Roos (2008), who explored the experiences of first-time parents who sought support from a health professional for their infant's 'colic'. They found that the expectations of new parenting were not met when their infants had 'colic'. Likewise, St James-Roberts et al (2019) found that the presence of IEC left parents shocked as their prenatal expectations of parenting were positive, with no prior warning that their babies might cry excessively.

When investigating an individual's ability to manage during periods of increased stress, there is a need to consider whether preparation for a foreseen event enables a person to cope better. This viewpoint can be better understood from a stress-coping perspective (Lazarus & Folkman, 1984). Lazarus & Folkman (1984) argue that emotional distress may be increased if people are not provided adequate opportunity to consider and prepare for their situation. Similarly, Kelly (2024, p. 941) suggests that the act of psychologically preparing someone for a potential event aims to improve control over it through optimising emotional readiness; this includes encouraging an individual to "expect the best but be prepared for the worst". To do this, Thompson (2018) recommends encouraging individuals to understand their circumstances, identify and prepare for any potential challenges, and help them to develop strategies and organise their emotions ahead of the event occurring. The act of doing so encourages individuals to visually and mentally rehearse their potential experience, enabling them to enter it more readily and thus improving their execution of it through careful preplanning (Kelly, 2024). O'Donovan et al (2014) determined that those parents who felt unprepared for the birth and experienced a lack of control over their birth were predictive variables associated with self-reported trauma. Likewise, parents who attend antenatal classes have significantly better postpartum mental wellbeing scores compared to those who do not (Mehrabadi et al., 2019). This suggests that a greater awareness of antenatal and

postnatal possibilities could enable a parent to feel more prepared, leading to improved psychological outcomes.

5.4.2 Seeking Solutions for IEC

In this study, parents described how the search for answers as to why their infant may be crying was seemingly endless, with the hope of finding an effective solution appearing impossible. Aside from seeking support from health professionals, parents used internet searches, social media groups, and private organisations (including a feeding specialist and cranial osteopath). This process often took hours of their time, with one parent suggesting that her own research had taught her everything she knew about IEC. Likewise, Landgren & Hallström (2011, p.321) explored parental experiences of living with an infant who cries excessively and found that parents will 'try every trick' to help reduce their babies' crying, including driving around in the car to soothe the baby, altering medication and adjusting feeding techniques. This supported the findings from a systematic review by Muller et al (2022) that parents are so desperate to find a cure that they will try many strategies, including changing their diet, using alternative therapies, and trialling various medications. Likewise, all six mothers who were interviewed by Oaten & Miller (2019) about their experiences of IEC described how they had tried everything and showed a desire to explore any potential treatment or strategy to help reduce the crying.

Within the current study, Kylie shared how she would prefer to try treatment options, as it *"gives you something to try rather than just listening to screaming for hours on end"*, even if there is no evidence behind their effectiveness. A possible reason for this is that the act of online searching may be a coping strategy in itself, one which enables parents to remain in control of their circumstances and proactive in their search (Landgren & Hallström, 2011). As suggested by Herlitz et al (2026), online health searching commences due to an individual feeling worried about a particular symptom and seeking reassurance. This worry is commonly associated with the hyperarousal state and therefore can be associated with racing thoughts, increased heart rate and chronic alertness (McEwen, 1998). However, Herlitz et al (2026) argue that the emotion of worry can also serve as a distraction technique from more intensified emotion. This concept is known as the 'avoidance theory of worry' developed by Borkovec et al (2004). If attention is drawn to the current research, whilst parents were searching for a cause for their infants' crying, their minds may be steered away from more intense emotional responses (such as guilt or anger). Whilst there is limited data surrounding IEC and the avoidance theory of worry, Herlitz et al (2026) investigated the use of internet searches among individuals with long COVID and found some suggestion that using internet searches for health research could act as an avoidance technique. However, the use of internet search

engines for self-diagnosis has been criticised by Starcevic (2023), who cites 'cyberchondria', which refers to the repeated or excessive use of online health searching, as an increasing public concern. Starcevic (2023) describes how a person may use the internet to find initial reassurance for the symptoms (in this case, crying) in the hope that this will relieve worry. However, this relief is short-lived and can "spiral out of control", leading to further distress and anxiety (Starcevic, 2023, p.223). Starcevic (2023) blames this spiral on untrustworthy, conflicting or ambiguous information online, leading individuals to feel desperate for closure and a desire for reassurance. Thus, whilst the act of searching may act as a coping strategy initially, the retrieval of information from unreliable sources could leave parents feeling more anxious or desperate, therefore hindering their stress-coping abilities.

In contrast, the process of searching for answers could imply that caregivers have increased their self-efficacy. The self-efficacy theory was developed by Bandura (1977) and is the belief and motivation in oneself to carry out a task and succeed. In practice, this may mean that when parents continue to look for answers to their infants' crying, they remain motivated to find a cure and hold a belief in themselves that they can find one. When reverting to the allostatic load framework, self-efficacy is crucial when identifying an individual's ability to cope during periods of intense stress, as higher self-efficacy has been associated with increased problem-solving strategies and optimism (Zhao et al., 2015). With increased optimism, a person could perceive a situation more positively, compared to somebody who does not share the same perspective (Conversano et al., 2010). As suggested by Conversano et al (2010), remaining optimistic can also have a positive impact on an individual's biological and psychological outcomes, with an improved ability to cope with everyday stressors. Arguably, this could influence how someone perceives their infant's crying. These findings are supported by Piergiovanni & Depaula (2018), who report that individuals with higher levels of self-efficacy use more positive reappraisal and solution-focused thinking, compared to people with lower levels. Developing the skill of positive reappraisal is crucial, as it can determine how individuals perceive their stress and the extent to which this stress influences anxiety symptoms (Xu et al., 2020). Therefore, a caregiver searching for answers could be a positive sign as it may signify continued hope, higher levels of self-efficacy and increased self-confidence.

5.5 A Social Support Perspective

The findings suggest that social support played an important role in enabling parents to cope with IEC. This may be understood through the social support theory, which suggests that emotional support, alongside being offered information and practical guidance, can reduce

the negative impact of stressful experiences by enhancing coping resources and reducing feelings of isolation (House, 1981; Cohen & Wills, 1985). Therefore, the following sections explore how different forms of support were experienced by participants and the extent to which they were perceived as helpful in managing the challenges associated with IEC.

5.5.1 The Importance of Validation and Emotional Support

Despite the biopsychosocial impacts of IEC described by the mothers, the consensus across all three PAR groups was that professionals did not have a true insight into how difficult the situation was for them. Melissa described how crying occurred at night, and therefore, healthcare professionals could not observe the crying severity, which left her feeling isolated and alone in her struggles. Rather, parents shared how professionals would continue to reiterate that their infant was thriving medically in the hope that this would offer reassurance to the parent. However, the mothers perceived this as overlooking their own needs, with Kylie describing how no one ever asked her, “Are you coping?” This suggests a lack of awareness among professionals about the potential cumulative effects of IEC on wider family functioning, which may lead to a lack of consideration when supporting families affected by the condition. This shares similarities with existing research, which explored the experiences of first-time mothers who sought professional help for their infants' excessive crying and found that professionals were “insufficiently supportive and sometimes dismissive of their concerns” (Cox and Roos, 2008, p.9). Likewise, Lester et al (2007, p.4) called for a “paradigm shift” to steer away from solely focusing on infant health, to considering IEC as a condition that affects the whole family.

Rather, the mothers appeared to value emotional validation through being heard and their struggles to be understood. From an allostatic load perspective, emotional validation may act as a protective factor by enabling families to feel supported, which may have reduced feelings of isolation, such as the ones described by Melissa. In turn, caregivers may feel they have someone they can speak to who listens and can empathise with their situation. For parents who experience intrusive thoughts of harm towards their infant, Landgren et al (2012) suggest that the use of probing questions could help identify parents who may be experiencing them. Through the identification of parents experiencing such thoughts, this would evoke a wider conversation, enabling openness in a non-judgmental setting.

Within the present study, the potential impact of open communication and family support was discussed throughout both the interviews and the PAR groups, with the view that this could be imperative to providing respite from the crying, enabling one to reset emotionally and feel heard. This is supported by guidance from The Mental Health Foundation (2026), which

recommends various strategies to relieve feelings of anger or frustration, including speaking to someone else who can listen, show empathy and offer their perspective on a situation. Additionally, Levitzky & Cooper (2000) described the importance of reassuring parents that their infant is thriving physically to reinforce that they are having a positive impact on their child's development and help reduce parental self-blame and guilt. These findings are supported by Landgren & Hallström (2011), who describe how a positive professional-family relationship could reduce isolation and build parental self-confidence. Arguably, these practices are all possible through the role of a social care professional.

In relation to social care practice, these findings highlight the potential value in recognising a parent's emotional wellbeing, alongside their infants' health needs. Social care professionals are encouraged to explore how parents are coping emotionally and to provide opportunities for reflection and discussion with families. Through validating parental experiences and acknowledging the challenges associated with IEC, professionals could strengthen these professional relationships, encourage open communication and identify any emerging support needs as early as possible.

5.5.2 Information as Support

Within the current study, all three mothers described a desire for more information and guidance regarding IEC. Whilst the mothers searched for possible reasons why their infant may be crying excessively, the consensus was that professional information was poor and limited. In addition, parents described uncertainty regarding the causes of IEC and whether their infant's behaviour was normal. These findings are supported by Levitzky & Cooper (2000), who found that more information about IEC reassured them that there was no underlying cause, which helped families manage through the condition. This suggests that professional information may act as an important part of support for parents who are experiencing IEC: reducing uncertainty by providing families with information to help make sense of their situation.

In support of this, Şule Bilgiç & Bozkurt (2025) suggest that more information and guidance could also positively impact a person's self-confidence. Having completed a parental intervention (details of which can be found within Appendix 12), Şule Bilgiç & Bozkurt (2025) found that intervention participants had significantly higher self-confidence during pregnancy, and in months 1, 2, and 3 postpartum ($p=.001$). Furthermore, mothers with higher self-confidence carried out their parenting role more effectively. Şule Bilgiç & Bozkurt (2025) suggest that this relies on parents being provided with the necessary tools and information to develop skills which enable them to carry out their role effectively. Likewise, Vance & Brandon

(2017) concluded that confident parents are more likely to implement positive parenting behaviours. Thus, if parents are provided with the necessary guidance and information required to feel confident that they know what they are doing and feel they are carrying out their role effectively, they are more likely to feel that they can overcome potential challenges (such as IEC).

Meanwhile, the three mothers who participated in the study shared how they felt that professionals were too quick to remind them of the importance of not shaking their baby. In response to thoughts of shaking their baby, Kylie described how *"nobody wants to do it, but when you're in that situation, you don't know how not to want to do that, if that makes any sense?"* Incidents of infant death due to abusive head trauma have been described in court as a *"momentary loss of control"* due to an inability to soothe the infant (Pritchard-Jones & Hooper, 2022). If caregivers are struggling to emotionally regulate themselves, resulting in a "loss of control", it could be possible that solely educating parents on the dangers of shaking a baby is not sufficient to reduce incidences of abusive head trauma. Rather, whilst Barr (2014) advocates for the dissemination of information warning caregivers of the dangers of shaking a baby, a systematic review with meta-analysis by Scott et al. (2022, p.1) found "sparse and uncertain" evidence suggesting that these have a significant impact on reducing abusive head trauma.

Rather, mothers within the current study desired more guidance on coping strategies; Erin explained how there is a significant *"jump"* from *"babies cry"* to *"don't shake your baby"*. However, the mothers within the present study described not having received this information from professionals and therefore had to devise their own coping strategies. These included bouncing their infant, going for a drive in the car, listening to music through their headphones, and walking their baby around in the pram. Notably, every mother stated that they had heard of the ICON (2023) concept, which does include some practical strategies (including listening to music and walking away); however, the understanding of this among the PAR group was that it reiterated the importance of not shaking their baby. The limited guidance on coping strategies provided by professionals resulted in Erin being concerned about the strategies she had implemented (such as letting her infant cry out) and whether they had any long-term impacts on the infant. Therefore, it is suggested that the ICON (2023) guidance is used by professionals to inform caregivers of the potential for IEC occurrence and the various strategies that can be used, rather than jumping to the final part of the concept, which is to 'never shake a baby'.

However, solely providing information to families may not always be sufficient, as all three

mothers shared how they encountered conflicting advice from professionals, online sources and peer support groups. This resulted in the mothers feeling confused and unsure what action they should take next. This suggests that the quality, consistency and accessibility of information may be equally important as the information itself. However, the act of searching may not be solely focused on finding an outcome, as Kylie suggested her preference to try various treatments, rather than “just listening to screaming for hours on end”. Therefore, rather than viewing repeated searching as a desire to reduce their infants' crying, professionals may also consider it as an attempt by parents to maintain control and stay proactive during an unpredictable and unsettling period. In doing so, this could help reduce judgment and support more empathetic conversations with families.

Overall, the data from this study suggests that parents will use various methods to search for information, including online and professional advice. However, the parents perceived that the information they receive can often conflict with one another, which appeared to reinstate feelings of uncertainty among them. Rather, parents desired trustworthy, evidence-based information, which they felt was missing from universal services. Therefore, this signifies a clear gap in current universal provision.

5.6 Recommendations for Action and The Creation of the Social Care Toolkit

5.6.1 Toolkit Development

The thesis has highlighted the importance of identifying parental needs at the earliest opportunity to reduce the likelihood of IEC, including prenatal mental ill-health (Petzoldt, 2017) and issues affecting the co-parenting relationship (Alexander et al., 2017). However, there is a concern that the awareness and need to prioritise this period are not reflected within current health and social care services (Noonan et al., 2018; Lushey et al., 2018). These findings were supported by those of the current study, which found social care workers had limited awareness of the specialist support required for young families. Furthermore, none of the five social care professionals had attended training or received guidance on the subject. Within the health sector, most midwives feel equipped to identify perinatal depression and anxiety; only 17.8% feel confident in supporting mothers with such conditions, and 15.3% feel they have received sufficient guidance and information to do so (Noonan et al., 2018). In addition, Milgrom et al (2011) report that health services do not adequately diagnose postnatal depression, with prevalence rates falling below those of the general population. Therefore, it is possible that midwives are not taking the necessary action to support mothers struggling with mental ill-health during the prenatal period. Likewise, a study by Lushey et al (2018) found that social workers prioritise postnatal family assessments over pre-birth assessments. When

social workers do complete pre-birth assessments, Lushey et al (2018) report that the guidance is inadequate. The prioritisation of the postnatal period could mean that there is a lack of understanding about the importance of pregnancy and how the prenatal phase can influence postnatal outcomes (Alexander et al, 2017; Petzoldt, 2017).

Findings from PAR group discussions and social care interviews highlighted a clear gap in awareness and understanding of IEC within the social work/care profession. In response, it was recommended by the mothers and social care professionals that this knowledge be increased. Thus, a practical toolkit was co-developed with mothers to address this need from their experience and requirements. The purpose of the toolkit is to increase awareness of IEC, assist social care professionals in recognising the impact IEC could be having, provide a framework for supporting parents, and protect children from harm. The toolkit consists of four parts, and these are detailed within this section;

- Social Care Process for Infantile Excessive Crying sheet (Appendix 1)
- Excessive Crying in Practice sheet (Appendix 2)
- Risk Assessment Tool for Social Care Professionals (Appendix 3)
- Training Module for Social Care Professionals (Appendix 4).

5.6.2 The Social Care Process Sheet (Appendix 1)

The concept of the social care process sheet was derived from PAR group discussions following insight from the social care interviews. During the interviews, Carla described how she would rely on health professionals for direction if she were supporting a family whose infant cried excessively. In addition, Mia shared how she had not told a parent to seek advice from the GP as she was unsure of the need to do so. These findings shared a likeness to the other three interviews, where the awareness of IEC was limited, and there was some uncertainty about how to support families affected by the condition.

Whilst the National Institute for Care and Excellence (NICE) guidance presents a process for health professionals when managing IEC, no guidance could be located for social care professionals (National Institute for Care and Excellence, 2022). Furthermore, as this guidance was used by health professionals, there was an expectation that families had already sought medical support. Therefore, the Social Care Process Sheet offers social care professionals a valuable resource to aid their understanding of how best to support families, particularly the need for families to seek medical advice.

5.6.3 Excessive Crying in Practice Sheet (Appendix 2)

The practical strategies sheet was co-created by the mothers who took part in the PAR groups, supported by the researcher. This page was created to complement 'The Social Care Process sheet' as it provided professionals with some practical strategies to help them to support parents once medical checks had been completed. These practical strategies helped to fill a gap described within PAR group discussions of the lack of support available once infants were abruptly discharged from health services.

All mothers shared how they desired more understanding from professionals about how difficult their experience was for them and the impact that this had on every aspect of their lives. Kylie added that she would have liked someone there to offer support if she got to a point where she felt she could not cope. This developed into a discussion of what support would have helped to improve their experiences. This involved recommendations for professionals to carry out home visits during the 'crying times' to understand the intensity of the crying and the struggles they experience, and the use of 'family group conferencing' to utilise the social support available to families (Family Rights Group, 2025).

The purpose of including the information on the training module, as well as the Practical Strategies sheet, was due to feedback during the social care interviews that information readily available at the time of need is beneficial, to coincide with physical training.

5.6.4 Risk Assessment Tool for Social Care Professionals (Appendix 3)

The risk assessment tool was developed following the researcher's reflection on the findings and the three other documents within the toolkit. It enables professionals to consider all aspects of the family and is felt to be a much-needed tool when assessing the risk and offering support for families affected by IEC.

Kylie and Erin both described how they were not fully honest with professionals and society about how difficult it was to have an infant who cried excessively. Kylie shared having thoughts of wanting to harm her infant and therefore feared judgment if she was honest, and Erin described how she was concerned that her health visitor would interpret her crying concerns as postnatal depression. Likewise, the awareness of how existing risk factors can increase IEC concerns was limited across social care professionals. Furthermore, two professionals reflected on situations where IEC could have been a pivotal factor in increased safeguarding concerns, such as neglect of an older sibling.

Therefore, this pilot assessment tool was developed to act as a guide for professionals to develop a holistic image of the potential concerns or escalating risk factors. For example, thoughts of harming one's own child may not escalate risk alone; however, if such thoughts are present, alongside an unknown person residing within the home and a history of violence, the risks could be much more serious. That being said, this preliminary design remains in its infancy and would require further development and testing prior to wider dissemination.

5.6.5 Training Module for Social Care Professionals

The training session was initially drafted during the second PAR group, with members discussing information they would like to include. The purpose of the third PAR group was to continue to develop the training package, receiving feedback and making required adjustments. One PAR group member could not attend the final PAR group and therefore was emailed the document shared; however, they did not respond with feedback.

The module is targeted at social care professionals, and this remains its main focus. However, the format remains versatile and therefore can be delivered to any professional who works with families who would benefit from increased knowledge on the subject. Within the training package, the information from the information sheet (Appendix 2) has also been included. The module is expected to last less than one hour and can be delivered face-to-face or virtually, incorporating the wishes of social care professionals for short, accessible information.

The topics covered within the training module include defining IEC, exploring the impact IEC can have on families, safeguarding risks associated with IEC, and practical strategies for supporting families affected by the condition. The module also includes two group exercises where professionals are asked to visualise themselves as a parent affected by IEC and imagine the challenges one may face along their journey.

5.7 Limitations

Action was taken throughout the research to reduce bias and increase the reliability and validity of the findings. However, there were some limitations.

Firstly, the researcher has had previous personal experience of IEC, and this information was shared with all mothers during the recruitment stage. The researcher remained reflexive throughout the process and took necessary action to prevent bias. Although it is possible that the researcher's own personal experience of IEC was influential during the PAR groups, it was believed that the level of influence the researcher had was minimal. This is because PAR is

structured in a manner which places the autonomy on participants as co-researchers to develop their own understanding of what needs to change (Fogg et al., 2022). In addition, the honesty of the researcher and their personal experiences were noted as positive; one PAR group member commented that she felt more comfortable in opening up about her experiences, as all attendees understood what she had gone through.

Recruitment challenges were experienced, and this resulted in lower-than-expected sample sizes. With only eight participants recruited across both the interviews and PAR groups, the study took place on a small scale. The number of participants recruited for a study is important to consider, as it will affect the reliability and transferability of the data presented (Charter, 2002). As suggested by Faber and Fonseca (2014), a low sample size risks presenting a false reality as the diversity of the participants does not account for the wider population. Therefore, the data presented within this thesis cannot be generalised and is solely the experiences of those who took part. That being said, the purpose of this research was to present an initial exploration which can now be used for further exploration.

The study's exclusion criteria stipulated that families who were open to children's social care at the time of consent and throughout the PAR groups could not take part. This was an ethical decision made prior to the research commencing due to potential safeguarding concerns. Due to an association between IEC and infant abuse (Barr, 2014), the researcher did not feel it was ethically appropriate to recruit families whose infants may already be classed as at risk of harm or significant harm under the *Children Act 1989*. Whilst these decisions were made in the interests of safeguarding, it does act as a limitation. This is because families who require social care involvement do so due to vulnerabilities or presenting risks (including domestic abuse, poor parental mental health, and substance misuse) (UK Parliament, 2021). Thus, the exclusion of this participant group could affect the validity of the data as it excludes those who are likely to experience increased allostatic load (McEwen & Stellar, 1993).

In addition, there was no requirement for families recruited onto the study to have had previous experience of children's social care. The reason for this decision was due to foreseen recruitment challenges in engaging families with recent experience of IEC, whilst also having been under the care of statutory children's services. Whilst the action was taken in the interest of the study and its timescales, it does act as a limitation as parents were only able to discuss the universal support they received, rather than any specific reference to social care support. To provide insight into the awareness of social care, the interview data was shared and discussed within the PAR groups and provided parents with an understanding of the experiences of the professionals who were interviewed.

Furthermore, the demographics of the caregivers recruited for the study may have also contributed to a reduction in risk and acted as a limitation. Firstly, all three parents described being in stable marriages with the fathers of their children and, therefore, may have experienced IEC differently than a single parent or someone with a limited support network. As suggested by Landgren & Hallström (2011, p.321), parents may feel more able to manage during the crying phases if they have someone to share their caring responsibilities, as it provides them with a space to “gather new strength” when things feel too much, whilst also benefiting from having someone present who they feel truly understands how difficult the situation was. Therefore, the recruitment of mothers in stable marriages may have influenced the findings.

All three partners of the mothers who participated in this study worked full-time and lived within the home. One of the mothers had returned to work four days a week following maternity leave, one was a stay-at-home mum having worked full-time before having children, and the third parent was still on maternity leave from her full-time post. All three parents shared positive attributes about their living and housing situations. Therefore, whilst the assessment of one’s socioeconomic status was not part of this study, a presumption could be made that they would be classified as having a relatively stable lifestyle. An individual’s socioeconomic status is important to consider when investigating IEC, as this could influence their ability to adapt to stressful situations (Szanton et al., 2005). Szanton et al (2005) summarised how people with low socioeconomic status experience elevated allostatic load when compared to those from more privileged backgrounds. Schulz et al (2012) also linked neighbourhood poverty (poverty experienced within a particular demographic area) to heightened allostatic load. In addition, Reijneveld et al (2004) found that unemployed parents are significantly more likely ($p<.0001$) to shake their baby because of the crying. These findings reinforce the need to investigate the current support available to families who are being supported by the social care profession.

Social care professionals were recruited using ‘network sampling’. Whilst it was a successful method in recruiting all five participants, it will have had an impact on the study’s validity, as it is argued that participants recruited from the researcher’s network may have similar judgements and values (Andrade, 2020). However, the study was successful in recruiting professionals from various roles, and therefore, this added variation to the data collected.

‘Microsoft Teams’ was used for interviewing and PAR groups. The use of online methods has been criticised by Poliandri et al (2023), who suggest that it can be more difficult to build trust

and gain rapport compared to face-to-face methods. Likewise, non-verbal communication can be harder to identify using online platforms; it does not enable the researcher to see the whole person (Flayelle et al., 2022). However, the benefits of using Microsoft Teams outweigh the potential downfalls. Firstly, action was taken to reduce potential risks associated with missing data due to potential errors in translating nonverbal communication, as the researcher reviewed each piece of footage at least once to ensure that subtle communication was recognised. Rather, the ability to review video recordings enabled the researcher to reflect on other aspects that were not observed at the time, such as a change in body language. Secondly, the use of online tools benefited from being able to reach a wider audience, as it was more accessible for participants without the requirement to travel. It also allowed mothers to switch their cameras when they desired privacy, including when they started breastfeeding. With a stringent inclusion criterion required for PAR group inclusion, the recruitment of participants within proximity to a location would have been challenging.

5.8 Future Research

The current study supported earlier research by St James- Roberts et al (2019) that the development of support for families experiencing IEC within the UK is vital. Within the present study, mothers worked in collaboration with the researcher to develop a toolkit for social care professionals. This toolkit was informed by findings from the literature review, social care interviews and PAR groups. To the best of the researcher's knowledge, this is the first study which has investigated the awareness of IEC within the social care profession. However, the current study's small sample size means that further wider-scale research would be required to develop the toolkit further, before its dissemination to social care professionals.

Within the social care remit, it would be reasonable to suggest that IEC and associated safeguarding risks may be increased among families subject to statutory child protection intervention (Children Act 1989). This assumption has been made based on statistics, which highlight family issues, such as domestic violence (Sayrs et al., 2022) and parental mental health (St James-Roberts et al., 2019), as risk factors for IEC. As these are prevalent within the remit of statutory children's services (UK Parliament, 2021), it would be beneficial to investigate the rates of IEC among those subject to social work intervention, compared to the general population. This would provide further insight into potential risk factors for IEC and would reinforce the need for increased social care awareness.

5.9 Implications for Policy and Practice Development

It is evident throughout this research and existing studies that IEC can negatively impact the whole family unit (Lester et al., 2007; St James-Roberts et al., 2019; Landgren & Hallström, 2011). Therefore, this thesis supports the use of the 'Think Family Agenda' (NHS, 2026) when supporting families affected by IEC. The agenda focuses on promoting a whole family approach to assessment, considering the holistic influences of factors, such as parental mental health (NHS, 2026). The findings within this thesis encourage the use of the agenda by highlighting parents' struggles as often associated with stressors which go beyond crying durations, affecting cognitive functioning, sleep deprivation, emotional regulation, and the perceived meaning behind the crying. Therefore, the application of this agenda within the management of IEC would encourage professionals to view IEC in line with other stressors, taking into consideration how IEC may affect parents and siblings of the baby. The use of this policy may be particularly relevant for families already receiving support from children's social care, as existing vulnerabilities may compound the potential stressors associated with IEC, meaning the potential impacts of the condition may be higher (UK Parliament, 2021; Bywaters et al., 2018; McEwen & Stellar, 1993). This is because the ability to cope during a period of stress (i.e. IEC) may be compromised if an individual has experienced increased chronic lifetime stress, including poverty (Sturge-Apple et al., 2011). Therefore, holistic family assessment may be key to delivering effective support to families, which takes into consideration their individual circumstances, support network and emotional wellbeing.

Furthermore, the findings highlight the need to provide both informational and emotional support to parents. Whilst parents described a desire for practical information on strategies to manage during increased stress, they also described a desire to be understood, listened to, and for their struggles to be validated by professionals. This is because all three mothers shared how they felt professionals were primarily concerned with their infants' health and often overlooked the psychological impact on them as caregivers. This suggests that professionals should always enquire how parents are coping with the emotional demands associated with the condition, as this may help reduce feelings of isolation, guilt and self-blame.

Overall, this research advocates for more awareness amongst the social care profession to support the delivery of existing support to families affected by IEC. However, to the best of the researcher's knowledge, no current training package for social care professionals is universally applied. Therefore, through collaboration with participants, this research has developed a social care toolkit. Whilst this remains in its very early stages of development, the findings continue to advocate for an increased awareness of IEC across this profession.

5.10 Summary

Within this chapter, the findings from the current study have been explored, alongside existing literature and the potential implications for social work practice. The research consisted of five interviews with social care professionals and three mothers of excessively crying infants who attended three PAR groups. Together, these methods provided an insight into both professional awareness and parental experience of IEC, alongside opportunities to co-develop ideas for practice development.

Overall, findings demonstrated how the presence of IEC can affect an individual's biopsychosocial functioning, including feelings of despair, guilt, isolation and the presence of intrusive thoughts of harm. Additionally, the lack of awareness among social care professionals may have implications for how IEC is understood, identified and supported. The mothers shared how professionals focused too heavily on the health of the infant, with a lack of consideration for their emotional wellbeing. Instead, professionals would continue to reiterate safeguarding messages, such as "don't shake the baby"; however, parents shared how they would have found practical strategies, more evidence-based information on IEC, and emotional support more helpful.

This study has been underpinned by the allostatic load framework, which argues that individuals who have experienced high levels of chronic lifetime stress (such as those in receipt of social care provision (Bywaters et al., 2018)) may perceive and respond to IEC differently to someone who has experienced less lifetime stress (McEwen & Stellar, 2018). Therefore, from a social care perspective, the onset of IEC could be an additional source of stress within an already complex family dynamic. As IEC is recognised as a repeated occurrence, this could also present a recurring source of stress for families, triggering multiple nervous system responses and affecting a person's wellbeing and response to their infant (Sturge-Apple et al., 2011). Therefore, this theoretical framework is beneficial for understanding how individuals who have experienced chronic lifetime stress are at risk of increased allostatic load, but also how IEC may function as a repeated and cumulative stressor in itself.

In response to these findings, a co-produced social care toolkit was developed with participants, which aims to improve awareness of IEC within the field of social work. It includes guidance, practical strategies, risk assessment, and training content, with a focus on supporting both emotional regulation and professional decision-making. This outcome reflects the aim of the study, which was to examine the experiences of caring for infants who cry

excessively and the potential implications for social work practice. Whilst this may be the first package developed which is focused on improving awareness of IEC among the social care profession, it remains in its very early stages and thus requires further exploration before dissemination and testing.

Finally, the study has several limitations which may affect the transferability of the findings, particularly the small sample size and the exclusion of families currently open to children's social care. While these decisions were made on the grounds of ethical and safeguarding considerations, they may act as a limitation. However, despite these limitations, the study provides an in-depth understanding of IEC and its implications for social care practice. Furthermore, it highlights the need for a greater awareness of IEC within the social care profession, a more holistic assessment of family stress, and better integration of both emotional and practical support for parents experiencing IEC.

CHAPTER 6: CONCLUSION

6.1 Introduction

This study used Participatory Action Research (PAR) to examine the experiences of caring for infants who cry excessively and the potential implications of this caring on social work practice. It was guided by three objectives, which were;

1. To conduct interviews with social care professionals to explore their awareness and understanding of infantile excessive crying (IEC).
2. To undertake Participatory Action Research (PAR) groups with caregivers to examine their experiences of IEC and the support available to them.
3. To collaborate with caregivers to co-develop a prototype toolkit to support social care professionals working with families affected by IEC.

Key findings from the study indicate that existing support systems are inconsistent and often focus too narrowly on infant health concerns and physiology. As a result, IEC places significant emotional and practical strain on families. The study also shows that both social and community-based care offer an effective and alternative avenue for parental support, particularly for families who are already experiencing the chronic stressors and vulnerabilities associated with IEC. Social care professionals can therefore play a vital and complementary role in recognising and responding to the broader needs of these families.

This chapter will explore the study's theoretical framework and contribution to both knowledge and practice, before addressing areas for further investigation.

6.2 Contribution to Knowledge

Overall, the study distinguishes itself from existing literature by making three original contributions. To the best of the researcher's knowledge, this is the first empirical research into IEC from a social care perspective. This has highlighted a potential gap in social care knowledge, as findings suggest how professionals may not consider the wider impacts of IEC, which extend further than the infant's health, including the potential impact on a person's biopsychosocial functioning (Engel, 1997). Furthermore, this is the first study which has investigated IEC through the lens of the allostatic load framework. This has been critical to justifying the study's significance as it demonstrates how existing vulnerabilities, which are likely to be present and require the involvement of the social care profession (UK Parliament, 2021), may be further compounded by the sudden onset of IEC. Therefore, these findings suggest that families in receipt of social care provision may be at heightened risk of increased

allostatic load, which could result in reduced tolerance and coping capacity (McEwen & Stellar, 1993). Finally, through collaboration with parents of excessively crying infants, this is the first prototype toolkit to be created which focuses on the development of awareness and understanding of IEC among the social care profession to support practice development. Whilst it requires further testing before dissemination, this could provide a vital opportunity to adequately train social care professionals to support families affected by IEC, which could help to improve future practice.

6.3 Implications for Policy and Practice.

This thesis has focused on the awareness and support provided to families who are affected by IEC. More specifically, an opportunity to enhance the support available to families who are already in receipt of social care provision by improving the knowledge and skill set of this profession. The inclusion of social care professionals within the remit of IEC would benefit families and services alike. Firstly, delivering training to social care professionals on the topic of IEC is an effective and low-cost way to increase awareness of the condition and develop practice among those already working with families. This increased knowledge could help professionals to recognise IEC earlier than they would have previously done, which could lead to timelier interventions. It would also promote an individualised approach through enhanced recognition of potential barriers families may face. This could encourage professionals to consider adjustments they could make to enhance the quality of their support (such as improving access to family group conferencing, organising meetings to fit around the needs of the family, or adjusting home visits to the evening time where crying bouts may be increased). These practices would improve the experiences of families when accessing services and struggling with IEC.

Secondly, the inclusion of social care professionals within the management of IEC could be pivotal in addressing the desire of the three mothers to be listened to and for their struggles to be understood. This is fundamental, as parents within the current study suggested that professionals would primarily focus on infant health without displaying an understanding of how it could impact them as a family. These findings replicate those of Cox and Roos (2008) and Muller et al (2022), where professional involvement has been described as “unsupportive” (Cox and Roos, 2008, p.9) and “lacking” (Muller et al., 2022, p. 403). Additionally, PAR group dialogue suggests that a stringent focus on infant health can increase feelings of parental self-blame, frustration and helplessness. Therefore, this thesis supports the application of the “Think Family Agenda” (NHS, 2026). By viewing IEC through this lens, it is hoped to encourage professionals to consider the wider potential impacts of the condition to ensure

necessary and timely support is provided to families who are likely to already present with existing vulnerabilities or stressors (UK Parliament, 2021).

6.4 Theoretical Framework (Allostatic Load)

Allostatic load has underpinned this research as its theoretical framework. The framework is used to understand the impact of chronic stressors on the human body (McEwen & Gianaros, 2011). Whilst the current research did not investigate the role of chronic stress as a measurable construct, the allostatic load as a metaphorical concept was selected as it provides a unique rationale for how IEC can vary depending on how the brain processes stress and consequently how internalised feelings can impact externalised perceptions (McEwen & Gianaros, 2011). This was fundamental in understanding how individuals may perceive certain situations.

Throughout the findings, the allostatic load framework has been pertinent to understanding the impact of IEC and how that could be supported through the provision of social care. This is because the allostatic load framework denotes that an individual can experience differing realities depending on the levels of chronic stress experienced in their lifetime (Sturge-Apple et al., 2011). Thus, if caregivers have experienced chronic lifetime stress (through living in inadequate housing or being at risk of homelessness), they are less likely to retain a normative arousal state where they can think and act rationally (Sturge-Apple et al., 2011). Rather, they are more likely to move outside of this window to a hyper or hypo state of arousal where they may present with low energy, detached from emotion; appearing withdrawn or depressed (hypo), or a more heightened state where they experience racing thoughts, anxiety, anger, insomnia or hypervigilance to threat (hyper) (McEwen & Stellar, 1993; Sturge-Apple et al., 2011). If someone is experiencing these symptoms, including hypervigilance to perceived threat or anger, it is evident to see how the sound of an infant crying may affect someone differently than someone who remains within their normal arousal state.

Within this research, the experience of IEC has been likened to a “warzone”, with uncertainty from caregivers on what they can do or who they can turn to for support. In addition, caregivers have described a level of desperation for their infants to stop crying, feeling exhausted, yet spending the nights searching for answers, rather than sleeping. These symptoms share similarities with the hyperarousal state (insomnia, anxiety, hypervigilance to threat). Therefore, it is possible that periods of increased crying placed the mothers outside their normative arousal state (McEwen & Stellar, 1993; Sturge-Apple et al., 2011).

This presents a potential missed opportunity for social care professionals who are already supporting families. This is because social care professionals, including statutory social workers, early help workers, family workers, and domestic violence workers, are involved with a family due to a particular vulnerability, such as struggling to meet the needs of their child or inadequate housing (Lancashire County Council, 2025; Samuel, 2025). This would suggest that families open to social care provision may be more likely to have experienced more chronic lifetime stress; therefore, more likely to fluctuate outside their normative arousal state. If this is so, social care professionals who are working with families would need to have a deeper insight into IEC and how it could impact the family. In turn, this would enable professionals to identify families who may be in need of support at the earliest opportunity. This identification of need would also encourage social care professionals to consider the potential impact of IEC when carrying out assessments with the family.

6.5 Limitations and Reflexivity Statement

The study recruited a small number of participants, including three mothers and five social care professionals. The number of participants limits the generalisability of the findings.

Researcher positionality and lived experience were managed through reflexive practices, but remain potential sources of bias.

6.6 Future Research

A draft toolkit has been co-produced with mothers of excessively crying infants using data from interviews with social care professionals to inform its development. This is a potentially valuable resource which would require additional exploration and development prior to dissemination to professionals. It is embedded in the principle that family support is key to addressing concerns associated with IEC. This places a responsibility on social care professionals directly working with vulnerable families to be equipped with the necessary knowledge and awareness to support them. However, the toolkit has been produced based on the experiences of three mothers and five social care professionals. Therefore, it is recommended that a wider-scale study be undertaken to further investigate the potential link between IEC and the social care profession, to help develop the blueprint for wider dissemination and testing.

6.7 Summary

The findings have revealed limited support systems which are heavily focused on infant health concerns, with little regard for their wider impact on family functioning. This places significant strain on the family, where they can reach “breaking point” emotionally. Using the allostatic load framework as a metaphorical concept, it illustrates how IEC can be experienced differently among people depending on the accumulation of chronic lifetime stressors (McEwen & Stellar, 1993; McEwen, 1998). Therefore, how social care professionals can improve parental wellbeing by supporting them to remain in a normative arousal state, regardless of their external stressors.

Currently, IEC is supported predominantly by health care services. The problem with this approach is that there is no underlying cause for the crying in 95% of these infants (St James-Roberts et al., 2019). This can leave parents feeling their needs are dismissed, with a lack of provision for families whose infants no longer require input from a medical professional. In some cases, health professionals may placate parents by prescribing treatments to enable them to feel listened to (McGann et al., 2018). This action is costly to the NHS and may not be required, as Hiscock et al (2014) and McPherson et al (2022) suggest that an improvement in parental wellbeing is possible without the need to reduce the crying symptoms.

In summary, this study offers a unique perspective by investigating a potential relationship between IEC and the social care profession. Overall, the findings from this study demonstrate how the persistent and recurring nature of IEC can act as a cumulative burden of stress for families and have a detrimental impact on parental wellbeing. However, professionals can lack understanding and empathy with a rigid focus on the health of the baby, rather than the psychological implications for the caregivers. Therefore, this thesis argues that by integrating awareness of IEC and the broader social determinants of parental stress into practice, social care professionals are well positioned to support families, enhance wellbeing, reduce stress, and contribute to more responsive and resilient services for the future.

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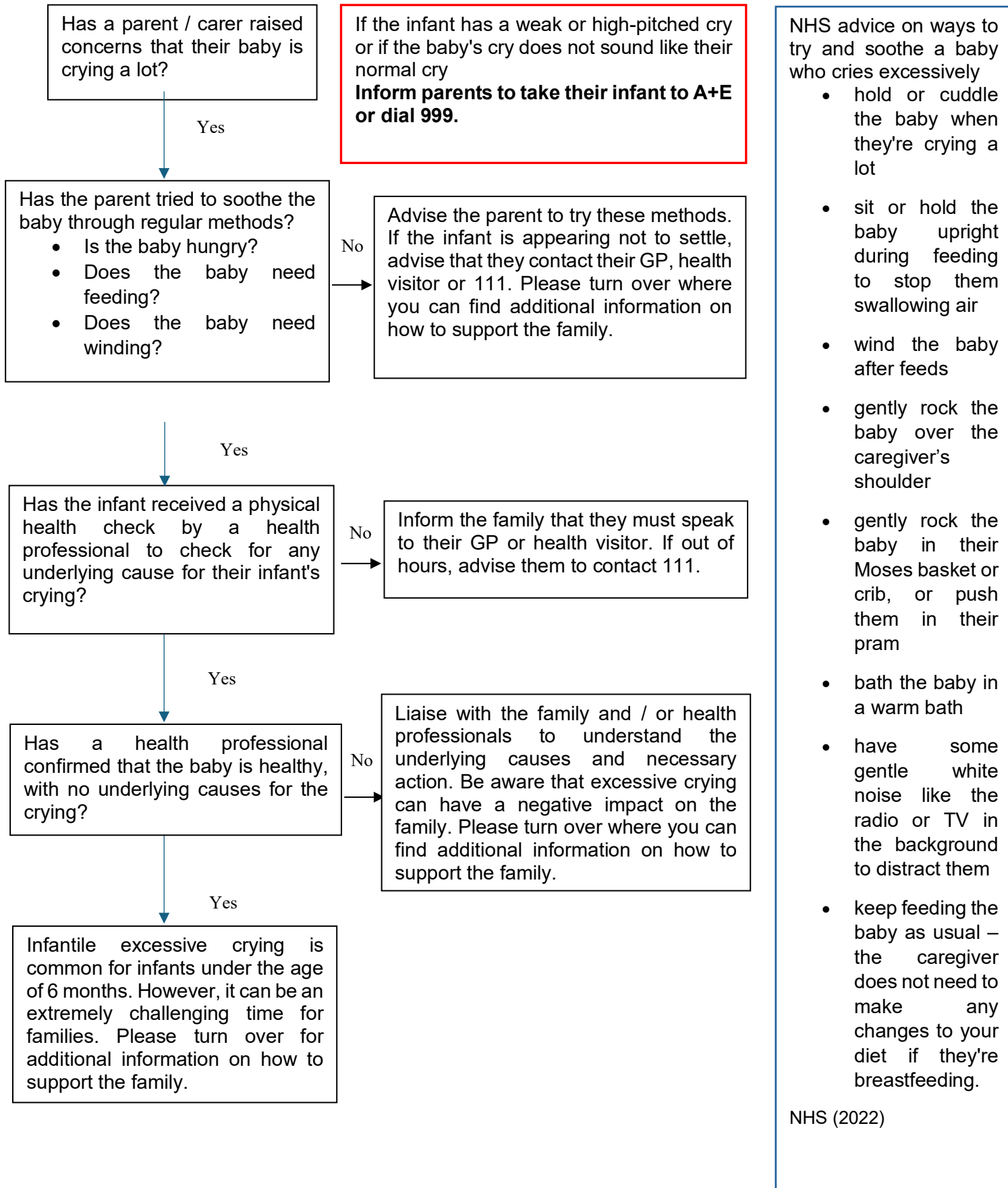
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APPENDIX 1: SOCIAL CARE PROCESS FOR INFANTILE EXCESSIVE CRYING



APPENDIX 2: EXCESSIVE CRYING IN PRACTICE

Family Support for Infantile Excessive Crying for infants under 6 months

Listen to parent / carers, take them seriously and try to understand their experiences and struggles.

Infantile excessive crying can affect the whole family. Talk to siblings about their experiences and how they are feeling.

Try and prepare parents for the arrival of their newborn baby. Parents have shared how they feel unequipped and unprepared for their babies' excessive crying.

Spend time with the family and try to visit during periods of increased crying (usually afternoons and evenings).

Organise a family group conference or family meeting so that families can create their own family plan. This also reminds parent / carers that they are not alone.

Offer to hold the baby whilst the parent gets a break from the crying.

INFANTILE EXCESSIVE CRYING

Infantile excessive crying (otherwise referred to as 'infantile colic') affects babies under the age of 6 months. The NHS (2022) defines the condition as when a baby cries more than three hours a day, three days or more, for longer than a week.

Be aware of the potential impact it may have on the parent / carers' wellbeing. Increase frequency of visits during this period to offer additional support.

It is important that parents / carers seek advice from their GP or health visitor about their infants excessive crying if they are concerned. This can help to rule out any underlying causes at the earliest opportunity.

Use a genogram to identify family members who can support the parents / carers with sharing the responsibility.

Talk to parents about the dangers of shaking their baby. Remind them that it is okay to put their baby down in their cot and walk away. Promote honest and open communication.

Safeguarding remains paramount.

Try and speak to parents individually, where possible. Infantile excessive crying can have a significant impact on the couple relationship and therefore this needs to be considered.

Some parents / carers find comfort in speaking with other experienced parents / carers. Signpost families to local parent and toddler groups, crying support groups or online social media groups.

Provide additional support and visits for those parents / carers who are at risk of social isolation (such as, single parent families).

Don't feel constrained by the crying duration to determine whether it is 'excessive'. If parents / carers are struggling with their infants crying, they need support.

APPENDIX 3: RISK ASSESSMENT TOOL FOR SOCIAL CARE PROFESSIONALS

Infantile Excessive Crying

This assessment tool can be used to determine the level of risk associated with infantile excessive crying. It is not a diagnostic tool and is to be used for guidance only.

	0 points	2 points	4 points	6 points
1. Has either parent presented with a mental health condition during pregnancy?	No		Yes No, but there are symptoms present which are consistent with such a condition.	
2. Does the family have a support network?	Yes, a large network of positive support	Yes, a small network of positive support	Yes, however the support is not always positive	No, the family does not have a support network
3. Is the baby living in a two-parent household?	Yes, the parents are in a strong and committed relationship.	No, the baby is residing in a single-parent household; however has a large support network.		Yes, but there are significant concerns regarding the parent-couple relationship. OR No, the baby is residing in a single-parent household with a limited support network.
4. Is there a history of domestic abuse within the family? Ensure that both parents and household adults are spoken to individually.	No, there is no history of domestic abuse.		Yes, however the perpetrator is no longer residing within the home, nor is parent or the partner of the infants' parent.	Yes and the perpetrator continues to reside within the home. OR

				No, the perpetrator does not reside within the home however is the father of the child or partner of a parent.
5. Is there a history of violence within the family (excluding domestic abuse)?	No, there is no history of violence.		Yes, a close family member residing outside of the home has a history of violence. This person always sees the infant when in the presence of the primary caregivers.	Yes, a household member has a history of violence. OR Yes, a close family member residing outside of the home has a history of violence and sees the infant without other adults present.
6. How would you rate the interactions between the mother and the infant? This assessment must take place whilst observing a parent caring for their infant during a crying episode.	The attachment appeared secure. The mother was showing affection towards the infant. During the crying episode, the mother used strategies, such as rocking or cuddling her infant to help soothe them. If required, the mother placed the baby down safely and walked away for a short period of time.		The mother showed frustration or anger towards her infants crying. When present, she used strategies, such as walking away. However, it is felt that these strategies are not always used.	The mother did not respond to her infant or try to console them during the crying episode. OR The mother appeared to be highly distressed by her infants crying and did not utilise strategies, such as walking away.
7. How would you rate the interactions between the father and the infant?	The attachment appeared secure. The		The father showed frustration or anger	The father did not respond to her infant or

This assessment must take place whilst observing a parent caring for their infant during a crying episode.	father was showing affection towards the infant. During the crying episode, the father used strategies, such as rocking or cuddling his infant to help soothe them. If required, the father placed the baby down safely and walked away for a short period of time.		towards his infants crying. When present, he used strategies, such as walking away. However, it is felt that these strategies are not always used.	try to console them during the crying episode. OR The father appeared to be highly distressed by her infants crying and did not utilise strategies, such as walking away.
8. Are there any other adults currently residing within the home who are not the infants' parents?	No there are no other adults residing within the home. OR Yes there are other adults living within the home however these are close family providing positive support.			Yes and there are current concerns in relation to this individual. OR Yes there are adults living within the home with little information known at this stage.
9. Has either parent disclosed having thoughts of harming their infant during crying episodes?	No they have not and I do not feel the infant is at risk of physical abuse.	Yes they have. The parent felt guilty about having these thoughts and has been using strategies to help reduce these (such as listening to music, using family support and, placing the baby down and walking away).	No they have not. There is no previous history of anger among any household members however I do have concerns that the parent/s are not being honest about how difficult they are finding the crying episodes.	Yes they have. The parent/s has a history of anger issues, and I am concerned about the infant's safety. OR No they have not, however the parent/s

				has a history of anger issues, and I am concerned about the infant's safety.
10. Does any household member have a history of drug or alcohol misuse?	No.	Yes, but the individual has not misused substances for more than 5 years.	Yes, but the individual has not misused substances for more than 12 months. OR The household member has stopped using substances in the past 12 months with no history of violence or anger.	Yes, the household member continues to misuse substances. OR The household member has stopped using substances in the past 12 months with a history of violence or anger.

This assessment framework can be used to assess the potential risks of infantile excessive crying.

It is strongly advised that any answers scoring a 6 be discussed with management and the multidisciplinary team to assess the likelihood of harm or escalation of concerns.

0-4 The family is deemed low risk of escalating concerns. The family should be advised of the professional support available to them.

5-8 There are some risk indicators. A family plan should be considered.

9-12 There are increased risk indicators. A risk assessment should be completed with the family to explore current support and establish the level of risk.

12+ There are high-risk indicators. Escalation to specialist services should be considered to support the family and safeguard the infant.

APPENDIX 4: TRAINING MODULE FOR SOCIAL CARE PROFESSIONALS

An Introduction into Infantile Excessive Crying

A TRAINING PACKAGE FOR SOCIAL CARE PROFESSIONALS

"And I think also for me just a bit of an understanding and preparation of how tough it is. Like I don't think in my whole life, and I've had difficult things happen to me as everyone has. I don't think I've ever felt that intense despair. Like complete desperation and despair. It's just complete mental overwhelm and overload and it's so intense. And for me, I felt like shaking May, throwing her out the window; it's horrible to say it, but I did. And someone just saying to me, 'oh don't shake your baby', it wasn't particularly helpful. Like, I know I'm not supposed to hurt her. And that's the last thing I want to do. But at the same time, I can't, I can't manage this. I just want it to stop and nobody's giving me the tools to help it to stop."

Parent

This training material has been co produced with parents of excessively crying infants.

A special thank you goes to those who have taken part in the research to enable this package to be created.

For the purpose of confidentiality, all names have been changed.

What do we mean by ‘infantile excessive crying’?

Infantile excessive crying (otherwise referred to as ‘infantile colic’) is when a baby cries a lot with no underlying or identified cause (NHS, 2022).

It is estimated that 10% of newborns excessively cry, accounting for between 10–20% of all early infant health appointments (Landgren and Hallström, 2011) (Akhnikh et al, 2014).

According to the NHS website, colic is defined by a baby who cries “more than 3 hours a day, 3 days a week for at least 1 week but are otherwise healthy” (NHS, 2022).

The crying usually starts when the infant is a few weeks old and reduces when they reach approximately 3–4 months old (NHS, 2022).

During periods of crying, infants are often;

- ❖ inconsolable and difficult to settle
- ❖ red in the face appearing as though they are in pain
- ❖ clenching their fists
- ❖ bringing their knees up to their tummy and arching their back

The crying can also be high pitched and sound different to other infant cries.

(NHS, 2022)

“I don’t think I’ve ever felt that intense despair”

Excessive crying has been regarded as one of the most difficult aspects of parenting with nearly every aspect of their lives being ‘disrupted’ (Long and Johnson, 2001).

Anxiety, depression and increased stress levels were found to be high amongst parents with an infant who cries excessively (Türkmen et al, 2022).

Families have shared how their lives suddenly developed into a ‘chaotic rush’ with increased arguments and tension within the home environment (Long and Johnson, 2001).

Amongst 23 mothers, 90% shared how their marriage had experienced significant tension during the period of excessive crying (Levitky & Cooper, 2000).

Parents have shared how they were forced to manage and remain in control, but in doing so, neglected their own needs. One study found their main theme was '*colic overshadows everything*' (Landgren and Hallström, 2011).

Parents become so desperate to stop the crying, they go in search for answers to find a cure. Many repeated and failed attempts can lead to parents feeling disappointed and helpless (Long and Johnson, 2001).

Group Exercise

Imagine you are a new parent.

Your baby is waking every 1-2 hours through the night meaning you are sleeping very little.

You are exhausted and feeling overwhelmed.

Listen to the video clip of a baby crying for 5 minutes.

<https://youtu.be/8DXWRko6Vm0?si=pssTB7UK2778JTik> (Try and find one where baby can be seen)

Group Exercise continued...

Reflect on this within smaller groups;

- How did you feel when listening to this?
- How would you feel if this was your baby and you felt responsible to stop the crying and soothe them?
- Could you have comfortably listened to this any longer?
- If I asked you to attend a meeting, could you concentrate on what was being said?
- Would you feel confident going to parent groups with your baby crying like this?

How does it feel to care for a baby who excessively cries?

"I myself can't even cope with the screaming and I have to give him to his dad and get him to take him away and settle him for a bit because it just gets to the point where I literally just can't even bear it"

"They were saying well, she's OK. And I was like, well, I'm not OK. Nobody ever said like, are you coping? I was like, me and my husband literally were at complete breaking point where it was 3 o'clock in the morning and we were walking down the road in the dark on our own crying because we were at complete breaking point"

"And then also when she was crying all the time to begin with, it felt like she was rejecting me. And it felt like I wasn't an actual mother. I didn't know what she was doing. She hated me. I thought, you know, my primary job as a mother is to be the one who can settle her and make her feel comfortable and take care of her and I felt horrendous as I couldn't do it."

Group Exercise

Imagine yourself desperate for the crying to reduce.

You speak to the GP who reassures you that your baby is fine physically.

What do you do next? Does this reduce your worries or make things feel easier for you?

What is your next step? Do you carry out your own search? Do you link up with other parents? Do you get a second opinion? Do you continue managing through the crying hoping things will get better on their own?

I will give you ten minutes and I want you to carry out a search for answers or remedies using the internet. Imagine yourself a parent desperate for answers...

What are your findings?

What information did you find that was helpful or reassuring?

Do you find any information which conflicted with one another?

How would you feel if you were a parent desperate for answers and not knowing where to start?

As well as the periods of intense crying, parents are often willing to try various things in the hope this will help. Every baby is different and what works for one, doesn't necessarily work for another. When something doesn't work, this continues the cycle of hope and disappointment many parents feel.



The risks associated with infantile excessive crying

Parents may be left feeling rejected, isolated and frustrated by their infants cries.

Some people can struggle to control these feelings and this can place infants at increased risk. Infantile excessive crying has been described as a 'significant risk factor' for infanticide and physical abuse (Levitzky & Cooper, 2000).

Statistics show how newborn infants remain at significantly higher risk of harm compared to any other age group (Department for Education, 2020).

During an interview with 23 mothers, 70% of those reported having experienced explicit aggressive fantasies or thoughts about their infant and 26% disclosed having had thoughts of infanticide during the colic period (Levitzky & Cooper, 2000).

How can I support families?

Levitzky & Cooper (2000) found professionals can either leave parents feel comforted or incompetent depending on the support provided.

"But I think if you have just had a baby that doesn't do that and just cries a bit, it's easy just to say, 'oh, that baby's got colic or whatever'. But I think until you've experienced that, I mean the crying that Henry does is just intense. It's like screaming and agony, his whole stomach goes hard. And it's like, it's not just like a baby cry, it's like next level and it's just horrific."

"It was just, you know all-encompassing and there was just no support at all."

Practical Strategies

- It is important that parents / carers seek advice from their GP or health visitor about their infants excessive crying if they are concerned. This can help to rule out any underlying causes at the earliest opportunity.
- Try and prepare parents for the arrival of their newborn baby. Parents have shared how they feel unequipped and unprepared for their baby excessive crying.
- Listen to parent / carers, take them seriously and try to understand their experiences and struggles. Research has found how parents' self confidence can be improved by professionals showing a deeper understanding of their circumstances and struggles (Landgren and Hallström, 2011)
- Be aware of the potential impact it may have on the parent / carers wellbeing. Increase frequency of visits during this period to offer additional support.
- Spend time with the family and try to visit during periods of increased crying (usually afternoons and evenings). This will enable you to understand their struggles and strengths, as well as enabling you to assess how they manage during the crying episodes.

- Looking after a baby who cries excessively can be exhausting. Provide additional support and visits for those parents / carers who are at risk of social isolation (such as, single parent families).
- Infantile excessive crying can affect the whole family. Talk to siblings about their experiences and how they are feeling.
- Don't feel constrained by the crying duration to determine whether it is 'excessive'. If parents / carers are struggling with their infants crying, they are in need of support.
- Some parents / carers find comfort in speaking with other experienced parents / carers. Signpost families to local parent and toddler groups, crying support groups or online social media groups.
- Be the professional who offers to hold the baby whilst the parent gets a break from the crying.

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- Use a genogram to identify family members who can support the parents / carers with sharing the responsibility.
 - Organise a family group conference which will enable families to create their own family plan and remind parent / carers that they are not alone.
 - Try and speak to parents individually, where possible. Infantile excessive crying can have a significant impact on the couple relationship and therefore this needs to be taken into consideration.
 - Talk to parents about the dangers of shaking their baby. Remind them that it is okay to put their baby down in their cot and walk away. Promote honest and open communication; during an episode of excessive crying, 70% of mothers shared having explicit aggressive thoughts or fantasies about their baby and 26% experienced thoughts of infanticide (Levitzky & Cooper, 2000).
 - Safeguarding is paramount. The risks associated with infantile excessive crying should be considered throughout assessments.

Group Exercise

In pairs, discuss;

- What can you take from today's session?
- Has your awareness developed as a result of the training?
- How can you implement what you have learnt to support families in the future?
- Will your practice develop as a result of what you have learnt today?

Services available to families

- The NHS website provides information for parents who may be worried about their infants crying. This can be accessed on [Colic - NHS \(www.nhs.uk\)](https://www.nhs.uk/conditions/colic/)
- The CRY-SIS helpline is open from 9am-10pm and can be accessed on 0800 448 0737. [Support For Crying And Sleepless Babies | Cry-sis](#)
- [Home - ICON Cope](#)
- If parents / carers are concerned, they should contact 111 or speak to their GP / Health Visitor.

Thank you for listening. Any Questions?

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APPENDIX 5: INITIAL CODES FROM INTERVIEWS

The potential risk of IEC

The need for more training

Risks already there may be increased

Professional misunderstanding

Parents are not always honest with SW

Observed the impact on families

My own personal experience impacted my professional understanding

Limited awareness of infantile excessive crying

It is just not talked about

Individualised support for individual families

Individual family perception influences professional understanding

Importance of multi disciplinary working

Importance of detailed assessments and observation

Importance of creating a family plan

Ideas for support

Awareness of families at risk

APPENDIX 6: FIRST LEVEL CODES FROM PAR GROUPS

At complete breaking point
Awareness through personal connections
Benefits of someone understanding
Conflicting information from professionals
Feeling alone
Finding our own strategies
Guilt and self blame
I did not feel prepared for it
I felt my baby was rejecting me
Ideas for support
I'm worried about being judged
Increased pressures as a mother
It was like we were in a war zone
Lack of clarity
Lack of information
Lack of support
Lack of trust in professionals
Lack of understanding from others
More trust for those with personal experience
Need for partner support
Not being heard
Professionals focus so much of shaking baby they forget support
Reassurance from other parents
Reassurance that awareness and support is increasing
Search for answers and reassurance
Seeking support from other parents
There's a reason for their cries
Worries about the long term impact of excessive crying

APPENDIX 7: ETHICS APPLICATION FORM

Ethics, Integrity and Governance Unit **Ethics Application Form**

PLEASE NOTE THAT ONLY ELECTRONIC SUBMISSION IS ACCEPTED

This application form is to be used to seek approval from one of the three University Ethics Review Panels (BAHSS; Science & Health). These Ethics Review Panels deal with all staff and postgraduate research student projects. Taught (undergraduate and MSc dissertation projects) will normally be dealt with via School/Faculty process / committee.

If you are unsure whether your activity requires ethical approval please complete a [UCLan Ethics Checklist](#). If the proposed activity involves animals, you should not use this form. Please contact the Ethics, Integrity and Governance Unit within the Research and Enterprise Service - EthicsInfo@uclan.ac.uk - for further details.

Please refer to the guidance notes for help with completing the Ethics Form.

If this application relates to project/phase which has previously been approved by one of the UCLan Ethics Review Panels, please supply the corresponding reference number(s) from your decision letter(s). ONLY REQUIRED FOR PHASED PROJECT		
Previous Ethics Approval Ref No		
Student Registration No	20690062	
1.0 Insurance Assessment Questions: <i>Place a cross against the options that reflect your project (if applicable)</i>		
Does any part of your research take place outside of the UK?		☐
Does the research deliberately include participants from any of the following groups:	• pregnant women?	☐
	• children aged five or under?	☐
	• adults who lack the capacity to give informed consent?	☐
Does the research include medical intervention involving:	• investigating a medical device?	☐
	• a clinical trial?	☐
	• contraception?	☐
Does the research include more than 5000 participants?		☐
Is the research to be carried out by other organisations where the University is required by contract to provide insurance cover for the research if it proceeds?		☐
1.1 Project Type:		
What Research Theme does your project fall under? Citizenship, Society and Justice		
Which Research Institute or Research Centre does your project align to? Institute:		

☐ Staff Research
☐ Commercial Project

☐ Masters by Research
☐ MPhil Research
☐ PhD Research
☒ Professional Doctorate

☐ Taught MSc/MA Research*
☐ Undergrad Research*
☐ Internship
 *Please provide course name:

1.2 Principal Investigator / Director of Studies or Supervisor (if student project):

Name	School	Email
Victoria Moran	Community Health and Midwifery	vlmoran@uclan.ac.uk

1.3 Other / Co-Researchers / Student:

Name	School	Email
Jacqueline Williams	Social Work, Care and Community	JWilliams31@uclan.ac.uk
Rebekah Giles	Social Work, Care and Community	Rmgiles1@uclan.ac.uk

1.4 Project Title:

Participatory action research examining the experiences of caring for infants who cry excessively and its potential impact on social work practice.

1.5 Proposed Start Date:

01/08/2022

1.6 Proposed End Date:

01/10/2024

1.7 Is this project in receipt of any external funding? (including donations of samples, equipment etc.)?

☐ Yes ☒ No

If Yes, please provide details of sources of the funding and what part it plays in the current proposal.

N/A

1.8 Project Description (in layman's terms) including the aim(s) and justification of the project (max 300 words)

Give a brief summary of the background, purpose and the possible benefits of the project. This should include a statement on the academic rationale, context of the activity and justification for conducting the project.

Infantile colic (otherwise referred to as 'excessive crying') is defined within the United Kingdom as an infant who is irritable, crying or fussing for more than three hours a day, three days or more, lasting longer than a week with no identified cause (NICE, 2017). It is estimated that as many as 1 in 6 families within the United Kingdom

seek advice from a health professional in relation to the condition and has been regarded within previous research findings as a 'significant risk factor' for infanticide and physical abuse (Levitzky & Cooper, 2000).

Through reviewing the literature to date, it has highlighted a significant gap linking children's social care and infantile colic as a result of previous data predominantly taken from a health perspective. The aim of the study is to examine the experiences of caring for infants who cry excessively and its potential impacts on social work practice.

The research will use existing data through a systematic review followed by participatory action research with both parent / carers and social workers. Its purpose is to increase awareness of infantile colic amongst children's social care professionals, and taking a clear directive from the participating parents experiencing living with Colic to create a working toolkit. As current research tells us, the need to take infantile colic into consideration is vital. For social workers completing assessments with those who are already assessed at being potentially 'in need', it could be suggested that infantile colic as a contributing factor for physical harm, family breakdown, domestic abuse and parental conflict is not being fully assessed. Through completing research in this area and developing social work knowledge, this will enable the profession to best support families whilst also ensuring the safeguarding risks are assessed adequately and appropriately with consideration for infantile colic as a factor.

1.9 Methodology Please be specific

Provide an outline of the proposed method, include details of sample numbers, source of samples, type of data collected, equipment required and any modifications thereof, etc. Please include:

- *Aims and objectives:*
- *Hypotheses and/or research question(s) to be addressed:*
- *Study design, to include recruitment and sampling strategy, inclusion/exclusion criteria, sample size and justification*
- *Proposed method(s) of data analysis:*
- *Description of site(s) / facilities / equipment required:*

Aim and Objectives

To examine the experiences of caring for infants who cry excessively and its potential impact on social work practice.

1. To examine the experiences and impact of infantile colic on the wider family, relationships and wellbeing.
2. To explore children's social workers' experiences of infantile colic and the support they feel would be necessary to be more effective within their role.
3. To evaluate the findings with colic experienced caregivers to develop social work policy and practice.

Methodology

The study will employ participatory action research (PAR). This will be embedded throughout all aspects of the research from the initial PAR group to undertaking interviews and data analysis. Through utilising PAR, participants will be consulted with at three stages; initially, then following the systematic review and also at the end of the study for the purposes of analysis. This will enable the research to remain participant-led and reduce the likelihood of potential bias as a sole researcher. These will take place via Teams virtually and it is expected that each one will last approximately one hour. Participants will be informed of the level of commitment required during the information sheet and at the initial PAR group.

The structure of the research will consist of;

1. A systematic review with metasynthesis to review the experiences and impact of infantile colic on the lived experiences of families.
2. The PAR group will include 5-10 colic experienced caregivers and children's social workers to formulate clear research aims and objectives. For the purpose of the research, caregivers do not need to have experience of social work as the focus will be primarily on the lived experience of infantile colic and support, rather than their previous experiences of being supported by social care. This will be advertised on Facebook support groups for infantile colic. Participants will be encouraged as part of a group to develop key areas of interest to be covered.
3. The PAR group to meet to discuss the data from the systematic review and meta synthesis. The group will be encouraged to develop key themes, any gaps in knowledge and what information is to be gained from interviews. The second PAR group members will also provide feedback on the questions to be asked within the interviews and the interview schedule will be set.
4. Semi structured interviews with ten different social workers from those partaking in the PAR group who are currently working within child protection services. It is expected that these will last approximately one hour and will be video recorded with the respondents consent. The purpose of the interviews will be to gain a deeper understanding into social workers' perceptions of infantile colic and its impact, alongside any experiences they have had supporting families during this period.
5. The PAR group to meet to review and analyse the data findings, alongside the intended outcomes to develop social work practice. At the time of writing, it is felt the creation of a social work toolkit could be beneficial, however this will be further discussed and developed with participants throughout all stages of the research and therefore may be subject to change. The purpose of the study is to increase knowledge of infantile colic across the social care sector and therefore feedback will be sought from social work participants to review how the information should be displayed to have the most significant impact on knowledge and practice. Parent / carers also have a key role to play within this PAR group in providing feedback on their interpretation of the data collected and what they feel is needed within the social work toolkit to represent the lived experiences of families appropriately.

Each PAR group will be video recorded and consent will be gained for this via the consent form. Immediately following the group taking place and on the same working day, the data will be transferred to Uclan's safe server. The recordings from both the interviews and PAR groups will be stored electronically in a password protected file separately so that they cannot be identified. I, as the researcher, will be the only person who has access to electronic files. Alongside this, each consent form will be awarded a number each one and stored separately from any data collected to maintain anonymity. This number will only be accessed if the respondent wants to withdraw from the study before data analysis begins.

As enclosed in the participant consent forms, every participant can withdraw at any time via email with no detriment. Participants can withdraw at any stage throughout the research up until the data is anonymized at the start of the data being analysed following the final PAR group. All participants will be informed of this via the information sheet. Participants will be aware that the information they have provided up until withdrawal can be used, however no further data will be requested. Participants can also choose to keep their camera's off if they wish to do so, and can opt to use an alternative display name as long as this is detailed within the consent form so that they are identifiable by the researcher in the event of a safeguarding disclosure.

Recruitment of Participants

Parent / carer participants will be recruited via online social media support groups for infantile colic (social media advert attached). I will initially contact the administrators of support groups on 'Facebook' and request their permission to post onto their page. The social media post will include the aims and purposes of the study and details of how to request an information sheet and consent form will also be included.

Social work participants will be contacted through LinkedIn, their organisation emails and word of mouth. It is envisaged that between 5-10 caregivers and 5-10 social workers will be recruited to actively participate, attending three PAR groups. A search of social media platforms has highlighted a key support group 'UK Baby Colic And Reflux Support Group' with 11.8 thousand members and over 800 posts a month. Ten social workers will also be recruited for interviewing. Every caregiver will be provided a £10 gift voucher for their time and this will be provided to them via email at the end of the final PAR group. Participants who withdraw earlier than the final PAR group, and who have attended one or more groups will also be emailed the voucher at the same time as the other participants. For the purpose of sampling and fairness, participants will be recruited to a maximum of 10 per client group (parent / carers, social work PAR group members, social worker interviewees) and this will be on a first come first served basis.

Due to the nature of the study and being PAR, it is critical that we recruit participants who have experience of the area being researched. However, it is envisaged that the barrier to recruiting participants with lived experience of both infantile colic and children's social care would be extremely limited. As a result, parent / carer participants do not need to have been supported by children's social care, however the research area will be clearly identified within the social media advert and therefore it is hoped that this will be of particular interest to those with this prior experience.

Data Analysis

As with PAR research, data will be analysed concurrently following the cycle of plan, act and observe, reflect resulting in adjustments being made throughout the process depending on any gaps in knowledge. The data collected through the PAR groups and semi- structured interviews will be taken to the final PAR group to review.

Implementing thematic analysis, the data will be coded whereby themes will be developed and following on, inputted into a Computer Assisted Qualitative Data Analysis Software (CAQDAS), NVivo. Using the final PAR group to actively contribute to the analysis aspect of the research looks to limit potential bias. For the purpose of the research, the final PAR group will be key in reviewing the data and sharing their perspective of what the data is telling them with the intention of limiting any misinterpretations. Each participant will be provided the opportunity to include their email address on the consent form if they wish to have the findings of the study disseminated to them.

1.10 Has the quality of the project been assessed? (select all that apply)

- ☐ Independent external review
- ☐ Internal review (e.g. involving colleagues, academic supervisor, School process)
- ☒ Research Programme Approval gained on [Click here to enter a date.](#) **(Please note that RPA is a prerequisite for Research Degree Students and Professional Doctorates).**
- ☐ None

If other please give details

1.11 Please provide details as to the storage and protection of your physical / electronic data for the next 7 years (or 10 years if funded by the EU or Medical Research Council) – as per UCLan requirements – or whichever archive period is appropriate

Electronic data:

All PAR group discussions and interviews will be transcribed at the earliest opportunity and stored on the UCLan Network (password protected OneDrive folder). Any electronic copies of consent forms will be saved in a password protected folder on OneDrive shared only with the research team. Personal data (if any) and study data will be transferred through the University's OneDrive account only; and from off-campus to a location on the University network using VPN (encrypted channel).

Data will be anonymised at the earliest stage possible. Only the research team members will go through the transcripts and remove certain types of identifying data to ensure anonymity.

As stated in the Participant Information Sheet, data generated by this project will be securely stored in electronic form at UCLan for 7 years from the end of the project.

1.12 How is it intended the results of the study will be reported and disseminated?

(select all that apply)

- ☒ Peer reviewed journal – hard copy or online
- ☐ Internal report
- ☒ Conference presentation
- ☐ Other publication
- ☐ Written feedback to research participants
- ☐ Presentation to participants or relevant community groups
- ☒ Dissertation/Thesis
- ☐ Other

If other, please give details

1.13 Will the activity involve any external organisation for which separate and specific approval is required? (e.g. NHS; school; any criminal justice agencies including the Police, Crown Prosecution Service, Prison Service or Probation Service)?

☐ Yes ☒ No

If **YES**, please refer to the guidance notes to determine what external approvals may be required.

If Yes, please provide details of the external organisation and attach letter of approval

1.14 The nature of this project is most appropriately described as research involving:
(more than one may apply)

- ☐ Behavioural observation
- ☐ Questionnaire(s) – please provide a copy of the questionnaire / survey
- ☒ Interview(s) – please provide a list of questions to be asked, or if semi-structured the topics
- ☒ Qualitative methodologies (e.g. focus groups) – please provide the questions/topics to be covered
- ☐ Psychological experiments
- ☐ Epidemiological studies
- ☐ Data linkage studies

☐ Psychiatric or clinical psychology studies ☐ Human physiological investigation(s) ☐ Biomechanical device(s) ☐ Human tissue(s)* ☐ Human genetic analysis ☐ A clinical trial of drug(s) or device(s) ☐ Lab-based experiment – please provide relevant COHSS / RA forms ☐ Archaeological excavation/fieldwork ☐ Re-analysis of archaeological finds/ancient artefacts ☐ Human remains analysis ☐ Lone working or travel to unfamiliar places (e.g. interviews in participants homes) – please provide relevant risk assessment form ☐ Other (please specify in the box below)
If 'Other' please provide details:
1.15 Human Participants, Data or Material - the project will involve:
Please select the appropriate box(es)
☒ Participants [proceed to next question 1.16] ☐ Data [proceed to question 1.30] ☐ Tissues /Fluids / DNA Samples [proceed to question 1.31] Please email EthicsInfo@uclan.ac.uk if a project involves this option. ☐ Remains [proceed to question 1.32]
1.16 Will the participants be from any of the following groups: (tick as many as applicable)
☐ Students or staff of this University (<i>Where staff or students of the university are being used please explain how this is <u>not</u> a convenience sampling in section 1.9</i>) ☐ Children/legal minors (anyone under the age of 18 years) ☐ Patients or clients of professionals ☐ Those with learning disability ☐ Those who are unconscious, severely ill, or have a terminal illness ☐ Those in emergency situations ☐ Those with mental illness (particularly if detained under Mental Health Legislation) ☐ People with dementia ☐ Prisoners ☐ Young Offenders ☐ Adults who are unable to consent for themselves ☐ Any other person whose capacity to consent may be compromised ☐ A member of an organisation where another individual may also need to give consent ☐ Those who could be considered to have a particularly dependent relationship with the investigator, e.g. those in care homes ☒ Other vulnerable groups (please list in box below)
If 'Other' please provide details It is envisaged that parent / carers may be more likely to consent to take part if they have a vested interest in the area; for example, they have this prior experience of children's social care.
1.16a Justify their inclusion
<i>Ethics approval covers all participants, but attention must be given to those in a vulnerable category. Therefore, you need to fully justify their inclusion and give</i>

details of extra steps taken to assure their protection.

As documented previously, there is no requirement for the parent / carer participants to have been supported by children's social care previously. That being said, the social media advert will indicate the aims of the study which is to examine the experiences of raising a baby with infantile colic and its impact on children's social care. For this reason, it is envisaged that parent / carers may be more likely to consent to take part if they have a vested interest in the area; for example, they have this prior experience. Whilst it would likely be a barrier for recruitment if the exclusion criteria included previous social care involvement, recruiting participants with lived experience of both children's social care and infantile colic would create the most reliable data. It could be argued that, in order to strengthen the PAR element of the research, parent / carers with experience of social care would be required in order to co-produce a toolkit alongside social workers so that the service user voice is heard throughout.

There is no requirement for parent / carers to disclose whether they have prior experience of children's social care. For the purpose of safeguarding, the consent form will clearly include the requirement for families to be closed to children's social care if they have been previously open to them. The rationale behind this is that the research to date highlights potential implications for safeguarding and therefore it is essential that we are not undertaking research whereby children are already assessed as being at risk of harm.

Alongside this and as with all parent / carers whose infant is still experiencing colic at the time of the initial PAR group, they will be provided with Crysis helpline number and ICON; Babies Cry You Can Cope resources and information, including a Coping with Crying: My Personal ICON Plan. There is a real need for research of this kind to better support SW and parents during times of anxiety, when dealing with an infant with colic.

1.16b Is a DBS - Disclosure and Barring Service (formerly CRB - Criminal Records Bureau) check required?

Certain activities and/or groups of individuals require DBS (formerly CRB) clearance. If unclear, please seek advice.

☐ Yes ☒ No

If Yes, please advise status of DBS clearance (e.g. gained; in process; etc.)

1.16c All staff should be aware of UCLan's Policy and Procedures on Safeguarding and Prevent. Please confirm that, where relevant to your project, the appropriate training has been undertaken.

Please refer to UCLan Safeguarding Children, Young people and Vulnerable Adults Policy and Prevent guidance

☒ Yes ☐ No ☐ N/A

If Yes, please give details of relevant training session - external or internal - and when (e.g. within last 3 years)

Blackpool Council Staff Safeguarding Induction Training October 2020

1.17 Please indicate exactly how participants in the study will be (i) identified, (ii) approached and (iii) recruited

If an advertisement and/or information sheet is being used, please attach

Initially, social media group administrators will be contacted to request permission to advertise on their page. Through gaining this permission, a post will be uploaded which will include details of the aims and purpose of study, alongside contact details of the researcher. On making contact with the researcher, they will receive a response including the information sheet (as attached) and how to consent to taking part. In the event that too many participants apply to take part, they will be treated on a first come first served basis to ensure equality across all individuals. A cap on numbers will be implemented at 10 of each participant group (social worker PAR group members, parent /Carer PAR group members or social worker interviewees).

In recruiting social workers, this will predominantly be through word of mouth and LinkedIn. Initially, social workers from local authorities outside of the Lancashire region will be contacted and will be provided with the information sheet and consent form if this is something they are interested in. Each social worker will be contacted directly via the email they supplied following on from their consent form being received and a date / time will be agreed at a time convenient for them.

The consent forms from both the interviews and PAR groups will be stored electronically in a password protected file separately from the recordings / transcripts so that they cannot be identified. This will happen immediately following the PAR group or interview taking place. I, as the researcher, will be the only person who has access to electronic files. They will be scanned or emailed in and uploaded electronically which will also be password protected.

As enclosed in the participant consent forms, every participant can withdraw at any time via email with no detriment. Participants can withdraw at any stage throughout the research up until the data is anonymized at the start of the data being analysed following the final PAR group. All participants will be informed of this via the information sheet. Participants will be aware that the information they have provided up until withdrawal can be used, however no further data will be requested. Participants can also choose to keep their camera's off if they wish to do so, and can opt to use an alternative display name as long as this is detailed within the consent form so that they are identifiable by the researcher in the event of a safeguarding disclosure.

1.18 Will consent be sought from the participants and how will this be obtained?

If a written consent form is being used, please attach

All participants will receive an information sheet that provides details as to what participation involves, the voluntary nature of participation, confidentiality, anonymity, and withdrawal.

Consent will be obtained at the start of the interview/PAR group discussion. The researcher will read the statements on a consent form (to ensure they understand why they are taking part and what it will involve) and she will record the participants' verbal agreement.

1.19 How long will the participants have to decide whether to take part in the research?

There will be two weeks between the advertisement on social media to the initial PAR group taking place. Participants can consent to taking part in the study up to 24 hours prior to the initial PAR group/interview taking place.

1.20 What arrangements have been made for participants who might not adequately understand verbal explanations or written information, or who have special communication needs?

Give details of what arrangements have been made (e.g. translation, use of interpreters, etc.).

Participants will be given the opportunity to ask any questions prior to the PAR group/interview. Eligible participants of FGDs will be able to understand English.

1.21 Payment or incentives: Do you propose to pay or reward participants?

☒ Yes ☐ No

If Yes, please provide details

Parent / carer participants will be provided a £10 voucher each for taking part. All parent / carer participants will receive these and this will not be dependent on whether they remain for the whole study or withdraw part way through.

1.22 Will deception of the participant be necessary during the activity?

☐ Yes ☒ No

If Yes, please provide justification, and complete Question 1.28

1.23 Does your project involve the potential imbalance of power / authority / status, particularly those which might compromise a participant giving informed consent?

☒ Yes ☐ No

If Yes, please detail including how this will mitigated
Describe the relationship and the steps to be taken by the investigator to ensure that participation is purely voluntary and not influenced by the relationship in any way.

It is possible that there may be an imbalance of power, particularly given the PAR group is a mix of both professionals and parent / carers. Steps will be taken to ensure that all participants provide informed consent through ensuring they read the information sheet prior and complete the electronic consent form. The initial PAR group will review the details within the information sheet, as well as formulating group rules and expectations. All participants will be encouraged to share their individual experiences and there will be an expectation from all participants that these are respected. No pressure will be placed on participants to remain until the end of the study and to reduce this possibility of stigma or being recognised, participants can remain anonymous to other group members and can withdraw from the study at any time up until the point where their data will be anonymized at data analysis. Participants will also be provided an email address and phone number of the researcher so that they are able to email or text to withdraw from the study if they prefer this method of communication.

As an additional safeguard, any caregivers whose infant is still experiencing colic at the time of the initial PAR group will be provided with Crysis helpline number and ICON; Babies Cry You Can Cope resources and information, including a Coping with Crying: My Personal ICON Plan. There will also be ten minutes at the end of each PAR group where we will have a 'check out' and debrief. This will include encouraging PAR group members to discuss a different topic of choice; for example, their favourite film, food or interest. The purpose of this is to enable to PAR group members to formulate relationships, as well as encourage each session to end in a positive and relaxed manner. Each parent / carer will also be provided details of health visiting services during the initial PAR group and how they can make contact, if required.

1.24 Does the procedure involve any possible distress, discomfort, or harm (or offence) to participants or researchers? (including physical, social, emotional, psychological and/or aims to shock / offend - e.g. Art)?

☒ Yes ☐ No

If Yes, please explain
Describe the potential for distress, discomfort, harm or offence and what measures are in place to protect the participants or researcher(s). Please consider all possible causes of distress carefully, including likely reaction to the subject matter, debriefing or participant upset.

Due to the sensitive nature of the subject being discussed which may trigger emotion, there is a potential for participants to experience discomfort as they relive a potentially distressing time of their life. Alongside this, data from existing research has highlighted how caregivers can sometimes have thoughts of wanting to harm their baby during colic episodes and therefore may experience intense feelings of guilt as they reflect on this period of their life. Consideration should also be made for any disclosure made where it is felt that the infant is at risk of harm; this will be clearly explained within the consent form and during the initial PAR group. As an additional safeguard, any caregivers whose infant is still experiencing colic at the time of the initial PAR group will be provided with Crysis helpline number and ICON; Babies Cry You Can Cope resources and information, including a Coping with Crying: My Personal ICON Plan. There will also be ten minutes at the end of each PAR group where we will have a 'check out' and debrief. This will include encouraging PAR group members to discuss a different topic of choice; for example, their favourite film, food or interest. The purpose of this is to enable to PAR group members to formulate relationships, as well as encourage each session to end in a positive and relaxed manner.

Participants will be advised within the information sheet and during the initial PAR group that any information which raises concerns over the safety of themselves or others may be disclosed to the relevant authority without their consent. If the concern raised is in relation to a child, the local authority in which they live will be contacted.

1.25 Does the activity involve any information pertaining to illegal activities or materials or the disclosure thereof?

☐ Yes ☒ No

If Yes, please detail

Describe involvement and explain what risk management procedures will be put in

1.26 What mechanism is there for participants to withdraw from the investigation and how is this communicated to the participants?

Participation is voluntary and participants do not have to answer all the questions in the PAR group discussions/interviews and can leave the group/interview at any point, without giving a reason. Participants will not be able to withdraw any data from the PAR group, due to the group-based nature of the discussions. Any data contributed during the PAR group up to the point of withdrawal cannot be withdrawn. This will be communicated to the participants via the information sheet and again at the beginning of the PAR discussions.

1.27 What are the potential benefits for the research?

Through understanding more about infantile colic and its impact on social work practice, it is envisaged that the data will enable a wider awareness of the condition throughout the profession. Participants will also be provided an opportunity to meet other parents in similar circumstances and understand that they are not alone.

1.28 Debriefing, support and/or feedback to participants

Describe any debriefing, support or feedback that participants will receive following the project and when.

As a member of a PAR group, participants will meet on three separate occasions. The final groups' purpose is to discuss the emergent finding with the researcher. Participants will be provided with a form where they can request the published findings from the data collected.

1.29 Will the project involve access to confidential information about people without their consent?

☐ Yes ☒ No

If yes, please explain and justify

State what information will be sought, from which organisations and the requirement for this information.

1.30 Confidentiality/anonymity - Will the activity involve:

	Yes	No
a. non-anonymisation of participants (i.e. researchers may or will know the identity of participants and be able to return	☒	☐
b. participants having the consented option of being identified in any publication arising from the	☐	☒
c. the use of <u>personal data</u> (i.e. anything that may identify them - e.g. institutional role - see DP checklist for further guidance)?	☐	☒

*If **yes to any** please attach completed Data Protection (DP) checklist*

1.31 Does the activity involve human tissue?[‡] See Human Tissue Act (HTA) Supplementary list of Materials to check what is classified as human tissue. ☐ Yes ☒ No If no, please skip to question 1.32 If yes, please detail and answer questions 1.31a-c
1.31a Who will be sourcing the human tissue? (e.g. a tissue bank governed by its own HTA licence)
1.31b Will the human tissue be stored at UCLan? (please note restrictions on storage) ☐ Yes ☒ No <i>If yes, please state how long and in what form - cellular or acellular (DNA extracted) Please note - if human tissue is only kept for DNA extraction rendering it acellular the HTA storage regulations may not apply. If holding for DNA extraction, please state the length of time the tissue would be stored pre-extraction.</i>
1.31c Is the human tissue being used for an activity listed as a 'scheduled purpose' under Schedule 1 Parts 1 and 2 of the Human Tissue Act 2004? (click here to see list of HTA 'scheduled purpose' activities) ☐ Yes ☒ No
1.32 Does the project involve excavation and study of human remains? ☐ Yes ☒ No If yes, please give details <i>Discuss the provisions for examination of the remains and the management of any community/public concerns, legal requirement etc.</i>
1.33 Does the project involve working in a low or lower-middle income country as defined by the World Bank ? ☐ Yes ☒ No <i>If yes, please explain how each article within the Global Code of Conduct for Research in Resource-Poor Settings has been considered with respect to your project: http://www.globalcodeofconduct.org/wp-content/uploads/2018/05/Global-Code-of-Conduct-Brochure.pdf</i> NOTE: <i>If your research involves humans or animals, UCLan ethics/AWERB approval needs to be in place before application for local approval is made.</i>

DECLARATION

This declaration needs to be signed by the Principal Investigator (PI), and the student where it relates to a student project (for research student projects PI is Director of Studies and for Taught or Undergrad project the PI is the Supervisor). Electronic submission of the form is required to EthicsInfo@uclan.ac.uk. Where available insert electronic signature - alternatively, provide an email in lieu from appropriate party.

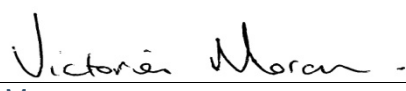
Declaration of the:
Principal Investigator
OR
Director of Studies/Supervisor and Student Investigator <u>X</u>
• The information in this form is accurate to the best of my knowledge and belief, and I take full responsibility for it. • I have read and understand the University Ethical Principles for Teaching, Research, Knowledge Transfer, Consultancy and Related Activities. • I have read and understand the University's policy and procedures on Safeguarding and Prevent. • I undertake to abide by the ethical principles underlying the Declaration of Helsinki and the University Code of Conduct for Research, together with the codes of practice laid down by any relevant professional or learned society. • If the activity is approved, I undertake to adhere to the study plan, the terms of the full application of which the Ethics Review Panel has given a favourable opinion and any conditions of the Ethics Review Panel in giving its favourable opinion. • I undertake to seek an ethical opinion from the Ethics Review Panel before implementing substantial amendments to the study plan or to the terms of the full application of which the Ethics Review Panel has given a favourable opinion. • I understand that I am responsible for monitoring the research at all times. • If there are any serious adverse events, I understand that I am responsible for immediately stopping the research and alerting the Ethics Review Panel within 24 hours of the occurrence, via EthicsInfo@uclan.ac.uk. • I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data. • I understand that research records/data may be subject to inspection for audit purposes if required in future. • I understand that personal data about me as a researcher in this application is

required by the Ethics, Integrity Unit and Governance Unit within Research and Enterprise Services, on behalf of the University, for an ethics review, and to evidence that the appropriate level of ethics review has been undertaken. Such data will be stored and managed in accordance with the principles established in the General Data Protection Regulations (GDPR) and the Data Protection Act 2018.

- I understand that the information contained in this application, any supporting documentation and all correspondence with the Ethics Review relating to the application, will be subject to the provisions of the Freedom of Information Acts. The information may be disclosed in response to requests made under the Acts except where statutory exemptions apply.
- I understand that all conditions apply to any co-applicants and researchers involved in the study, and that it is my responsibility to ensure that they abide by them.
- **For Principal Investigator:** I understand my responsibilities to work within a set of ethical and other guidelines as set out by the University Policies and/or professional standards.
- **For Supervisor/Director of Studies:** I understand my responsibilities as Supervisor/Director of Studies, and will ensure, to the best of my abilities, that the student investigator abides by the University's Policy on Research Ethics at all times.
- **For the Student Investigator:** I understand my responsibilities to work within a set of ethical and other guidelines as agreed in advance with my Supervisor/Director of Studies and understand that I must comply with the University's regulations and any other applicable code of ethics at all times.

Please indicate below if you consent to your University Ethics Checklist, Ethics Application and other documentation being shared for training and review purposes. All forms and documents will be anonymised.

☒ Yes ☐ No

☐ Signature of Principal Investigator: or ☒ Supervisor or Director of Studies	
Print Name:	Victoria Moran
Date:	20/7/22
Signature of Student Investigator:	

Print Name:	R Giles
Date:	14/6/2022

APPENDIX 8: SOCIAL CARE PROFESSIONAL INFORMATION SHEET

Participant Information Sheet

You are being invited to participate in an exciting new research study. However, before you decide whether to participate, it is important for you to understand why the research is being conducted and what it will involve. Please take the time to read the following information carefully and feel free to ask us if you would like more information, or if there is anything that you do not understand. I would like to stress that you do not have to accept this invitation and should only agree to take part if you want to participate.

Thank you for reading this.

1. Research Project Title

Participatory action research examining the experiences of caring for infants who cry excessively and its potential impact on social work practice.

2. What is the aim of the research?

The research intends to understand more about infantile colic from the perspective of children's social care. Through undertaking this research, I would like to gain a deeper understanding into what it is like to care for a baby with infantile colic, the impact this has on the wider family, and any adjustments or additional support required from a social work perspective.

3. Do I have to take part?

You have been invited to become a participant because of your experiences of working closely with families who may have experienced infantile colic. Your participation is voluntary and you choose whether you would like to take part. If you do decide to take part, you can withdraw at any time without any questions asked up until your data is anonymised following on from the interview taking place. You can email rmphillips1@uclan.ac.uk to withdraw from the study. The information you have provided up until you withdraw will be used, however no further information will be collected.

4. What should I expect if I do take part?

You will be invited to attend one virtual semi-structured interview which will last approximately one hour. This will take place via teams and will be video recorded and then immediately transcribed. The Lead Researcher will be the only person who will have access to the recordings or any data which may identify you.

The research is participatory action research and therefore the anonymised answers you provide to the questions will also be reviewed by 5-10 parent / carers and 5 – 10 social care workers with the intention of exploring further the areas you have identified. Prior to sharing the interviews with the participatory group, any identifiable information will be anonymised by the lead researcher.

It is intended that the findings from the research will be presented to social care professionals with the aim of increasing their understanding and developing practice. The findings from the research will also be published within an academic thesis, a toolkit for practitioners, presented at conferences and other research articles.

5. What are the possible disadvantages or risks of taking part?

I do not envisage there to be any disadvantages to taking part in the project. If you have any concerns in relation to the research, you can contact myself, Rebekah Phillips in the first instance and I will try my best to help. The details for what to do if you have a concern or complaint is included at the end of this information sheet.

6. What are the potential benefits of taking part?

The aim of the research is to increase awareness of infantile colic amongst children's social care so that families can be appropriately supported and babies safeguarded. For you as social work professionals, the intention is that this will increase awareness and knowledge within this area which will improve practice development.

7. Will my information be kept confidential?

The interviews will take place via Teams and these will be video recorded. Transcripts will also be produced from the recordings. All of your data will be stored electronically on UCLan secure server for 7 years and in line with the data protection requirements of the University of Central Lancashire. These will be held in a password protected folder which only the lead researcher has access to. All data within the transcripts and any subsequent publications will be anonymised.

Confidentiality of the information provided will be safeguarded and will not be released without your consent, unless you disclose information which raises significant concerns about the safety of yourself, or others. In such cases I may be required to disclose this confidential information to the relevant authorities.

8. Will I be recorded?

The interviews will take place via Teams and these will be video recorded. You will have the option to leave your camera off during the interviews, if you wish to do so.

9. What will happen to the findings of the research?

The findings of the research will be published in an academic thesis, a toolkit for practitioners, presented at conferences and other research articles. You will not be identified in any report or publication. As participatory action research, it is expected that a toolkit will be produced for social work professionals, however this is subject to change depending on the viewpoints of the group and how they feel they would like to present the information.

10. Who has ethically reviewed the research?

The research has received ethical approval from The University of Central Lancashire's Business, Arts, Humanities, and Social Sciences (BAHSS) Ethics Review Panel.

11. What if I am unhappy or if there is a problem?

If you are unhappy, or if there is a problem, please feel free to let me know by contacting Rebekah Giles and I will try to help. If you would prefer to talk to someone not involved in study, please contact Dr Victoria Moran on +44 (0)1772 893830.

If you remain unhappy, or have a complaint which you feel you cannot come to us with, then please contact the Research Governance Unit at OfficerForEthics@uclan.ac.uk.

The University strives to maintain the highest standards of rigour in the processing of your data. However, if you have any concerns about the way in which the University processes your personal data, it is important that you are aware of your right to lodge a complaint with the Information Commissioner's Office by calling +44 (0)303 123 1113.

12. Who can I contact if I have further questions?

Dr Victoria Moran, University of Central Lancashire, Preston, UK.

Telephone: +44 (0)1772 893830

Email: VLMoran@uclan.ac.uk

13. Contact details of lead researcher

Rebekah Phillips University of Central Lancashire, Preston, UK.

Email: rmphillips1@uclan.ac.uk

APPENDIX 9: SOCIAL CARE PROFESSIONAL CONSENT FORM

Social Worker (Interview) Consent Form

Version number & date: Version 1 26/1/2023

Research ethics approval number: BAHSS2 0363

Title of the research project: Participatory action research examining the experiences of caring for infants who cry excessively and its potential impact on social work practice.

Name of researcher(s): Rebekah Phillips

Please initial box

1. I confirm that I have read and have understood the information sheet dated 26/1/2023 for the above study, or it has been read to me. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that taking part in the study involves a video recorded interview. ☐
3. I understand that my participation is voluntary and that I am free to stop taking part at any time. I can withdraw from the study at any time without giving any reason and without my rights being affected. In addition, I understand that I am free to decline to answer any particular question or questions. ☐
4. I understand that if I withdraw from this study data collected prior to my withdrawal will be retained, but no further data will be collected. ☐
5. I understand that the information I provide will be held securely and in line with data protection requirements at the University of Central Lancashire. ☐
6. I understand that signed consent forms, video recordings and transcripts will be retained electronically in a password protected file on the UCLan University Secure Server by the lead researcher for 7 years. The lead researcher will be the only person with access to the file. ☐
7. I understand that confidentiality and anonymity will be maintained and it will not be possible to identify me in any reports, presentations or publications arising from the research. ☐
8. I understand that personal information collected about me that can identify me, such as my name or where I live, will not be shared beyond the lead researcher. ☐
9. I understand and agree that my participation will be video recorded and I am aware of and consent to use of these recordings for the following purposes; ☐
 - Toolkit for practitioners
 - A published academic thesis
 - Presentation to practitioners

- Conference and research articles

10. I understand that the confidentiality of the information I provide will be safeguarded and won't be released without my consent unless I disclose information which raises concerns about the safety of myself or others. In such cases the researcher may be required to disclose my confidential information to the relevant authorities.

☐

11. I would like to be sent the data findings and any published articles via email. For the purpose of this, my email address is

☐

12. I agree to take part in the above study.

☐

Participant name

Date

Name of person taking consent

Date

Student Investigator

Rebekah Phillips

University of Central Lancashire, Preston, Lancashire

Rmphilips1@uclan.ac.uk

APPENDIX 10: PARTICIPATORY ACTION RESEARCH GROUP INFORMATION SHEET

Participant Information Sheet

You are being invited to participate in an exciting new research study. However, before you decide whether to participate, it is important for you to understand why the research is being conducted and what it will involve. Please take the time to read the following information carefully and feel free to ask us if you would like more information, or if there is anything that you do not understand. I would like to stress that you do not have to accept this invitation and should only agree to take part if you want to participate.

Thank you for reading this.

14. Research Project Title

Participatory action research examining the experiences of caring for infants who cry excessively and its potential impact on social work practice.

15. What is the aim of the research?

The research intends to understand more about infantile excessive crying from the perspective of children's social care. Through undertaking this research, we would like to gain a deeper understanding into what it is like to care for a baby with the condition, the impact this has on the wider family, and any adjustments or additional support required from children's social care.

16. Do I have to take part?

You have been invited to become a participant because of your experiences of caring for a baby with infantile excessive crying. Your participation is voluntary and you choose whether you would like to take part. If you do decide to take part, you can withdraw at any time without any questions asked up until your data is anonymised following on from the final PAR group taking place. You can email rmphillips1@uclan.ac.uk to withdraw from the study. The information you have provided up until you withdraw will be used, however no further information will be collected.

17. What should I expect if I do take part?

The study is known as participatory action research which means that you actively contribute to it. Over the course of the research, you will be invited to attend three 45-minute focus groups which will take place virtually, via Teams. There is an expectation for between 5-10 social care workers to also attend these groups. As participatory action research, you will be expected to discuss the research findings presented by the lead researcher, alongside providing feedback on how these compare to your own experiences. As the lead researcher, I will also be undertaking interviews with social workers and you will be key in reviewing the data collected from these. It is intended that the findings from the research will be presented to social care professionals with the aim of increasing their understanding and developing practice. The findings from the research will also be published within an academic thesis, a toolkit for practitioners, presented at conferences and other research articles.

18.What are the possible disadvantages or risks of taking part?

We do not expect there to be any disadvantages to taking part, however we understand that existing research highlights infantile colic as being a challenging time for parents and carers. For this reason, we acknowledge that you may find the topic being discussed distressing and upsetting. If you require support, Cry-sis helpline can be contacted on 08451 228 669 and their web address www.cry-sis.org.uk where there are several resources which you may find beneficial. If you are struggling and in need of someone to talk to, Samaritans can also be contacted on 116 123. We also advise that you also speak to your Health Visitor or GP.

19.What are the potential benefits of taking part?

You will be provided with a £10 voucher for taking part in the study.

The aim of the research is to increase the awareness of infantile colic amongst children's social care. In doing so, social work professionals will be provided with a deeper understanding into your experiences to allow them to best support families in similar circumstances in the future. There will be other parents who have also had recent experience of caring for a baby with infantile excessive crying and therefore this will provide you an opportunity to meet other like-minded people.

20.Will my information be kept confidential?

The focus groups will take place via Teams and these will be recorded. Transcripts will also be produced from the recordings. All of your data will be stored electronically on a secure server for 7 years and in line with the data protection requirements of the University of Central Lancashire. These will be held in a password protected folder which only the lead researcher has access to. All data within the transcripts and in publications will be anonymised.

There may be times where we may have to disclose information to relevant authorities, such as children's social care or the police, without your consent. This is if you disclose something which raises concerns about your safety or the safety of others.

21. Will I be recorded?

The focus groups will take place via Teams and these will be video recorded. You will have the option to leave your camera off during this time, if you wish to do so. You can also type your answers using the chat facility on Teams if you prefer. We understand that you may have some worries about being identified, therefore you can also opt to change your display name to ensure complete anonymity to other participants. However, you will be expected to share accurate personal details with the researcher.

22. What will happen to the findings of the research?

The findings of the research will be published in an academic thesis, a toolkit for practitioners, presented at conferences and other research articles. You will not be identified in any report or publication. As participatory action research, it is expected that an information toolkit will be produced for social worker professionals, however this is subject to change depending on the viewpoints of the group and how you feel you would like to present the information.

23. Who has ethically reviewed the research?

The research has received ethical approval from The University of Central Lancashire's Business, Arts, Humanities, and Social Sciences (BAHSS) Ethics Review Panel.

24. What if I am unhappy or if there is a problem?

If you are unhappy, or if there is a problem, please feel free to let me know by contacting Rebekah Phillips and I will try to help. If you would prefer to talk to

someone not involved in study, please contact Dr Victoria Moran on +44 (0)1772 893830.

If you remain unhappy, or have a complaint which you feel you cannot come to us with, then please contact the Research Governance Unit at OfficerForEthics@uclan.ac.uk.

The University strives to maintain the highest standards of rigour in the processing of your data. However, if you have any concerns about the way in which the University processes your personal data, it is important that you are aware of your right to lodge a complaint with the Information Commissioner's Office by calling +44 (0)303 123 1113.

25. Who can I contact if I have further questions?

Dr Victoria Moran, University of Central Lancashire, Preston, UK.

Telephone: +44 (0)1772 893830

Email: VLMoran@uclan.ac.uk

26. Contact details of lead researcher

Rebekah Phillips, University of Central Lancashire, Preston, UK.

Email: rmphillips1@uclan.ac.uk

APPENDIX 11: PARTICIPATORY ACTION RESEARCH GROUP CONSENT FORM

Consent Form

Version number & date: Version 1 / 26/1/2023

Research ethics approval number: BAHSS2 0363

Title of the research project: Participatory action research examining the experiences of caring for infants who cry excessively and its potential impact on social work practice.

Name of researcher(s): Rebekah Phillips

Please initial box

1. I confirm that I have read and have understood the information sheet dated 26/1/2022 for the above study, or it has been read to me. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that taking part in the study involves my participation in three video recorded discussion groups. ☐
3. I understand that my participation is voluntary and that I am free to stop taking part can withdraw from the study at any time without giving any reason and without my rights being affected. In addition, I understand that I am free to decline to answer any particular question or questions. ☐
4. I understand that if I withdraw from this study data collected prior to my withdrawal be retained, but no further data will be collected. ☐
5. I understand that the information I provide will be held securely and in line with data protection requirements at the University of Central Lancashire. ☐
6. I understand that signed consent forms, video recordings and transcripts will be retained electronically in a password protected file on the UCLan University Secure Server by the lead researcher for 7 years. The lead researcher will be the only person with access to the file. ☐
7. I understand that confidentiality and anonymity will be maintained and it will not be possible to identify me in any reports, presentations or publications arising from the research. ☐
8. I understand that personal information collected about me that can identify me, such as my name or where I live, will not be shared beyond the lead researcher. ☐
9. I understand and agree that my participation will be video recorded and I agree that information can be quoted in research outputs such as project reports, academic papers and on websites. ☐

10. I understand that the confidentiality of the information I provide will be safeguarded and won't be released without my consent unless I disclose information which raises concerns about the safety of myself or others. In such cases the researcher may be required to disclose my confidential information to the relevant authorities. ☐
11. I understand the requirement that my children are not currently open to children's social care at the time of consent. I understand that if children's social care were to become involved with my immediate family, I would be required to withdraw from the study immediately. ☐
12. I understand that I am required to join a virtual group on Teams where there will be other parent / carers and social workers. I am aware that I have the option to keep my camera off and use an alternative display name so that I cannot be identified by other group members. If I do wish to remain anonymous, I will provide the researcher with my alternative display name on Teams. ☐
13. I would like to be sent the data findings and any published articles via email. For the purpose of this, my email address is _____

14. I agree to take part in the above study. ☐

Participant name

Date

Name of person taking consent

Date

Student Investigator

Rebekah Phillips

University of Central Lancashire, Preston, Lancashire

Rmphillips1@uclan.ac.uk

APPENDIX 12: INTERVENTION AND SUPPORT PACKAGES DISCUSSED WITHIN THE THESIS

12.1 Literature Review Interventions

Education Sessions on Attachment Behaviours (Akbarzadeh et al., 2016)

Weekly sessions lasting 60-90 minutes each for four- six weeks. These varied between lectures, question and answer sessions, role playing, open discussions, and reviewing film footage. Topics covered included pregnancy and childbirth, the embryos' feelings, perceptions of the embryo, attachment theories, the development of attachment with the fetus, the impact of anxiety and negative thoughts on attachment behaviours, the importance of quality sleep, exercise and a healthy diet during pregnancy.

Psychoeducational Intervention (Missler et al., 2020)

A low intensity, easily accessible support package implemented during pregnancy and continuing postnatally. The intervention consisted of an information booklet and an educational video, as well as a prenatal support visit and a postnatal phone call scheduled at approximately four weeks postpartum. There was an expectation that parents utilise the booklet and watch the video prior to the support visit as the aim of this was to facilitate a discussion about the materials provided and answer any questions. The purpose of the telephone call was to offer support and ask questions in respect of how they and their infants were doing. It also provided an opportunity for parents to ask questions about any potential issues which may have arisen following implementation of the booklet and video clip. This visit and telephone call was undertaken by the first author who has a background in clinical psychology and infant developmental psychology

Prevention Program for Infant Sleep and Cry Problems (Hiscock et al., 2014)

The intervention consisted of a booklet and video clip. The booklet consisted of information about infant sleep cycles, normal crying patterns, strategies to encourage infants to self soothe, as well as self-care guidance for parents. The DVD video clip provided similar information, however also demonstrated infant settling techniques, as well as infant-tired signs. The package also consisted of a telephone consultation when infants were between 6-8 weeks old and a 1.5-hour group session at 12 weeks. The purpose of both were to support parents to discuss concerns related to cry and sleep problems and develop a plan to address problems, such as, a clear and consistent bedtime routine. Telephone calls and group sessions were undertaken by trained health professionals with experience within infant care.

What Were We Thinking (WWWT) programme (Fisher et al., 2016)

The WWWT programme consists of three components; primary care input, printed materials and a face-to-face seminar offered at 6-8 weeks postpartum. Firstly, trial Maternal and Child Health Centres were set up to provide primary care services to first time parents. These were led by Maternal and Child Health Nurses who were trained in WWWT programme theory. All parent couples were also provided programme materials which included a short book and worksheets. At 6-8 weeks postpartum, couples and their infants were invited to a 6 hour face to face seminar. The main focus of these seminar were; "*About Babies*" (covering topics, such as infant crying, infant tired cues, establishing consistent sleep routines), and "*About Parents*" (including parental expectations compared to parental experience, identify as a parent, an exploring gaps in support).

Baby Triple P (McPherson et al., 2022)

Baby Triple P (BTP) consisted of eight sessions; four 2 hours face to face group sessions which took place before birth, and four weekly 30 minute telephone sessions from 6 weeks postpartum. All couples were provided with a physical manual which included information discussed during the sessions with tasks to complete at home. Each prenatal session was structured and covered various topics including strategies for a positive parent-infant relationship, understanding cry and sleep behaviours, changes following birth, emotional regulation strategies, and the parent-couple relationship. The telephone calls were individualised sessions developed with the family where it explored prenatal session information and the implementation of strategies; whilst encouraging parents to set personal goals which were then reviewed during subsequent phonecalls.

Practical Resources for Effective Postpartum Parenting (PREPP) (Werner et al., 2016; Grubb et al., 2024)

The intervention consisted of three in person or online sessions (firstly at 28-32 weeks gestation, 34-39 weeks gestation, and 6 weeks postpartum). Each session lasted 45-60 minutes each. There were also two phone call check ins at 18-72 hours postpartum and 2 weeks postpartum of 15-30 minutes each, a PREPP Mindfulness Meditation App, and PREPP booklet. Parents were also provided with a swaddling blanket and infant carrier. The purposes of each session was to establish goals, develop positive self care strategies using mindfulness, implement and review the effectiveness of caregiving skills and techniques, and self reflect on the parenting journey.

Behavioural Therapy Counselling (Montazeri et al., 2022)

The intervention was available to anxious mothers and took place at 2-6 weeks postpartum. This consisted of 8 systematic desensitisation counselling sessions which took place over 4 weeks with 2-3 sessions per week. The topics included teaching in-depth relaxation techniques, exploring feelings of anxiety, the desensitisation of anxiety provoking situations. Desensitisation started during session 5 and involved the mother visualising and exploring various situations which increase anxiety; starting from the least to most provoking instances. This method of desensitisation would continue throughout sessions 6, 7 and 8 until the lowest levels of anxiety is observed.

Family Centred Treatment (Salisbury et al., 2012)

This programme commenced postnatally, between 4-8 weeks postpartum. Three home visits took place (immediately following enrolment and baseline data being taken, then 2 and 6 weeks after this). Each session involved a mental health clinician and paediatrician. The mental health clinician worked with the parents to develop strategies to reduce self-criticism, and stress. Information was provided to families about normal feeding, crying and sleeping patterns to aid a reduction in self-critical beliefs. The parents were also provided an opportunity to discuss any worries or concerns they had. On the other hand, the pediatrician explored factors associated with infant health concerns; such as cows milk protein allergies, feeding schedules, and gastroesophageal reflux (GER).

The Surviving Crying Package (Powell et al., 2018; St James- Roberts et al., 2019)

The Surviving Crying Package consisted of three elements of support. Firstly, a website which consisted of written information and expert advice on IEC, videos from other parents of excessively crying infants, and printable checklists and tips. The booklet included all written information from the website. In addition, parents were offered up to five Cognitive Behavioural

Therapy-based (CBT-based) sessions which could take place in person or over the phone within a 4–6-week period. These sessions lasted up to 90 minutes and explored infant crying, family support needs, parenting information and reassurance, caregiving skills and infant soothing techniques, as well as emotional regulation strategies.

12.2 Emerging Intervention Released Following Completion of the Final Literature Search

Online Infant Care Education and Postpartum Counselling (Şule Bilgiç & Bozkurt, 2025)

The intervention was aimed at mothers who all received a tailored package during the prenatal period. These were delivered in two online sessions which took place between 32- and 38-weeks gestation. Each lasted approximately 40 minutes. The first session explored breastfeeding, infant health and information on health checks, and positive parent-infant communication. The second session focused on baby care techniques and strategies, such as, information on safer sleep and safety strategies, nappy cleaning, and two videos on baby massage. In addition, crying problems, and infant minor health concerns (vomiting, thrush, fever, and gas pain) were also explored. In addition, counselling sessions took place on a weekly basis postnatally, up until 3 months postpartum. These sessions explored areas, such as infant feeding, crying, and nappy care. Mothers were also encouraged to reach out to the researcher for support at any time should they require it.

12.3 Packages Shared with Parents During PAR Group 2 (Information on The Surviving Crying Package and Baby Triple P Package was also Shared During PAR Group 2)

ICON (ICON, 2023)

The ICON concept consists of various publications, including leaflets, posters and a website. These are displayed across the UK including health centres, pharmacies and hospitals. The purpose is to increase awareness of infant crying and reinforce the importance of walking away for a short period of time to reduce potential safeguarding risks posed to the infant, including abusive head trauma. ICON stands for;

I - Infant crying is normal and it will stop.

C- Comfort methods can sometimes soothe the baby and the crying will stop.

O- It's OK to walk away if you have checked the baby is safe and the crying is getting to you.

N- Never, ever shake or hurt a baby.

Period of Purple Crying (National Center on Shaken Baby Syndrome, 2025)

This intervention is a preventative programme aimed at increasing awareness of infant crying to help reduce incidences of abusive head trauma. The programme consists of a e-booklet, website and mobile App conveying the message that infant crying is another part of development. The materials include a 10 minute PURPLE crying video, and a 17 minute video named "Crying, Soothing, Coping: Doing What Comes Naturally" to encourage parents to treat infant crying as 'normal' and utilise strategies to cope during these times. The word PURPLE stands for;

P- Peak of crying (infants may cry most in their second month)

U-Unexpected (the crying will come and go, and they maybe crying for no reason)

R- Resists soothing (crying may be resistant to strategies or soothing techniques)

P-Pain like face (infants may appear red-faced as though they are in pain, when they are not)

L-Long lasting (the crying can last more than 5 hours a day)

E-Evening (the crying may increase in the late afternoon or evening)

‘Coping with Crying’ Package (Hogg & Coster, 2014)

This package was led by the NSPCC and was a short 10-minute film developed to help parents care for their new baby. The film was shown to new parents before discharge from hospital following birth. It intended to prepare parents with the prospect that their infant may cry excessively; providing them with strategies of managing their own stress and reinforcing the dangers of shaking their baby. Other parents can be seen discussing their experiences of having an infant who cries excessively, as well as experts. The film is intended to be hard hitting with information about abusive head trauma and an animation of what happens to a baby’s brain when they are shook.

APPENDIX 13: INTERVIEW SCHEDULE

1. Can you confirm that you have read the participant information sheet and consent form and are happy for this interview to be recorded?
2. Could you tell me about your current role and how long you have worked within children's social care?
3. What qualifications, training, or specialist experience do you have that are relevant to your current role?
4. This interview focuses on infantile excessive crying, sometimes referred to as colic or infantile colic. What comes to mind when you hear these terms?
 - How would you describe IEC?
 - What do you think causes it?
 - How would you recognise it?
5. How have you developed your understanding of IEC?
6. Have you encountered families affected by IEC in your professional role?
 - Can you tell me about these experiences?
 - What concerns were raised?
 - How did the family describe the situation?
7. How commonly do you encounter concerns related to infant crying within your role?
8. Have you experienced IEC within your personal life?
 - Would you be comfortable sharing that experience?
 - Has this influenced your professional practice?
 - If so, in what ways?
9. In your experience, how does infantile excessive crying affect parents or caregivers?
10. Do you think infantile excessive crying can contribute to safeguarding concerns?
 - Why or why not?
 - What kinds of concerns might arise?
 - How are these concerns assessed and managed?
11. How well do you think IEC is understood within children's social care?
 - What experiences have shaped this view?
 - What knowledge gaps exist?
 - What is currently working well?
12. What support, guidance, or training is available to professionals in your organisation regarding IEC?
 - Is it sufficient?
 - What improvements would you suggest?

13. Is there anything else you think is important for social care professionals to understand about IEC?
14. To summarise, today we discussed [summary]. Does this accurately reflect what you said?
15. Is there anything you would like to add, clarify, or amend before we finish?