The accessibility and acceptability of a brief "IPT-informed" intervention for pregnant first-time mothers in the context of the COVID-19 pandemic

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Thesis declaration form:

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I can confirm that this has been indicated in the thesis.

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Overview:

Interpersonal Psychotherapy (IPT) in the Perinatal Period has been found to be effective in both the prevention and treatment of Postnatal Depression (PND). However, there is a lack of brief “IPT-informed” interventions aimed at the prevention of PND within the literature. **Part 1** of this thesis provides a conceptual introduction to IPT in the perinatal period. The review covers the diagnosis and screening of PND, and the key associated risk factors. It then focuses on the development and theoretical underpinnings of IPT, prior to outlining the evidence for IPT in the prevention and treatment of PND. The review will conclude with an overview of the “IPT-informed” intervention, the aims of the thesis and the impact of COVID-19 on the study. **Part 2** of the thesis presents an empirical, mixed-methods, feasibility study designed to investigate three research questions: 1) Is this brief “IPT-informed” acceptable and accessible for expectant and new mothers? 2) Are there any adverse effects as a result of the brief “IPT-informed” intervention? 3) Do the findings from this feasibility study provide evidence for a larger trial in the future? The findings from this study highlight that whilst participants who took part in the intervention reportedly enjoyed and benefitted from it, further trials and pilot studies addressing the limitations and refinements are required to conclude on the interventions accessibility and acceptability for perinatal women. The quantitative data suggests that this intervention does not have any adverse effects on participants, however following refinement, and further pilot testing, a larger scale trial would be beneficial to determine this and its efficacy in the prevention of PND. The findings of this research have clinical and academic implications for the prevention and education of PND. **Part 3** of this thesis provides a personal, critical appraisal of the work.

Impact statement:

The results of this thesis have both clinical and academic implications. Academically, the thesis adds to the limited research and evidence base regarding brief “IPT-informed” interventions in the perinatal period. Furthermore, the current study has identified that a further pilot/ feasibility study is required to address some of the study limitations such as sample (size and demographics) and implementation/ fidelity of the intervention. The findings of this further study would help to determine the brief “IPT-informed” intervention’s accessibility and accessibility for the perinatal population. Furthermore, results from the further pilot/ feasibility study will inform whether a larger scale RCT would be beneficial in identifying the efficacy of this intervention. Regarding clinical implications, one of the key-themes identified in the study was *“this is about you, you are important”*. This theme and its sub-themes identified that women in the perinatal period often feel unimportant, unnoticed and that their health and well-being is secondary to that of their babies. Women who took part in this study felt that the intervention provided them with a space to speak about their emotional well-being and to learn about mental health in the perinatal period, which was something they felt had been missing throughout their experiences. Thus, the study highlighted an area which is commonly missed in antenatal and postnatal care, underlining a clear need for the content of this intervention in the perinatal period. Existing research has highlighted that multiple barriers exist in relation to Health Care Providers (HCP’s) asking about, screening for and diagnosing perinatal mood disorders (Smith et al., 2019). These barriers exist at four different levels: organisational (funding cuts, lack of resources/training), individual (lack of awareness and stigma from both perinatal women and HCPs), structural (unclear policies within services) and sociocultural (language and cultural barriers) (Smith et al., 2019). In addition, the current COVID-19 pandemic has added more barriers to providing adequate antenatal and postnatal care, including a lack of face-to-face checks and follow-up appointments (MacGregor et al., 2020). The findings from this research suggests that a systemic change needs to occur within current perinatal health care provision. This brief “IPT-intervention” can help increase awareness of perinatal mood disorders amongst pregnant women and to reduce the stigma associated with them. Furthermore, the brief “IPT-intervention” could be taught to various HCP’s who may choose to incorporate the principles into their antenatal care or who may even choose to run the groups, where Clinical Psychologists would be able to offer on-going supervision.

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Acknowledgements

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Part 1: Conceptual Introduction

The development of a brief “IPT-informed” intervention for pregnant first-time mothers

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Abstract

It is suggested that nearly 10-22% of all new mothers will experience an episode of major or minor depression in the first three months following birth, making Postnatal Depression (PND) one of the most common difficulties associated with childbearing (Werner et al., 2015). Risk factors associated with the development of PND in the Perinatal Period have been well researched (Milgrom et al., 2008; Yim et al., 2015). Limited social support has been identified as a significant risk factor for women. In turn, the current literature and research has explored the use of Interpersonal Psychotherapy (IPT) in the Perinatal Period and has found it to be effective in both the prevention and treatment of PND. This project aims to explore the experiences of first-time pregnant mothers taking part in a brief "IPT-informed" intervention. The intervention comprised of two parts. Firstly, participants took part in a group intervention which aimed to educate new mothers on the signs and symptoms of PND, explore mothers' available support networks and begin to anticipate the transition to motherhood. Secondly, participants took part in an individual follow-up session two months after birth, where they were invited to reflect on key IPT concepts discussed in the session. At the end of this session, participants also provided feedback on their experiences of the intervention during a semi-structured interview. This Conceptual Introduction will provide a rationale for the development of this brief "IPT-informed" intervention, through providing a thorough investigation of the current literature available and covering associated key concepts and theories.

Introduction

The perinatal period ranges from the time of conception until 12 months postpartum (Bright et al., 2019). During this time, women experience increased emotional, psychological, biological and social adjustments (Bright et al., 2019). In addition, this period brings a major life transition which includes expectations of new roles (e.g., motherhood), as well as changes to physical appearance (Bright et al., 2019). As such, the perinatal period is a time of increased stress and psychological vulnerability (Bright et al., 2019) and is associated with a heightened risk of the development of serious mental health difficulties (Robertson et al., 2003). The three most common presentations in the postnatal period are the baby blues, PND and postpartum psychosis, each of which have differing clinical presentations, management, and prevalence (Robertson et al., 2003). It is suggested that between 10-22% of all new mothers will experience a period of major or minor depression in the first few months following birth, thus creating the most common difficulty associated with childbearing

(Werner et al., 2015). In turn, PND signifies a public health issue for both women and their children and families (Werner et al., 2015).

There are a range of psychological interventions available for new mothers for the prevention and treatment of PND. Specifically, IPT has been recognised as an evidence-based intervention suitable for this population. IPT is focused on the interpersonal context in which depression can develop. Consideration of the interpersonal context is essential in the perinatal period as a lack of social support has been identified as a risk factor for the development of PND. Social support has been defined as "the emotional and instrumental assistance received from various sources, with a focus on how the support is perceived by the recipient" (Ginja et al., 2018). Social support can ease a woman's transition into motherhood (Werner et al., 2015). Women suffering with PND often report that there is a difference between the social support that they wish to receive and the social support that they do receive (O'Hara, 1994; Stuart, 2012). A lack of perceived social support can occur with women and their partners, families and friends but is mostly reported and noticeable in relationships with partners (Stuart, 2012). Typically, partners of childbearing women do not share similar views and believe that they are providing adequate levels of support (Stuart, 2012). The birth of a baby is a significant and life-altering event, which can "challenge even the strongest of relationships" (Stuart, 2012; Fraser & Cullen, 2006).

This introduction will aim to provide an overview of the current literature, leading to the development of the brief "IPT-informed" intervention for first-time mothers in the perinatal period. This introduction will firstly outline key concepts associated with PND, including a clear definition, methods of screening and diagnosis and key risk factors for development. Following this, the psychological treatment available for PND will be outlined, focused most specifically on IPT. The introduction will outline the core aspects of IPT, and the specific adaptations required for delivery in the perinatal period. The introduction will then provide an overview of the current evidence-base for IPT in the perinatal period. The review will conclude by outlining the brief "IPT-informed" intervention developed for first time pregnant women, the results of which will be presented in the main body of the thesis. Finally, the review will highlight adaptations and changes made to the intervention due to the current COVID-19 pandemic.

Postnatal Depression- Definition

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) describes Postnatal Depression as a major depressive episode "with peripartum onset if onset of mood symptoms occurs during pregnancy or within 4 weeks following delivery" (APA, 2013; Stewart & Vigod, 2016). Importantly, depression which occurs after four weeks, or which

may not meet the full criteria for a “major depressive episode” could be a reason for concern and require further treatment in the future (Stewart & Vigod, 2016). In clinical practice, PND is typically defined as a depression which develops within 4 weeks after childbirth or up to 12 months after childbirth (Stewart & Vigod, 2016).

The full Diagnostic and Statistical Manual of Mental Disorders, fifth edition criteria: (list adapted from American Psychiatric Association’s DSM-V, 2013, found in Stewart & Vigod, 2016):

A minimum of five symptoms present for at least two weeks, for most days:

One symptom must be:

- Depressed mood
- A clear decline in interest or pleasure in most or all activities.

Other symptoms:

- Clinically significant loss of weight when not dieting or clinically significant increase in weight. Or an increase/ decrease in appetite.
- Insomnia or hypersomnia.
- Psychomotor agitation or retardation.
- Fatigue or loss of energy.
- Excessive and inappropriate feelings of guilt or feelings of worthlessness.
- A reduced ability to think/ concentrate or indecisiveness.
- Reoccurring thoughts of death or suicidal ideation (may or may not include a specific plan).

Symptoms of PND must cause significant levels of distress or significant impairment in occupational, social and/or other areas of functioning (APA 2013). In addition, PND symptoms are not due to direct physiological effects of substances or other medical conditions (APA, 2013). Furthermore, PND symptoms must not be better explained by a schizoaffective disorder or any other psychiatric disorder (APA, 2013). Finally, a manic or hypomanic episode must not have been experienced (APA, 2013).

Screening and Diagnosis

The best method of screening for PND is still a controversial topic (Stewart & Vigod, 2016). The administration of the Edinburgh Postnatal Depression Scale which is comprised of 10 items (EPDS) is recommended for detection of PND symptoms (Stewart & Vigod, 2016). In the UK, the National Institute for Health and Care Excellence (NICE) guidelines suggests asking all postpartum women the same two questions:

1) "During the past month, have you been bothered by feeling down, depressed, or hopeless?"
2) "During the past month, have you been bothered by little interest or pleasure in doing things?"

These questions have shown consistently high sensitivity and modest pooled specificity across a number of situations; it is rare that a depressed woman will answer 'no' to both questions (Stewart & Vigod, 2016). If the answer is yes to either of these questions, it is suggested to then use a screening measure for depression such as the EPDS or the PHQ-9. High scores on either of those measures would prompt a complete clinical assessment to reach a diagnosis (Stewart & Vigod, 2016). To reach a diagnosis, a comprehensive assessment must explore the mother's background, any co-morbid psychiatric disorders, and possible psychosocial and biological contributing factors (Stewart & Vigod, 2016). It is relatively common for women to suffer from mild-depressive symptoms after birth, this is commonly known as the 'baby blues' and affects around 70% of new mothers (Stewart & Vigod, 2016). These symptoms tend to include feelings of sadness, mood lability, anxiety, irritability, and tearfulness (Stewart & Vigod, 2016). Importantly, 'baby blues' do not severely impact on functioning and tend to spontaneously improve after around 2 weeks (Stewart & Vigod, 2016). Whilst distinguishing between PND and 'Baby blues' can be difficult, it has been suggested that assessing severity of symptoms across numerous points in time may be helpful in differentiating the two as well as assessing the impact on maternal functioning (Stewart & Vigod, 2016).

PND is frequently under-diagnosed and overlooked in pregnancy (Wichman & Stern, 2015). Faisal-Cury and colleagues (2021) conducted a study in Brazil and found that when compared to non-pregnant women, depression underdiagnosis was significantly linked to pregnancy. There may be several reasons for this. Firstly, health care providers in different countries may not be trained or educated on assessing the signs and symptoms of PND (Legere et al., 2017). Secondly, there are issues with the diagnostic criteria and screening materials used to screen for and diagnosed PND. This is because the symptoms associated

with PND are similar to the somatic experiences of pregnant women. It is common for pregnant women to experience difficulties with their sleep, appetite and to have low energy levels without having an affective disorder (Wichman & Stern, 2015). These aspects make detection and offering treatment for PND more challenging (Legere et al., 2017). Therefore, it has been suggested that clinicians' focus more on non-somatic symptoms such as a lack of interest in the pregnancy, feelings of guilt or ruminations, suicidal ideations and a lack of pleasure or enjoyment in activities to guide diagnosis in pregnancy (Wichman & Stern, 2015).

The impact of PND

It has been well evidenced in the research that untreated maternal depression affects the whole family unit. Untreated depression has been associated with marital discord and difficulties with social and occupational functioning and is linked with mother-infant bonding difficulties (Werner et al., 2015). Furthermore, PND has continuously been found to have detrimental effects on the infant's psychosocial and attachment functioning (Stuart, 2012; Murray, 1992; Goodman & Gotlib, 1999). PND has been linked to affective dysregulation, slow development of cognitive skills and attachment disturbances in children (Stuart, 2012; Field, 1990). Research has found that mothers who suffer with depression are generally more punitive, rejecting and hostile (Stuart, 2012). In addition, depressed mothers may be less sensitive, affectively available, and responsive to their babies (Stuart, 2012; Field et al.,1985; Field et al.,1990). Furthermore, numerous studies have found evidence that maternal depression is linked to cognitive and social difficulties in children up to the age of five (Stuart, 2012; Philipps & O'Hara, 1991; Caplan et al., 1989).

Risk factors for the development of PND

Researchers have identified several risk factors associated with the development of PND and these have been synthesised in both systematic reviews and meta-analyses (Beck, 1996; O'Hara & Swain, 1996; Beck, 2001; Robertson et al., 2004). The known risk factors cover a wide range of biological, socio-economic and demographic, psychiatric, personal and interpersonal factors (Milgrom et al., 2008).

Obstetric & Biological risk factors

Biological factors associated with the development of PND are still in the early research stages, with a lack of clarity across the literature (Werner et al., 2015). Studies have suggested that the complex biological changes involved during the perinatal period may

contribute to vulnerability (Yim et al., 2015). However, fluctuations in estrogen and progesterone from pregnancy to the postnatal period, do not predict PND (Studd, 2011; Okun et al., 2011; Yim et al., 2015).

Obstetric risk factors such as a history of terminating a pregnancy or miscarriage have been found to be associated with PND (Pope, 2000; Robertson et al., 2004; Milgrom et al., 2008). There is mixed evidence in the literature regarding whether obstetric difficulties are linked to PND with some studies suggesting that obstetric difficulties lead to an increased risk of PND (Boyce et al., 1992; Boyce, 2003) and others stating that they do not (Murray & Cartwright, 1993; O'Hara et al., 1982; Paykel et al., 1980; Boyce, 2003).

Socioeconomic and Demographic factors

A mother's age (both younger and older) has been linked to the development of PND (Milgrom et al., 2008; Pope, 2000; Rubertsson et al., 2003) and it has been suggested that women from lower socio-economic backgrounds are more at risk for developing PND (Patel et al., 2002).

Psychiatric risk factors

Key psychiatric factors which increase the likelihood of developing PND include a history of family or personal mental illness (specifically depression) (Milgrom et al., 2008; O'Hara & Swain, 1996; Pope, 2000; Johnstone et al., 2001). In addition, women who experience depression and/or anxiety during pregnancy are a risk for developing PND (Barnett & Parker, 1986; Bergant et al., 1999; Beck, 2001; Matthey et al., 2003; Heron et al., 2004).

Specific personality traits such as neuroticism, perfectionism, and introversion, have been noted as risk factors for the development of PND (Milgrom et al., 2008; Verkerk et al., 2005; Dimitrovsky et al., 2002).

Interpersonal risk factors

It has also been identified that stressful life events, such as negative life events (e.g., the death of a loved one, illness of self/ a significant other, difficult social circumstances) and events linked with the pregnancy or birth (e.g., pregnancy related illnesses and birth complications), can contribute to the development of PND (Milgrom et al., 2008). Rubertsson and colleagues (2005) found that the occurrence of "two or more stressful life events in the year prior to pregnancy" can predict depression both in the antenatal and postnatal period (Milgrom et al., 2008).

Good levels of perceived social support are believed to assist a woman's transition to new motherhood, especially for women who find the transition to be particularly stressful, and good social support is thought to be important for maternal role development (Plews et al., 2005; Levitt et al., 2007; Emmanuel et al., 2008; Leahy-Warren et al., 2011). Alternatively, low levels of social support in the perinatal period pose significant risks in relation to the development of PND (Milgrom et al., 2008; Honey et al., 2003). A lack of social support is often reported most noticeably between the woman and her partner (Stuart, 2012). Good perceived partner support can facilitate the transition to motherhood (Stuart, 2012). However, poor partner support, such as conflict and intimate partner violence can be a predictor of PND (Ludermir et al., 2010). The birth of a new baby can bring great happiness to new parents but also involves a substantial adjustment in family dynamics and relationships (Lu, 2006). It may change the dynamic of the relationship between the parents and the relationship with grandparents (Leung & Lam, 2012). Conflict with grandparents more often occurs when they are involved in childcare (Leung & Lam, 2012). Studies have shown that particularly amongst Chinese women, conflict between perinatal women and their in-laws can contribute to the development of antenatal depression and PND (Leung & Lam, 2012; Lau & Keung, 2007; Lau et al., 2011). The research has also found that despite potentially triggering conflict between relationships, babies can also strengthen relationships with in-laws (Leung & Lam, 2012).

Psychological interventions for PND

As a direct result of being underdiagnosed, PND is often undertreated (Stuart, 2012). It is estimated that fewer than 25% of women with PND receive treatment (Posmontier et al., 2016). Reasons for this might include women worrying about being labelled as mentally ill and the stigma associated with that, receiving judgment from others, and fearing that their children would be removed from them were they to seek support or treatment (Posmontier et al., 2016). In addition, there is limited access to mental health providers who can provide the treatment required (Posmontier et al., 2016). Women often face the dilemma as to whether to choose psychological treatment, antidepressant medication or a combination of both (Stuart, 2012). Typically, women prefer psychotherapy in the postpartum period to taking medication (Grigoriadis & Ravitz, 2007). This is because women often worry about the possible immediate and long-term side effects of anti-depressant medication when breastfeeding (Stuart, 2012). Whilst there is now a growing evidence base suggesting that anti-depressant medication has limited adverse side effects for infants, many mothers are still ambivalent and will likely remain so until conclusive studies are published regarding the impact on children's development (Stuart, 2012). A study conducted by Boath and Henshaw

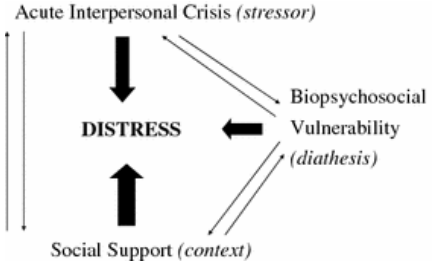
(2001) found that 31% of women with PND refused to take anti-depressant medication because they were breastfeeding. The study also found that compliance with medication was poor amongst those who did take medication due to worries about possible side-effects, dangerous long-term effects, not waking to the baby's cries at night and the stigma associated with taking an anti-depressant medication in the perinatal period (Boath & Henshaw, 2001).

There are a range of psychological therapies available for the treatment and prevention of PND. Specifically, Cognitive Behavioural Therapy (CBT) and Interpersonal Psychotherapy (IPT) have been identified as effective interventions in both the prevention and treatment of PND (Posmontier et al., 2016). Whilst CBT assists women to manage and change negative thought patterns which affect mood, it does not address the interpersonal context which has been identified as critical in the perinatal period, as outlined above. In addition, IPT has been identified to be extremely adaptable and can be delivered by a range of healthcare professionals, making it desirable for the perinatal population.

Interpersonal Psychotherapy

Interpersonal Psychotherapy (IPT) (Klerman et al., 1984) is a short-term psychotherapy, originally developed for the treatment of depression. IPT aims to improve individuals' interpersonal functioning and in turn reduce depressive symptomology (Stuart & Robertson, 2012). IPT is based on the principle that interpersonal distress is associated with psychological distress and that psychological symptoms are triggered by a specific interpersonal stressor (Stuart & Robertson, 2012). The principles of IPT suggest that the individual's ability to manage the stressor both biologically and socially is influenced heavily by their biopsychosocial vulnerabilities (Stuart, 2008). In addition, the individual's important relationships and general support allow for the context where the "stress-diathesis" interaction may happen (Stuart, 2008). All together, these aspects create the 'Interpersonal Triad' (see figure 1) which encompasses the basic IPT conceptualisation for the development of distress (Stuart, 2008).

Figure 1: IPT Stress-Diathesis Model (Stuart, 2008)



IPT specifically focuses on interpersonal relationships as a way of improving depressive symptoms and bringing interpersonal change (Stuart & Robertson, 2012). The goal is to help individuals manage their interpersonal relationships through helping them to identify their needs and appropriately ask for any practical or emotional support they may need (Stuart & Robertson, 2012). Furthermore, IPT aims to help strengthen individuals' social support so that they are more able to deal with interpersonal distress (Stuart & Robertson, 2012). This will be discussed further below.

Theoretical foundations of IPT: Attachment Theory

Attachment Theory (Bowlby, 1969) is the key theoretical foundation of IPT and provides an understanding for individuals' difficulties within relationships (Stuart & Robertson, 2012). Attachment Theory explains the ways in which humans create, maintain and finish relationships, along with the difficulties that can occur within them (Stuart & Robertson, 2012). Attachment Theory posits that individuals have an 'intrinsic desire' to create and maintain close relationships with others (Stuart & Robertson, 2012). Supported by evolutionary theory, this desire is biologically driven, meaning that this desire to form bonds with others is crucial for human survival (Stuart & Robertson, 2012; Bowlby, 1988). For example, helpless infants require an attachment to their mother to survive (Weissman et al., 2017). Bowlby argued that differences in our early relational experiences can impact the way in which we relate to others within our relationships in the future (Ravitz et al., 2008). In early attachment, these experiences support the growth of 'internal working models' which are founded on our experience and are predictive templates, often named 'schemas' which inform our expectations, perceptions, and behaviours in relationships (Ravitz et al., 2008).

Attachment classifications are recognised using Mary Ainsworth's Strange Situation (Ravitz et al., 2008; Ainsworth et al., 1978). In her work, Ainsworth identified three key attachment styles in babies; each classification describes a pattern of interpersonal behaviour which occurs due to stress in the absence or unavailability of a parent (Ravitz et al., 2008). An infant with a secure attachment to their primary caregiver has enough positive early experiences to develop the capacity to self-soothe and identify comfort in others when in stressful situations (Ravitz et al., 2008). Infants with insecure attachments (anxious or avoidant) frequently have parents who are not attuned to their needs (Ravitz et al., 2008). Infants with an insecure anxious attachment style tend to have experienced parents who are unable to respond appropriately to their temperamental needs and who display high levels of parental anxiety (Ravitz et al., 2008). Infants with an insecure attachment style may have experienced parenting that is abusive, insensitive, or neglectful (Ravitz et al., 2008). It has been well documented throughout the literature that insecure attachment styles are more

frequently linked to poor mental health outcomes in later life and can be detrimental to interpersonal functioning within relationships in later life (Ravitz et al., 2008).

Attachment Theory suggests that, when our attachment needs are appropriately met, we are better able to function. Conversely, when these needs are not appropriately met, we become more vulnerable to experiencing distress and mental health difficulties (Stuart & Robertson, 2012). Therefore, Attachment Theory suggests that disruptions in relationships with others causes psychological distress (Stuart, 2008). It has been suggested that individuals who have insecure attachments are more susceptible to interpersonal difficulties, conflicts, transitions, and losses due to their initial attachment relationship and a lack of or poor social support from others (Bowlby, 1973). These ideas link in with IPT's four focal attachment areas, however in IPT the focus is on current relationships rather than past experiences. Individuals with insecure or anxious attachment styles are more susceptible to issues and challenges in their interpersonal relationships and to alienating their social support networks (Stuart, 2008). In addition, these attachment styles lead to difficulties with communication which prevents attachment needs from being met (Stuart, 2008; Stuart & Noyes, 1999).

IPT: Therapeutic implications of Attachment Theory

Stuart (2008) outlines a number of implications of Attachment Theory which are essential in IPT. Firstly, it helps therapists to understand an individual's distress in relation to their attachment needs being unmet. For example, it may be that an individual's attachment style affects the way in which they interact with others and ultimately impacts on their own beliefs about their abilities. Individuals with insecure attachments may be more vulnerable to interpersonal conflicts, transitions and losses due to their poor social networks and difficult primary relationships (Bowlby, 1973; Stuart, 2008). Such difficulties are targeted in IPT using the focal areas "Role Transitions, Grief and Loss, and Interpersonal Disputes". The focus in IPT is on helping the individual to more effectively have their needs met through focusing on improving communication with the individual's key attachment relationships and social support networks. Stuart (2008) states "IPT's primary targets are the patient's interpersonal relationships and social support". It is not a target of IPT to change an individual's attachment style, but to improve and change their communication with others through using a variety of therapeutic strategies and techniques.

Stuart (2008) states that Attachment Theory helps make links between the ways in which the individual connects with the therapists and how they attach to significant others in their lives. Importantly, IPT does not specifically focus on the patient-therapist relationship;

however, the therapist's experience of the relationship can help in the development of hypotheses about the individual's relationship style and interpersonal functioning in relationships outside of therapy. In addition, Attachment Theory can provide important information about potential therapeutic challenges and how to manage them whilst keeping the IPT structure (Stuart, 2008).

IPT Protocol

IPT encompasses both clinical experience and research. IPT is exceptionally adaptable and continues to be modified as additional data from research and clinical experience continues to grow (Stuart & Robertson, 2012). This allows clinicians to be flexible and use clinical judgement when delivering IPT and to adapt to the needs and presentation of their clients (Stuart & Robertson, 2012). In addition, it has allowed IPT to be delivered to clients from diverse cultures that may not have been represented in the literature (Stuart & Robertson, 2012).

IPT is typically characterised as having four key elements:

- IPT focuses on interpersonal functioning and improving social support as an intervention.
- It is based on the biopsychosocial model of psychological functioning.
- IPT is intended to be a short-term intervention.
- IPT does not specifically address the client-therapist interactions/relationship.

IPT is a time-limited therapeutic intervention, typically delivered once weekly over 10-20 weeks and includes three stages (beginning, middle and end) (Stuart, 2008). In the first stage of treatment, the therapist identifies the target symptoms (e.g., depression) and the interpersonal context in which the symptoms present (Markowitz & Weissman, 2004). The therapist does this by gathering an idea of the client's current interpersonal relationships, through completing an 'interpersonal inventory' (Klerman et al., 1984) with the client (Markowitz & Weissman, 2004). The inventory is a unique aspect of IPT which is both a structured way of gathering a person's history and of mapping their person's interpersonal relationships (Stuart, 2008). The inventory is conducted over a number of sessions and is always considered 'a work in progress', with an understanding that the client's interpersonal relationships and related difficulties change over time (Stuart, 2008). The interpersonal formulation (Stuart & Robertson, 2003) is comprised of a general assessment of the client's history of psychological functioning and information gathered from the inventory. It provides

a hypothesis grounded in the information gathered and explains the onset and development of their psychological difficulties (Stuart, 2008). The inventory helps identify a focus area for treatment, of which there are four in IPT. The three most used IPT focus areas are; “Interpersonal Disputes, Grief and Loss and Role Transitions” (Stuart, 2008). The fourth IPT focus area and less commonly used is ‘Interpersonal Deficits’, which is relevant in the absence of any major life events. Therapists then link the client’s current symptoms to the interpersonal focus area and agree with the client the focus for the duration of the intervention (Markowitz & Weissman, 2004).

In the second phase of treatment, the therapist will use certain techniques to help manage whichever area has been selected as the focus of treatment (Markowitz & Weissman, 2004). For example, if a ‘Dispute’ is the selected focus area, techniques may help the client resolve a significant area of contention in their lives, such as an argument with a partner, friend, family member or acquaintance. For ‘Transitions’, the therapist will use specific techniques to help the individual grieve the loss of an old role and help them accept the new one in as positive a light as is possible. In ‘Grief’, the client may be encouraged to engage in appropriate mourning. Lastly, with ‘Interpersonal Difficulties’, the focus is on decreasing social isolation (Markowitz & Weissman, 2004). Regardless of the focal area, the therapist will likely place an emphasis on identifying how the individual can communicate their needs and wants in their interpersonal relationships (Markowitz & Weissman, 2004).

In the last phase of treatment, the therapist will remind the client that the sessions are nearing the end and help them to feel more independent and capable, through reviewing his or her achievements throughout the duration of the sessions (Markowitz & Weissman, 2004). The therapist will acknowledge that ending treatment is a transition, with both good and difficult features (Markowitz & Weissman, 2004).

IPT for the Perinatal Period

Since its original development, IPT has been adapted to be delivered in multiple contexts and for a range of mental health presentations (Stuart & Robertson, 2012). As IPT focuses on reducing depressive symptoms, increasing social support, and improving general interpersonal functioning, it is perhaps unsurprising that IPT has been evidenced to be particularly helpful for women in the perinatal period (Stuart & Robertson, 2012; Sockol, 2018).

Adaptations for assessment

Stuart (2012) suggests that adaptations for IPT for the perinatal period begin with the assessment phase and proposes several adaptations. Firstly, Stuart (2012) notes that a careful assessment of the mother's depressive symptoms must be carried out, with special consideration given to the fact that being a new mother brings about disturbances to sleep and can lead to a lack of energy in the postpartum period without a diagnosis of depression. He also notes that therapists should also focus on aspects such as issues related to conceiving, unwanted and/or unplanned but wanted pregnancies, any prenatal complications, and difficulties in labour, all of which can complicate the development and course of PND. Additionally, Stuart (2012) reports that practical considerations should be taken into account for women with PND, such as finding adequate childcare and time to attend sessions. Clinicians should explicitly and directly ask mothers about a range of their experiences of new motherhood. Mostly, women describe positive relationships with their babies and often women with PND will describe their interactions with their babies as being the only positive interactions they have. However, for some women, despite feeling strong attachments to their newborns, they may have feelings of resentment about their additional workload, the impact of the baby on their relationship or career and the loss of their spontaneity. Such feelings are often not directly communicated, and many women often feel pressurised to only discuss and share the positive feelings they have for their baby, due to fear of being labelled a 'bad mother' or being judged by others. However, clinicians must pay special attention to any strong negative feelings toward an infant/child and a thorough risk assessment should always be completed, considering diagnoses such as Postpartum Psychosis. Any homicidal ideations toward the infant/child should always be immediately assessed.

Adaptations for the 'interpersonal inventory'

Stuart (2012) suggest that therapists should pay particular attention to the interpersonal inventory and the common difficulties found in the perinatal population. Therapists should focus on the individual's relationship with her baby, family, partner, her in-laws and her friends. The quality of the parents' relationship is important, as a strong relationship is predicted to facilitate the transition to motherhood. The birth of a newborn can impact and alter a woman's relationship with her partner, leading to changes in sexual and interpersonal intimacy, in caregiving roles, in managing additional workloads and the couple's social interactions with others (e.g., friends and family). Some women may not be interested in immediately resuming a sexual relationship with their partner in the postpartum period. Reasons for this may vary from tiredness, physical pain or discomfort following birth,

concerns around body image or possible disinterest from the partner due to feelings of neglect.

Adaptations for focus areas

Stuart (2012) outlines that the focal areas of IPT are particularly important in the perinatal period and are the same as those in traditional IPT. The middle sessions of IPT treatment for perinatal women focus on the specific 'themes', within one of the interpersonal areas. The focal area 'Interpersonal Disputes' typically focuses on the woman's immediate family or partner. Stuart (2012) reports that disputes with partners often involve a lack of perceived of emotional support and arguments surrounding childcare and roles. Disputes with the family are frequently related to perceived criticisms about the woman's handling of the baby, including issues such as sleep, routines, or breastfeeding, and can centre on a perceived lack of support (Stuart, 2012).

The 'Role Transitions' focus area explores how women feel around the transition to motherhood, as well as other common struggles such as the decision to return to the workplace or stay at home (Stuart, 2012). First-time mums may find it challenging to balance the responsibilities of their new roles and their other social interactions and requirements. Motherhood might also include unforeseen changes in priorities and can include a significant shift in self-identity. Grigoriadis & Ravitz (2007) report that "for women with post-partum depression, the challenge is to integrate their new social role as mother with their previously defined sense of themselves within their families, their workplaces, and their communities" (Stuart, 2012).

In 'Grief and Loss', although the focal area is not seen as frequently in the postpartum period as transitions and disputes, there are numerous areas where this focus area can be utilised in the perinatal period (Stuart, 2012). These can include previous pregnancy losses including stillbirths, miscarriages, and abortions which, after the birth of a healthy baby, may now be viewed and experienced in a different way, leading to substantial distress (Stuart, 2012). In addition, babies born with a disability, a significant medical illness or who were extremely premature may also be perceived as a loss (Stuart, 2012). Furthermore, women may experience a re-activation of feelings of loss, sadness and grief which are associated with their own poor parental experience, especially if issues such as abandonment and any form of abuse were present (Stuart, 2012).

Evidence to support IPT in the Perinatal Period

The earliest study examining the efficacy of IPT in the reduction of depressive symptoms in antenatal women was conducted by Spinelli (1997). Spinelli (1997) piloted an open trial of sixteen weeks of IPT with thirteen women meeting the DSM-III-R criteria for Major Depression. The study found that women's mean depression ratings on the Hamilton Depression Scale (HDS), Beck Depression Scale (BDS) and Edinburgh Postnatal Depression Scale (EPDS) decreased significantly from assessment to week sixteen of the programme (Spinelli, 1997).

Since Spinelli's initial study, there have been multiple studies conducted exploring the delivery of adaptations of IPT in the perinatal period. In turn, multiple systematic reviews and meta-analyses have synthesised the current findings and literature. Reviews have found IPT to be effective in the both the prevention (Sockol et al., 2018; Bright et al., 2019) and treatment (Bledsoe & Grote, 2006; Claridge, 2014; Sockol et al., 2011; van Ravesteyn et al., 2017; Sockol, 2018; Bright et al., 2019) of PND. In addition, two meta-analyses have suggested that IPT could be more effective than other models of psychotherapy (Sockol et al., 2018). A meta-analysis conducted by Sockol and colleagues (2011) found IPT to be more effective for the treatment of PND than CBT. Another meta-analysis conducted by Claridge (2014) found that, for the treatment of PND, IPT was more effective than other relational therapies, such as couples' therapy. The most recent systematic review conducted by Bright and colleagues (2019) concluded that, as a preventative intervention, IPT is more effective than other treatment conditions (active treatment, no treatment, treatment as usual) in reducing the risk of PND (Bright et al., 2019). When IPT is used as a treatment intervention with this population, it is effective in significantly reducing symptoms of anxiety and depression, alongside improving perceived social support and feelings of adjustment (Bright et al., 2019).

In line with the current project, there have been several studies examining preventative, brief and group interventions in the perinatal period. These studies will be outlined in more detail below, prior to outlining the development of the current intervention.

Preventative Perinatal IPT

Several studies have examined the possibility of using an IPT informed approach in the prevention of PND. One of the first studies to examine this was conducted by Zlotnick and colleagues (2001) who conducted a small, randomised control trail (RCT) examining the efficacy of an IPT informed group intervention in the prevention of postpartum depressive symptoms. The sample used in the study was relatively small, consisting of thirty-seven

“pregnant women receiving public assistance”. Women were enrolled if they had at least one risk factor for the development of PND (Zlotnick et al., 2001). Participants were assigned randomly to a four-session group IPT intervention or a treatment as usual (TAU) condition. The IPT intervention was named “survival skills for new mums” which included four one-hour group sessions which took place weekly (Zlotnick et al., 2001). The intervention focused on psychoeducation regarding ‘baby blues’ and ‘postpartum depression’, alongside identifying key IPT areas such as role transitions, changes associated with these and goals for effectively managing changes (Zlotnick et al., 2001). In addition, the intervention aimed to identify social supports and potential interpersonal conflicts, especially those predicted after the birth of the baby (Zlotnick et al., 2001). Skills were also taught to help women manage and resolve interpersonal conflicts (Zlotnick et al., 2001). Thirty-five women completed the study and were assessed using the DSM-IV (Structured Clinical Interview for DSM-IV (SCID)) to assess for PND and the Beck Depression Inventory (BDI) self-rating scale. Results found BDI scores before and after the IPT group were significantly lower than that for the TAU group (Zlotnick et al., 2001). Additionally, the results found that, within three months of giving birth, none of the seventeen women in the IPT intervention had symptoms of PND, compared with six out of the eighteen women in TAU (Zlotnick et al., 2001). The authors concluded that in a group of women who were financially disadvantaged, a brief, four session IPT orientated group intervention was effective in the prevention of postpartum depression (Zlotnick et al., 2001).

Zlotnick and colleagues (2016) later conducted a larger RCT to assess the effectiveness of IPT in decreasing the possibility of PND in “pregnant women on public assistance”. Women completed the Cooper Survey Questionnaire (CSQ) which is a self-report measure, predictive of PND (Zlotnick et al., 206) to identify whether they had any risk factors which are related to the development of PND. The ‘Treatment Services Review’ was utilised to identify whether treatment for mental health was received at various time points following the intervention (McLellan et al., 1992). The study randomised 205 pregnant women at risk of the development of PND to either IPT (N=104) or TAU (N=101). The IPT-based intervention utilised in this study was the “ROSE (Reach Out, Stand strong, Essentials for new mothers)” programme which was created to be given to antenatal women in small groups (two to five people) (Zlotnick et al., 2016). The ROSE programme is highly structured and contains a mixture of psychoeducation and IPT-based skills aimed at improving relationships and developing social supports (Zlotnick et al., 2016). The programme comprises four, 90-minute sessions running across four weeks (Zlotnick et al., 2016). It also contains a one off, 50-minute individual session that occurs within 2 weeks of birth (Zlotnick et al., 2016). The study found that, six months after birth, the control group had a higher overall depression rate (31%) than the intervention group (16%). Therefore, the IPT-based

intervention (ROSE programme) appears to be effective in the prevention of depression development in the postpartum period in a sample of at-risk women utilising public assistance (Zlotnick et al., 2016).

Grote and colleagues (2004) argue that depression during pregnancy is a significant indicator and predictor of PND, which has significant and negative lasting effects on infant and child wellbeing as well as on parental mental health. Therefore, Grote and colleagues (2004) piloted a study exploring the accessibility and feasibility of a culturally relevant, brief version of IPT for depression during pregnancy. Participants were twelve pregnant women presenting at an obstetrics clinic. The women were recruited as part of a "convenience sample from the clinic" (Grote et al., 2004). Women were offered an interview before treatment and were then offered eight sessions of brief IPT (IPT-B) (Grote et al., 2004). Following this, women were offered monthly maintenance sessions of IPT up to six months after birth (Grote et al., 2004). The authors chose the eight-session model based on pilot data by Swartz and colleagues (2004), who found that most individuals with symptoms of depression typically showed the greatest improvements after eight weeks of brief IPT and that depressive symptoms remained low at six-month follow ups. The authors felt that, given the high rates of dropouts in low income, minority individuals seeking help for depressive symptoms, IPT-B would be an appropriate intervention (Grote et al., 2004). Grote and colleagues (2004) argue that IPT-B seems a particularly acceptable treatment for antenatal depression as it reduces the burden of sixteen sessions, fits well with time pressures in pregnancy, as women often want to feel better before their baby is born, and provides an alternative to pharmacological treatment. Additionally, Grote and colleagues (2004) report that the idea that depression is linked to the interpersonal context appears to be culturally consistent with collectivist worldviews of diverse minority groups. Nine out of twelve of the women completed all eight sessions of IPT-B and paired t-tests highlighted that those who completed IPT-B showed significant improvements at post-treatment and at six-months postpartum on a measure of anxiety (Beck Anxiety Inventory (BAI)), three measures of depression (EPDS, BDI & Hamilton Rating Scale for Depression (HRDS)) and in some areas of social functioning (Social and Leisure Domain of the Social Adjustment Scale (SAS)) (Grote et al., 2004). The early results highlight that conducting depression screening and providing appropriate treatment to this sample of women in a clinic was both feasible and provided improvements in both clinical and functional areas (Grote et al., 2004).

Grote and colleagues (2009) later conducted a RCT of the efficacy of enhanced IPT-B delivered to fifty-three pregnant women who were not seeking treatment but receiving routine care in perinatal services and who had met criteria for depression of the EPDS. Women were assigned randomly to either the IPT-B (n=25) group or enhanced usual care (n=28) group. Women were assessed both before and after treatment on symptoms of

depression (BDI), diagnosis of depression (DSM-IV SCID, EPDS) and on social functioning (SAS) (Grote et al., 2009). The results found that there were significantly fewer reports of depressive symptoms and diagnoses of depression before birth (three months on from baseline) and six-months after birth in the IPT-B intervention group when compared with the enhanced treatment as usual group (Grote et al., 2009). Additionally, women in the enhanced IPT-B condition showed significant improvements in their social functioning six-months after birth when compared to the enhanced treatment as usual group (Grote et al., 2009). Grote and colleagues (2009) concluded that enhanced IPT-B is effective in the reduction of depression during pregnancy and prevents depressive relapse in the postpartum period. Enhanced IPT-B additionally improves social functioning up to six-months after birth.

Group Perinatal IPT

Several studies have examined the use of group IPT in the Perinatal Period. Reay and colleagues (2006) carried out a pilot study to evaluate the efficacy of group IPT (IPT-G) as a treatment for PND. Eighteen mothers who were diagnosed with PND took part in two individual sessions and eight group sessions of IPT. In addition, a two-hour educational session was held for partners of participants in the study (Reay et al., 2006). Measures of depressive symptoms (BDI, HRDS, EPDS) and social adjustment were administered at baseline, mid-point, and end of the intervention and at 3 months post-treatment. The study found that severity scores on all depressive measures reduced from pre- to post-treatment (Reay et al., 2006). This reduction was also found to be sustained at the three-month follow up. However, there were no overall improvements in the self-reported SAS, despite participants reporting better relationship with their partners (significant other) (Reay et al., 2006). The results of this pilot study suggest that IPT-G may improve depressive symptoms for women suffering from PND. Reay and colleagues (2006) note limitations in their study including the absence of a control group, and the fact that 67% of participants were concurrently receiving treatment for PND such as taking antidepressant medication, reducing the ability for them to conclude that improvements were due to IPT-G alone.

Miller and colleagues (2008) conducted a study testing the acceptability, helpfulness, and feasibility of IPT-G for pregnant adolescents with depression (IPT-PA). The study conducted two clinical trials of group IPT-PA in a New York City public school for expectant adolescents. The first study explored IPT-PA for the management of symptoms of depression through delivering IPT-PA to a health class of pregnant adolescents with a variety of symptoms of depression (N=14) (Miller et al., 2008). The second study examined IPT-PA for the treatment of depressive symptoms or adjustment disorder in pregnant

adolescents (N=11). Adolescents' depressive symptoms were measured using the EPDS and the BDI and diagnosis was evaluated using the Schedule for Affective Disorders and Schizophrenia in Children (K-SADS) (Miller et al., 2008). In the first study, at the end of the twelve-week programme, levels of depressive symptoms had reduced by 50% and twelve out of fourteen adolescents showed reductions in levels of symptoms (Miller et al., 2008). In the second study, at the end of the twelve-week programme, levels of depressive symptoms had reduced by 40% and ten out of eleven participants showed a decrease in their symptoms and in their DSM-IV clinical diagnosis. The study found that improvements in symptoms were maintained at a twenty-week postpartum follow up (Miller et al., 2008). Therefore, the results found in Miller and colleagues' (2008) two pilot studies suggest that group IPT-PA is effective in the treatment of depression in pregnant adolescents.

Leung and Lam (2012) compared an IPT orientated, four-week antenatal group intervention (N=78) against a TAU group (N=78) in Hong Kong. The group intervention focused on interpersonal difficulties found in qualitative studies of Chinese perinatal women, including role transitions and intergenerational conflicts (Leung & Lam, 2012). Intention-to-treat analysis found the intervention to be effective in the reduction of stress (Perceived Stress Scale (PSS)) and maintenance of happiness (Subjective Happiness Scale) in pregnant women. However, it is important to note that the significant effects were not found following delivery. The intervention was most helpful for women who showed symptoms of depression (EPDS) as they reported fewer depressive symptoms and lower stress levels at the end of the intervention (Leung & Lam, 2012).

Brief psychoeducational IPT in the perinatal period

Gao and colleagues (2010) conducted a study investigating the efficacy of an "IPT oriented childbirth psychoeducation programme" on the development of PND, satisfaction within interpersonal relationships and psychological well-being amongst Chinese first-time mothers. One hundred and ninety-four. Women were randomised to either received the intervention (n=96) or to the control group (n=98). The intervention was based on IPT principles and included two ninety-minute antenatal classes and around two-weeks after birth, an individual telephone follow-up, conducted by midwives (Gao et al., 2010). The control group received regular antenatal education which consisted of two ninety-minute sessions. These sessions focused on knowledge surrounding breastfeeding, infant care, the labour process, and postnatal care (Gao et al., 2010). In comparison, the IPT- orientated group intervention focused on psychoeducation regarding PND, identifying sources of social support, managing role transitions, and managing sources of interpersonal conflict (Gao et al., 2010). Women completed outcome measures in postnatal depression (EPDS), Psychological wellbeing

(General Health Questionnaire, GHQ) and satisfaction within interpersonal relationships (Satisfaction with Interpersonal Relationships Scale, SWIRS) (Gao et al., 2010). Women who received the intervention reported significantly better psychological wellbeing, better interpersonal relationships, and fewer depressive symptoms six-weeks after birth compared to women in the control group (Gao et al., 2010). Gao and colleagues (2010) concluded that an IPT-psychoeducation orientated intervention could have a part to play in routine perinatal education with on-going evaluation.

Later, Gao and colleagues (2012) conducted a study examining the perceptions of Chinese women regarding the delivery, personal impact, and the content of the IPT-oriented intervention. Ninety-two pregnant first-time mothers completed the programme, and eighty-three participants completed a programme satisfaction questionnaire (Gao et al., 2012) to evaluate the process. Twenty participants took part in an in-depth interview. Gao and colleagues (2012) reported that their brief IPT orientated intervention could help improve first-time mothers' perceptions of interpersonal support and role competency. In addition, they argued that their intervention could facilitate first-time mothers' adjustment to motherhood and change/improve interpersonal relationships (Gao et al., 2012).

Gao and colleagues (2015) later conducted a study examining the efficacy of an "IPT oriented psychoeducation programme" on the reduction of postnatal depressive symptoms, the improvement of perceived social support and perceptions of maternal role competencies in Chinese first-time mothers. One hundred and eighty participants were assigned randomly to either the intervention or control group (Gao et al., 2015). Participants in the control group (n=90) received a short visit from a nurse on the labour ward to provide them with an information sheet about sources of support for mothers following discharge from hospital. Participants in the intervention group (n=90) also received this information sheet and the "IPT oriented postnatal psychoeducation programme". The intervention included a one-hour education session prior to discharge and a telephone follow-up session within two weeks of discharge (Gao et al., 2015). Specific IPT techniques were utilised including information giving, encouragement of affect, clarification, identifying significance, reviewing both relationships, identifying sources of support and reviewing communication patterns (Gao et al., 2015). The psychoeducational 1:1 session was run by the midwife in a separate room on the labour ward (Gao et al., 2015). All participants completed outcome measures on symptoms of PND (EPDS), social support (Multidimensional Scale of Perceived Social Support, MPSS) and maternal role competency (Parenting Sense of Competence Scale-Efficacy subscale). Women who received the intervention had significantly less symptoms of depression and better reported perceptions of maternal role competency and social support six-weeks after birth when compared to the control group (Gao et al., 2015). The study

concluded that an IPT psycho-education postnatal approach appeared to be effective in supporting Chinese first-time mothers' transition to motherhood (Gao et al., 2015).

Guidelines on developing and evaluating complex interventions

The Medical Research Council (MRC) and National Institute for Health Research (NIHR) have jointly created guidelines and a framework highlighting the important steps that must be taken when developing and evaluating a complex intervention (Craig et al., 2008, 2013; O'Cathain et al., 2019). The guidelines state that "best practice is to develop interventions systematically, using the best available evidence and appropriate theory and to test them using a carefully phased approach, starting with a series of pilot studies targeted at each of the key uncertainties in the design, and moving on to an exploratory and then a definitive evaluation" (Craig et al., 2013).

When developing an intervention, the guidelines suggest a clear framework for doing so (Craig et al., 2008, 2013; O'Cathain et al., 2019). Firstly, a clear search of the evidence base is required, which typically consists of conducting a systematic review. In relation to the development of the current intervention, recent, high-quality systematic reviews evaluating the use of IPT in the prevention and treatment of PND in the perinatal period had already been conducted (Bledsoe & Grote, 2006; Claridge, 2014; Sockol et al., 2011; van Ravesteyn et al., 2017; Sockol et al., 2018; Bright et al., 2019). These reviews highlight the evidence base for the IPT in the perinatal period, identify gaps in the current provision of interventions and make suggestions for future trials, research and adaptations (e.g., to be briefer in nature and to include a mixture of group and individual sessions). Secondly, the guidelines suggest that the intervention should be supported by appropriate theory to help identify areas of change, which for IPT is Attachment Theory. The guidelines then state that the intervention should be modelled in a pilot/ feasibility study to identify any weaknesses and refinements needed. Pilot and feasibility studies should use mixed methods (qualitative and quantitative) to explore any barriers to participation and estimate any potential harm as a result of the intervention (Craig et al., 2008, 2013; O'Cathain et al., 2019). This is the aim of the empirical part of this paper.

Development of the current intervention

The evidence in the current literature clearly highlights the efficacy of IPT in the Perinatal Period for the prevention and treatment of PND. Few studies have explored a brief "IPT-informed" group for pregnant first-time mothers, thus identifying a gap in the current literature. Studies conducted by Gao and colleagues (2010; 2015) found that brief IPT and

psychoeducational sessions were beneficial for pregnant women and mothers who had recently delivered their babies, showing its possible effectiveness. In addition, brief interventions are preferred as new mothers often struggle to commit to attending psychotherapy and to balance the demands required as a new mother (Grigoriadis & Ravitz, 2007).

Bright and colleagues' (2019) systematic review of the perinatal IPT literature found that group IPT interventions led to a significantly greater reduction in depressive symptoms than individually delivered IPT. Bright and colleagues (2019) reported that their findings did differ to other reviews and concluded that future IPT interventions should consider the acceptability of mixed group and individual therapy.

Based on the current gaps in the literature, the current project was created as part of The Prospect Model (Graham et al., 2019) which is a matched care model for the delivery of evidence-based IPT interventions for a range of people with differing clinical needs across the Lothians in Scotland. The Prospect Model is based on the 'Matrix' guidelines in planning and delivering evidence-based psychological therapies in Scotland (Campbell, 2011). The author developed the current intervention alongside IPT trained members of her team as part of The Prospect Model, but it has yet to be trialled. Permission was granted to use the adaptation for the purposes of this doctoral thesis. The intervention focused on delivering a brief "IPT-informed" and psychoeducational group to pregnant first-time mothers, followed by an individual follow-up after birth. The intervention was developed to be delivered in a 90-minute, one off group session with first-time mothers who were 6+ months pregnant. The aims of the intervention were;

1) To educate mothers as to the symptoms of 'baby blues' and PND.
2) To provide mothers with a brief overview of IPT as an intervention and the theoretical concepts underpinning it.
3) To help participants map out their social network through using the 'interpersonal inventory'. The intention of this was to highlight to participants the levels of their social support, including emotional, practical, and social support, and this was the main focus of the group.
4) To assist women in anticipating the transitions to motherhood through thinking together about some of the changes that motherhood would bring about. This included exploration of possible changes in social support during the postpartum period.

Once the women who participated in the group had given birth, they were offered a sixty-minute individual follow-up session when their baby had reached two months of age. The

purpose of the individual session was to reflect on key aspects covered in the group. The first focus of the individual session was a general check-in on mood and physical health following birth. Then attention moved to reviewing and reflecting on the individual's social support network, identifying any changes that may have occurred since the birth of the baby (both positive and negative changes). The session also focused on the overall transition to motherhood, identifying again both positive and negative experiences.

As the intervention has never been trialled before, we made the decision to trial this as a feasibility study with an emphasis on the experiences of the women in the group. Thus, at the end of the individual follow-up session, participants took part in a brief semi-structured interview. This interview comprised questions about the participants' experience of the intervention as a whole. We also decided to collect data on participants' depressive symptoms and social support using questionnaires (EPDS and MSPSS) before the group and after the follow-up session. These questionnaires were not administered to specifically identify any change as a result of the group, but to use as descriptive analysis linked to specific participants and their experiences.

Aims of the thesis

The main aims of the thesis are briefly noted below:

- To explore mothers' experiences of the intervention (both the group and individual follow-up).
- To identify whether the intervention is acceptable and accessible for expectant and new mothers.
- To identify whether there are any adverse effects as a result of the intervention.
- To identify whether this intervention could be trialed in a larger study in the future.

COVID-19

On the 11th March 2020, the World Health Organisation (WHO) declared the COVID-19 disease a global health pandemic. The pandemic has ultimately given rise to several stressors which can negatively impact mental health.

The above project was initially designed to be delivered through face-to-face groups with pregnant women, however due to the pandemic this was no longer possible. The decision was made to deliver the group intervention using a videocall platform. Changes were made to the delivery of the intervention and questionnaires and materials were electronically sent to participants prior to the group.

Arguably, the timing of this intervention was crucial. In response to the pandemic, key strategies were employed to keep us safe including the introduction of a national lockdown in the United Kingdom and individuals being instructed to adhere to social distancing. However, as humans have an innate desire to connect with one another, this would bring significant challenges for a number of people (Caparros-Gonzalez & Alderdice, 2020) as social support helps us manage and cope during times of stress (Van Bavel et al., 2020). Furthermore, as the above review highlights, poor social support in pregnancy is a risk factor for the development of PND. Thus, delivering a brief group intervention virtually at a time when women had restricted access to their usual antenatal classes, groups and social support network was both timely and essential. This will be particularly helpful in assessing whether the intervention is both accessible and acceptable for first-time expectant and new mothers.

References:

Ainsworth, M. D. S. (1969). Object relations, dependency, and attachment: A theoretical review of the infant-mother relationship. *Child development*, 969-1025.

Ainsworth, M. D., Blehar, M., Waters, E., & Wall, S. (1978). Patterns of attachment.
Bowlby, J. (1977). The making and breaking of affectional bonds: II. Some principles of psychotherapy: The Fiftieth Maudsley Lecture (expanded version). *The British Journal of Psychiatry*, *130*(5), 421-431.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.

Barnett, B., & Parker, G. (1986). Possible determinants, correlates and consequences of high levels of anxiety in primiparous mothers. *Psychological medicine*, *16*(1), 177-185.

Beck, C. T. (1996). A meta-analysis of predictors of postpartum depression. *Nursing research*, *45*(5), 297-303.

Beck, C. T. (2001). Predictors of postpartum depression: an update. *Nursing research*, *50*(5), 275-285.

Bergant, A. M., Heim, K., Ulmer, H., & Illmensee, K. (1999). Early postnatal depressive mood: associations with obstetric and psychosocial factors. *Journal of Psychosomatic Research*, *46*(4), 391-394.

Bledsoe, S. E., & Grote, N. K. (2006). Treating depression during pregnancy and the postpartum: A preliminary meta-analysis. Research on Social Work Practice, 16(2), 109-120.

Boath, E., & Henshaw, C. (2001). The treatment of postnatal depression: a comprehensive literature review. *Journal of reproductive and infant psychology*, *19*(3), 215-248.
Bowlby, J. (1969). Attachment and loss v. 3 (Vol. 1). *Random House. Furman, W., & Buhrmester, D.(2009). Methods and measures: The network of relationships inventory: Behavioral systems version. International Journal of Behavioral Development*, *33*, 470-478.

Bowlby, J. (1988). Developmental psychiatry comes of age. *The American journal of psychiatry*.

Boyce, P. M. (2003). Risk factors for postnatal depression: a review and risk factors in Australian populations. *Archives of Women's Mental Health*, *6*(2), s43-s50.

Boyce, P. M., & Todd, A. L. (1992). Increased risk of postnatal depression after emergency caesarean section. *Medical Journal of Australia*, *157*(3), 172-174.

Bright, K. S., Charrois, E. M., Mughal, M. K., Wajid, A., McNeil, D., Stuart, S., Hayden, K. & Kingston, D. (2019). Interpersonal psychotherapy for perinatal women: a systematic review and meta-analysis protocol. *Systematic reviews*, 8(1), 248.

Campbell, M. (2011). *The Matrix: A guide to delivering evidence-based Psychological Therapies in Scotland*. The Scottish Government.

Caparros-Gonzalez, R. A., & Alderdice, F. (2020). The COVID-19 pandemic and perinatal mental health. *Journal of Reproductive and Infant Psychology*, *38*(3), 223-225.

Caplan, H. L., Cogill, S. R., Alexandra, H., Robson, K. M., Katz, R., & Kumar, R. (1989). Maternal depression and the emotional development of the child. *The British Journal of Psychiatry*, *154*(6), 818-822.

Claridge, A. M. (2014). Efficacy of systemically oriented psychotherapies in the treatment of perinatal depression: a meta-analysis. *Archives of women's mental health*, *17*(1), 3-15.

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *Bmj*, *337*.

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2013). Developing and evaluating complex interventions: the new Medical Research Council guidance.

Dimitrovsky, L., Levy-Shiff, R., & Schattner-Zanany, I. (2002). Dimensions of depression and perfectionism in pregnant and nonpregnant women: Their levels and interrelationships and their relationship to marital satisfaction. *The Journal of psychology*, *136*(6), 631-646.

Emmanuel, E., Creedy, D. K., St John, W., Gamble, J., & Brown, C. (2008). Maternal role development following childbirth among Australian women. *Journal of advanced nursing*, *64*(1), 18-26.

Faisal-Cury, A., Rodrigues, D. M. O., & Matijasevich, A. (2021). Are pregnant women at higher risk of depression underdiagnosis?. *Journal of Affective Disorders*, *283*, 192-197.

Field, T., Sandberg, D., Garcia, R., Vega-Lahr, N., Goldstein, S., & Guy, L. (1985). Pregnancy problems, postpartum depression, and early mother–infant interactions. *Developmental psychology*, *21*(6), 1152.

Field, T., Healy, B. T., Goldstein, S., & Guthertz, M. (1990). Behavior-state matching and synchrony in mother-infant interactions of nondepressed versus depressed dyads. *Developmental psychology*, *26*(1), 7.

Fraser, D. M., & Cullen, L. (2006). Postnatal management and breastfeeding. *Women's Health Medicine*, *3*(5), 191-196.

Gao, L. L., Chan, S. W. C., Li, X., Chen, S., & Hao, Y. (2010). Evaluation of an interpersonal-psychotherapy-oriented childbirth education programme for Chinese first-time childbearing women: a randomised controlled trial. *International journal of nursing studies*, *47*(10), 1208-1216.

Gao, L. L., Xie, W., Yang, X., & Chan, S. W. C. (2015). Effects of an interpersonal-psychotherapy-oriented postnatal programme for Chinese first-time mothers: a randomized controlled trial. *International journal of nursing studies*, *52*(1), 22-29.

Ginja, S., Coad, J., Bailey, E., Kendall, S., Goodenough, T., Nightingale, S., ... & Lingam, R. (2018). Associations between social support, mental wellbeing, self-efficacy and technology use in first-time antenatal women: data from the BaBBLeS cohort study. *BMC pregnancy and childbirth*, *18*(1), 1-11.

Goodman, S. H., & Gotlib, I. H. (1999). Risk for psychopathology in the children of depressed mothers: a developmental model for understanding mechanisms of transmission. *Psychological review*, *106*(3), 458.

Graham, P., Irvine Fitzpatrick, L., Bowyer, D., Black, S., Cooke, S., Wilson, H., Williams. S. (2019). Delivery of Interpersonal Psychotherapy in Scotland: The Prospect Model. *DCP-S Review: The British Psychological Society*; 20, 15-20.

Grigoriadis, S., & Ravitz, P. (2007). An approach to interpersonal psychotherapy for postpartum depression: focusing on interpersonal changes. *Canadian Family Physician*, *53*(9), 1469-1475.

Grote, N. K., Bledsoe, S. E., Swartz, H. A., & Frank, E. (2004). Culturally relevant psychotherapy for perinatal depression in low-income ob/gyn patients. *Clinical Social Work Journal*, *32*(3), 327-347.

Grote, N. K., Swartz, H. A., Geibel, S. L., Zuckoff, A., Houck, P. R., & Frank, E. (2009). A randomized controlled trial of culturally relevant, brief interpersonal psychotherapy for perinatal depression. *Psychiatric Services*, *60*(3), 313-321.

Grote, N. K., Katon, W. J., Russo, J. E., Lohr, M. J., Curran, M., Galvin, E., & Carson, K. (2015). Collaborative care for perinatal depression in socioeconomically disadvantaged women: a randomized trial. *Depression and anxiety*, *32*(11), 821-834.

Heron, J., O'Connor, T. G., Evans, J., Golding, J., Glover, V., & ALSPAC Study Team. (2004). The course of anxiety and depression through pregnancy and the postpartum in a community sample. *Journal of affective disorders*, *80*(1), 65-73.

Honey, K. L., Bennett, P., & Morgan, M. (2003). Predicting postnatal depression. *Journal of affective disorders*, *76*(1-3), 201-210.

Johnstone, S. J., Boyce, P. M., Hickey, A. R., Morris-Yates, A. D., & Harris, M. G. (2001). Obstetric risk factors for postnatal depression in urban and rural community samples. *Australian & New Zealand Journal of Psychiatry*, *35*(1), 69-74.

Klerman, G. L., Weissman, M. M., Rounsaville, B. J., & Chevron, E. S. (1984). Interpersonal psychotherapy of depression. 1984. *Northvale, NJ: Jason Aronson*.

Klier, C. M., Muzik, M., Rosenblum, K. L., & Lenz, G. (2001). Interpersonal psychotherapy adapted for the group setting in the treatment of postpartum depression. *The Journal of Psychotherapy Practice and Research*, *10*(2), 124.

Lau, Y., Yin, L., & Wang, Y. (2011). Antenatal depressive symptomatology, family conflict and social support among Chengdu Chinese women. *Maternal and Child Health Journal*, *15*(8), 1416-1426.

Lau, Y., & Keung, D. W. F. (2007). Correlates of depressive symptomatology during the second trimester of pregnancy among Hong Kong Chinese. *Social science & medicine*, *64*(9), 1802-1811.

Leahy-Warren, P., McCarthy, G., & Corcoran, P. (2012). First-time mothers: social support, aternal parental self-efficacy and postnatal depression. *Journal of clinical nursing*, *21*(3-4), 388-397.

Legere, L. E., Wallace, K., Bowen, A., McQueen, K., Montgomery, P., & Evans, M. (2017). Approaches to health-care provider education and professional development in perinatal depression: a systematic review. *BMC pregnancy and childbirth*, *17*(1), 1-13.

Levitt, C., Shaw, E., Wong, S., Kaczorowski, J., & McMaster University Postpartum Research Group. (2007). Systematic review of the literature on postpartum care: effectiveness of interventions for smoking relapse prevention, cessation, and reduction in postpartum women. *Birth*, *34*(4), 341-347.

Leung, S. S., & Lam, T. H. (2012). Group antenatal intervention to reduce perinatal stress and depressive symptoms related to intergenerational conflicts: a randomized controlled trial. *International journal of nursing studies*, *49*(11), 1391-1402.

Lu, L. (2006). Postnatal adjustment of Chinese parents: A two-wave panel study in Taiwan. *International Journal of Psychology*, *41*(5), 371-384.

Ludermir, A. B., Lewis, G., Valongueiro, S. A., de Araújo, T. V. B., & Araya, R. (2010). Violence against women by their intimate partner during pregnancy and postnatal depression: a prospective cohort study. *The Lancet*, *376*(9744), 903-910.

Markowitz, J. C., & Weissman, M. M. (2004). Interpersonal psychotherapy: principles and applications. *World Psychiatry*, *3*(3), 136.

Matthey, S., Barnett, B., Howie, P., & Kavanagh, D. J. (2003). Diagnosing postpartum depression in mothers and fathers: whatever happened to anxiety?. *Journal of affective disorders*, *74*(2), 139-147.

McLellan, A. T., Alterman, A. I., Cacciola, J., Metzger, D., & O'Brien, C. P. (1992). A new measure of substance abuse treatment: initial studies of the treatment services review. *Journal of nervous and mental disease*.

Milgrom, J., Gemmill, A. W., Bilszta, J. L., Hayes, B., Barnett, B., Brooks, J., Ericksen, J., Ellwood, D. & Buist, A. (2008). Antenatal risk factors for postnatal depression: a large prospective study. *Journal of affective disorders*, *108*(1-2), 147-157.

Miller, L., Gur, M., Shanok, A., & Weissman, M. (2008). Interpersonal psychotherapy with pregnant adolescents: Two pilot studies. *Journal of Child Psychology and Psychiatry*, *49*(7), 733-742.

Mulcahy, R., Reay, R. E., Wilkinson, R. B., & Owen, C. (2010). A randomised control trial for the effectiveness of group interpersonal psychotherapy for postnatal depression. *Archives of women's mental health*, *13*(2), 125-139.

Murray, L. (1992). The impact of postnatal depression on infant development. *Journal of child psychology and psychiatry*, *33*(3), 543-561.
Murray, L., & Cartwright, W. (1993). The role of obstetric factors in postpartum depression. *Journal of Reproductive and Infant Psychology*, *11*(4), 215-219.

O'Cathain, A., Croot, L., Duncan, E., Rousseau, N., Sworn, K., Turner, K. M., ... & Hoddinott, P. (2019). Guidance on how to develop complex interventions to improve health and healthcare. *BMJ open*, *9*(8), e029954.

O'Hara, M. W. (1994) *Postpartum depression: Causes and consequences.* Springer-Verlag; New York.

O'Hara, M. W., & Swain, A. M. (1996). Rates and risk of postpartum depression—a meta-analysis. *International review of psychiatry*, *8*(1), 37-54.

Okun, M. L., Kline, C. E., Roberts, J. M., Wettlaufer, B., Glover, K., & Hall, M. (2013). Prevalence of sleep deficiency in early gestation and its associations with stress and depressive symptoms. *Journal of Women's Health*, *22*(12), 1028-1037.

Patel, V., Rodrigues, M., & DeSouza, N. (2002). Gender, poverty, and postnatal depression: a study of mothers in Goa, India. *American journal of Psychiatry*, *159*(1), 43-47.

Paykel, E. S., Emms, E. M., Fletcher, J., & Rassaby, E. (1980). Life events and social support in puerperal depression. *The British Journal of Psychiatry*, *136*(4), 339-346.

Philipps, L. H., & O'Hara, M. W. (1991). Prospective study of postpartum depression: 4½-year follow-up of women and children. *Journal of Abnormal Psychology*, *100*(2), 151.

Plews, C., Bryar, R., & Closs, J. (2005). Clients' perceptions of support received from health visitors during home visits. *Journal of Clinical Nursing*, *14*(7), 789-797.

Pope, S., (2000). Postnatal Depression: A Systematic Review of Published Scientific Literature to 1999. NHMRC, Canberra.

Posmontier, B., Neugebauer, R., Stuart, S., Chittams, J., & Shaughnessy, R. (2016). Telephone-administered interpersonal psychotherapy by Nurse-Midwives for postpartum depression. *Journal of midwifery & women's health*, *61*(4), 456-466.

Reay, R., Fisher, Y., Robertson, M., Adams, E., & Owen, C. (2006). Group interpersonal psychotherapy for postnatal depression: a pilot study. *Archives of Women's Mental Health*, *9*(1), 31-39.

Ravitz, P., Maunder, R., & McBride, C. (2008). Attachment, contemporary interpersonal theory and IPT: An integration of theoretical, clinical, and empirical perspectives. *Journal of Contemporary Psychotherapy*, *38*(1), 11-21.

Robertson, E., Celasun, N., and Stewart, D.E. (2003). Risk factors for postpartum depression. In Stewart, D.E., Robertson, E., Dennis, C.-L., Grace, S.L., & Wallington, T. (2003). Postpartum depression: Literature review of risk factors and interventions.

Robertson, E., Grace, S., Wallington, T., & Stewart, D. E. (2004). Antenatal risk factors for postpartum depression: a synthesis of recent literature. *General hospital psychiatry*, *26*(4), 289-295.

Rubertsson, C., Waldenström, U., & Wickberg, B. (2003). Depressive mood in early pregnancy: prevalence and women at risk in a national Swedish sample. *Journal of Reproductive and Infant Psychology*, *21*(2), 113-123.

Rubertsson, C., Wickberg, B., Gustavsson, P., & Rådestad, I. (2005). Depressive symptoms in early pregnancy, two months and one year postpartum-prevalence and psychosocial risk factors in a national Swedish sample. *Archives of women's mental health*, *8*(2), 97-104.

Sockol, L. E. (2018). A systematic review and meta-analysis of interpersonal psychotherapy for perinatal women. *Journal of affective disorders*, *232*, 316-328.

Sockol, L. E., Epperson, C. N., & Barber, J. P. (2011). A meta-analysis of treatments for perinatal depression. *Clinical psychology review*, *31*(5), 839-849.

Spinelli, M. G. (1997). Interpersonal psychotherapy for depressed antepartum women: a pilot study. *The American journal of psychiatry*, *154*(7), 1028.

Stewart, D. E., & Vigod, S. (2016). Postpartum depression. *New England Journal of Medicine*, *375*(22), 2177-2186.

Stuart, S. (2008). What is IPT? The basic principles and the inevitability of change. *Journal of Contemporary Psychotherapy*, *38*(1), 1-10.

Stuart, S. (2012). Interpersonal psychotherapy for postpartum depression. *Clinical psychology & psychotherapy*, *19*(2), 134-140.

Stuart, S., & Noyes Jr, R. (1999). Attachment and interpersonal communication in somatization. *Psychosomatics*, *40*(1), 34-43.

Stuart, S., & Robertson, M. (2012). *Interpersonal psychotherapy 2E a clinician's guide*. CRC Press.

Studd J. W. (2011). A guide to the treatment of depression in women by estrogens. *Climacteric : the journal of the International Menopause Society*, *14*(6), 637–642.

Swartz, H. A., Frank, E., Shear, M. K., Thase, M. E., Fleming, M. D., & Scott, J. (2004). A pilot study of brief interpersonal psychotherapy for depression among women. *Psychiatric Services*, *55*(4), 448-450.

Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... & Drury, J. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 1-12.

van Ravesteyn, L. M., Lambregtse-van den Berg, M. P., Hoogendijk, W. J., & Kamperman, A. M. (2017). Interventions to treat mental disorders during pregnancy: A systematic review and multiple treatment meta-analysis. *PLoS One*, *12*(3), e0173397.

Verkerk, G. J., Denollet, J., Van Heck, G. L., Van Son, M. J., & Pop, V. J. (2005). Personality factors as determinants of depression in postpartum women: a prospective 1-year follow-up study. *Psychosomatic Medicine*, *67*(4), 632-637.

Weissman, M. M., Markowitz, J. C., & Klerman, G. L. (2017). *The guide to interpersonal psychotherapy: Updated and expanded edition*. Oxford University Press.

Werner, E., Miller, M., Osborne, L. M., Kuzava, S., & Monk, C. (2015). Preventing postpartum depression: review and recommendations. *Archives of women's mental health*, *18*(1), 41-60.

Wichman, C. L., & Stern, T. A. (2015). Diagnosing and treating depression during pregnancy. *The primary care companion for CNS disorders*, *17*(2).

Yim, I. S., Stapleton, L. R. T., Guardino, C. M., Hahn-Holbrook, J., & Schetter, C. D. (2015). Biological and psychosocial predictors of postpartum depression: systematic review and call for integration. *Annual review of clinical psychology*, *11*.

Zlotnick, C., Johnson, S. L., Miller, I. W., Pearlstein, T., & Howard, M. (2001). Postpartum depression in women receiving public assistance: pilot study of an interpersonal-therapy-oriented group intervention. *American Journal of Psychiatry*, *158*(4), 638-640.

Zlotnick, C., Tzilos, G., Miller, I., Seifer, R., & Stout, R. (2016). Randomized controlled trial to prevent postpartum depression in mothers on public assistance. *Journal of affective disorders*, *189*, 263-268.

Part 2: Empirical Paper

The accessibility and acceptability of a brief “IPT-informed” intervention for pregnant first-time mothers in the context of the COVID-19 pandemic

Word count: 15,080

Abstract:

Introduction: This thesis project trialled a brief "IPT-informed" intervention with pregnant first-time mothers during the COVID-19 pandemic.

Aims: The aims of the brief "IPT-informed" intervention were to 1) educate participants as to the symptoms of 'baby blues' and PND 2) provide participants with a brief overview of IPT as an intervention and the theoretical concepts underpinning it 3) help participants map out their social network through using the 'interpersonal inventory' 4) assist participants in anticipating the transitions to motherhood. The research questions were 1) Is this brief group intervention accessible and acceptable for expectant and new mothers? 2) Does this brief group intervention have any adverse effects for expectant and new mothers? 3) Could this trial provide evidence for a larger 'preventative' trial in the future?

Method: The design of the study was a mixed-methods, uncontrolled, longitudinal feasibility study. Twelve first-time mothers who were 6+ months pregnant took part in a brief "IPT-informed" group intervention prior to birth. All twelve mothers also took part in an individual follow-up session and brief semi-structured interview around two to three months after birth. Participants completed the EPDS and MSPSS at the time of the group (T1) and at follow-up (T2). The groups and individual follow-ups were recorded and transcribed. Comparison of means and individual levels of change were used to analyse the quantitative data, alongside 'process evaluation' data (Moore et al., 2014). Thematic analysis was used to analyse the qualitative data.

Results: Overall, a comparison of means found that the EPDS scores remained relatively stable from group (M= 6.83, SD= 3.35) to individual follow-up (M= 6.91, SD= 3.91). Similarly, scores on the MSPSS remained relatively stable from group (M= 6.18, SD= .63) to follow-up (M= 6.17, SD= .58). Individual levels of change were also explored. A 'process evaluation' was completed which included sample, reach, drop-out rates, and implementation/ fidelity of the intervention. Four higher-order themes and several sub-themes were identified in the qualitative analysis; 1) "This is about you, you are important" 2) "Leaving one kind of life and starting another one" 3) A search for connection, 4) Changes to interpersonal relationships.

Discussion/ conclusion: This study is unable to conclude whether the brief "IPT-informed" intervention is accessible and acceptable to women in the perinatal period. Whilst mothers who took part reportedly benefitted from and enjoyed the intervention, the study identified several limitations and refinements that are required for future studies to address to adequately assess the accessibility and acceptability of the brief "IPT-informed" intervention for perinatal women. Generally, the intervention does not seem to have any adverse effects for expectant and new mothers. However, individual levels of change did show a slight

deterioration for four mothers on their EPDS scores from T1 to T2. Due to the design of the study, it is difficult to deduce whether this was due to the intervention and whether the intervention prevented more significant deterioration amongst participants. Evidence from this study highlights that a further pilot/feasibility study is required addressing some of the refinements and limitations noted in the results and discussion, prior to a larger scale RCT examining efficacy of the intervention on the prevention on PND.

Introduction:

The perinatal period

The perinatal period is regarded as a time of increased social, biological, psychological, and emotional adjustments (Bright et al., 2019). This period is also viewed as a significant developmental life stage with a number of adaptations and transitions involved (Bright et al., 2019). The World Health Organisation (WHO) reports “virtually all women can develop mental disorders during pregnancy and in the first year after delivery” (Topalidou et al., 2020). Depression in the perinatal period (Postnatal Depression/PND) is the most common difficulty associated with childbearing (Werner et al., 2015). It is estimated that within the first three months after birth, 10-22% of mothers will experience an episode of either major or minor depression (Werner et al., 2015). Research suggests that a lack of social support is a risk factor for the development of PND, and that adequate social support can assist a woman’s transition to motherhood (Werner et al., 2015).

Depression in the perinatal period: Identification and treatment

The economic argument for preventative and reactive interventions in the perinatal period is convincing. A recent report estimated that the cost of not treating perinatal mental health difficulties in the United Kingdom (UK) is around £8.1 billion per year (Bauer et al., 2014; Ayers & Shakespeare, 2015). The majority of the cost (72%) has been associated with the long-term adverse impact associated with children’s health outcomes (Ayers & Shakespeare, 2015). A report conducted by the Royal College of General Practitioners (Khan, 2015) highlighted numerous physician, patient and organisational barriers relating to the detection and treatment of mental health difficulties in the perinatal period (Ayers & Shakespeare, 2015). The largest barrier noted was the under-identification of mental health difficulties during this period (Khan, 2015). Other barriers included GPs not feeling competent or confident in managing perinatal mental health problems, time pressures, women fearing stigma around requesting help and finally women feeling overly reassured or

dismissed by GPs if they did request help (Ayers & Shakespeare, 2015). Thus, PND is frequently undetected and undertreated. If left untreated, 40% of women will have symptoms of PND that continue until their child enters school (Bright et al., 2019). Where PND has been detected, studies have found that women often prefer psychotherapy to medication in the postpartum period (Grigoriadis & Ravitz, 2007).

IPT in the perinatal period

Interpersonal Psychotherapy (IPT) (Klerman et al., 1984) is a short-term psychotherapy, originally developed for the treatment of depression. IPT focuses on the present and links depressive symptoms to the interpersonal context (Klerman et al., 1984). IPT has been adapted for use in the perinatal period and has been delivered in a variety of contexts (group and individual) with a varying number of sessions. IPT has been trialled with women in the antenatal period as well as in the postnatal period and has been researched with both at-risk and general perinatal populations. Reviews of the literature have found IPT to be effective in the both the prevention (Sockol, 2018; Bright et al., 2019) and the treatment (Bledsoe & Grote, 2006; Claridge, 2014; Sockol et al., 2011; van Ravesteyn et al., 2017; Sockol, 2018; Bright et al., 2019) of PND. In addition, two meta-analyses have evidenced that compared to other models of psychotherapy, IPT could be more effective in the treatment of PND (Sockol, 2018). A recent systematic review conducted by Bright and colleagues (2019) suggested that future IPT interventions should consider the acceptability of mixed group and individual interventions. IPT is desirable for the perinatal period as it has a strong focus on strengthening interpersonal relationships (Stuart, 2012). In addition, one of its four focal areas is 'role transitions' which appears to be highly applicable and acceptable to new mothers, as the transition to motherhood is one of the biggest transitions a woman will experience in their lifetime (Stuart, 2012).

While studies have shown the efficacy of IPT in the prevention of PND, very few have studied a brief psychoeducational- and "IPT-informed" approach aimed at the prevention of PND. Furthermore, IPT in full is offered over 16 weeks (Weisman et al., 1984). Whilst briefer versions of IPT using between 4-12 sessions have been developed, this still requires a large time commitment for new mothers (Grigoriadis & Ravitz, 2007). Therefore, there is a desire for briefer interventions in the perinatal period (Grigoriadis & Ravitz, 2007). The only research to have examined a brief "IPT-informed" psychoeducational intervention in the perinatal period has been conducted in China by Gao and colleagues (2010, 2012, 2015). This research was conducted with Chinese first-time mothers. The results of the studies found several benefits for women who took part in the brief IPT intervention (2 sessions prior to birth and 1 follow-up after birth) compared to control groups in their studies. Benefits

included significantly better reports of psychological wellbeing, interpersonal functioning, reported levels of social support, perceptions of maternal role competency and reduced depressive symptoms in the postnatal period (Gao et al., 2010, 2012, 2015). To the best of our knowledge, a brief IPT informed psychoeducational approach has not yet been studied or evaluated in the UK.

COVID-19 and the perinatal period

On the 11th of March 2020, the WHO declared a new coronavirus disease (COVID-19) a global health pandemic. To slow the transmission of the virus, the UK entered a nationwide lockdown and social distancing measures were put in place. Whilst necessary, these measures could be detrimental to mental health, as humans have an innate desire to connect with one another (Van Bavel et al., 2020). Furthermore, social connection helps individuals to manage stress and builds and sustains resilience, both of which are essential for managing psychological distress (Van Bavel et al., 2020). Research has found that emotions such as fear, sadness, guilt, confusion, irritability, and anger are common in quarantine, which may be especially challenging during pregnancy (Zanardo et al., 2020).

A consequence of the current pandemic is that there are many potential stressors that could negatively impact mental health in the perinatal period (Van Bavel et al., 2020). Pregnant women have been recognised as a vulnerable group and are among those who are thought to suffer more severe negative health consequences as a result of contracting COVID-19 (Brooks et al., 2020). In the early stages of the pandemic, pregnant women in the UK were asked to shield and, in turn, could only interact with other members of their immediate household, hence reducing their level of direct support from friends and relatives during their pregnancy (Caparros-Gonzalez & Alderdice, 2020). In addition, antenatal care changed from face-to-face appointments to mostly telephone or online appointments, making them difficult to access for some women and further reducing the possibility of meeting other pregnant women who often provide a source of social support during this stage (Caparros-Gonzalez & Alderdice, 2020). Research has highlighted that a lack of contact with other mothers in similar situations during the perinatal period may create difficulty in normalising women's experience of early motherhood and may cause threats to self-identity and mental health difficulties (Barclay et al., 1997). Furthermore, the pandemic may have caused new financial concerns for some women during their pregnancy (Caparros-Gonzalez & Alderdice, 2020). Hospital policies were changed meaning that many women had to attend appointments alone and barring extra people, such as partners, family members, friends, and doulas, from being able to enter the delivery room (Caparros-Gonzalez & Alderdice, 2020). Given the multiple potential stressors impacting women in the

perinatal period during the COVID-19 pandemic, the current literature has suggested that it is imperative to support women's mental health during this period (Matvienko-Sikar et al., 2020). The Maternal Mental health Alliance estimates that around two-thirds of women who have given birth gave during the COVID-19 pandemic have experienced some level of perinatal mental health difficulty which is an increase from around one-third in the pre-pandemic period (MacGregor et al., 2020).

The current research

The current project was developed to address current gaps in the literature regarding brief IPT interventions in the perinatal period. Although the project was designed pre-pandemic, considering both the likely and documented impact of COVID-19 pandemic on social support for pregnant women, the project is timely and important. The project consists of a brief "IPT informed" group intervention, individual follow-up, and semi-structured interview for first-time mothers. All aspects of the project were adapted for online delivery, in the context of COVID-19.

The brief IPT intervention is aimed at:

1) Educating mothers as to the symptoms of 'baby blues' and PND.
2) Providing mothers with a brief overview of IPT as an intervention and the theoretical concepts underpinning it.
3) Helping participants map out their social network through using the 'interpersonal inventory'. The intention of this was to highlight to participants the levels of their social support, including emotional, practical, and social support, and this was the main focus of the group.
4) Assisting women in anticipating the transitions to motherhood through thinking together about some of the changes that motherhood would bring about. This included exploration of possible changes in social support during the postpartum period.

The research questions we aimed to answer were:

- Is this brief group intervention accessible and acceptable for expectant and new mothers?
- Does this brief group intervention have any adverse effects for expectant and new mothers?

- Could this trial provide evidence for a larger 'preventative' trial in the future?

Method/s

This section will include an overview of the participants involved in the study including the inclusion and exclusion criteria and patient demographics. It will then highlight the measures used within the study, prior to outlining the design and procedure used. Following this, ethical approval for the study will be outlined before concluding with the planned data analysis.

Participants:

Participants were recruited for the study through advertising on social media, specifically via Twitter (see Appendix A for advertisement). The advertisement was retweeted by perinatal Twitter accounts with large followings, such as 'The Positive Birth Movement' and by other professionals working with perinatal populations, thus widening its reach. The project was also advertised on the website for the 'Mumologist' (https://mumologist.com/), set up by a Clinical Psychologist working in Perinatal Mental Health, who was also the external supervisor for this research project.

When potential participants responded to the advertisement, further, more detailed participant information was sent to them, alongside a consent sheet (see Appendix B). This ensured the eligibility of participants to take part in the study as it clearly highlighted the exclusion criteria and required participants to attest to this. Inclusion and exclusion criteria for the study are summarized below:

Inclusion criteria:

1. Women of child-bearing age (lower age limit of 18 and no upper limit established)
2. Women had to be at least 6 months pregnant with their first child

Exclusion criteria

1. Current substance abuse
2. Concurrent medication/treatment for a mental health condition
3. Active suicidal thoughts/ plans
4. Diagnosis of bipolar or personality disorder
5. Active psychosis

The above selected exclusion criteria were based on other similar studies' selection criteria (Gao et al., 2010, 2012, 2015). Active psychosis and substance abuse may impede an individual's ability to take part in the group intervention and may reduce the likelihood they will benefit from a short-term intervention. In addition, it may be disruptive to others in the group. Active suicidal ideations/ plans would warrant a more intensive intervention with a specialist team.

Out of the 22 women who expressed an interest and responded to the advertisement online, seven women were not eligible/able to take part after reading further participant information. Reasons for this included; being too early or far along in pregnancy (n=3), meeting the exclusion criteria (n=1 *participant already had a child), not being able to make the time of the group (n=2) and not wanting to take part in an online group (n=1). Therefore, 12 women in total took part in the feasibility study.

Recruitment took place between February and July 2020. A total of three online groups ran between May and July 2020. The software that was used to hold the group sessions was 'Microsoft Teams'. All participants were female, with an age range between 27 and 41 years (M= 33.17, SD= 4.13). Participants were eligible to take part in the group when they reached six months (26 weeks) of pregnancy, with the stage of pregnancy in the group ranging from 26 to 38 weeks (M= 32.75, SD 3.96). One participant was in a same-sex relationship and had conceived through IVF with donor sperm. One participant had chosen to be a single parent and had conceived through IVF and donor sperm. The remaining ten participants were in heterosexual relationships and had conceived without medical intervention. Follow-up interviews took place between August and December 2020, between two and three months after birth.

Please see Table 1 for a full list of participant demographics.

Table 1: Participant demographics

Participant Number:	Pseudonym:	Age:	Education:	Religion:	Employment:	Ethnicity:	Marital Status:	Sexuality:	Stage of pregnancy (weeks):	Date of group (all 2020):	Age of baby at follow up (weeks):	Gender of baby:
1	Isla	33	University undergraduate	None (Atheist)	Unemployed	White British	Married	Heterosexual	38	22nd May	10	Boy
2	Lily	31	University postgraduate	None (Atheism)	Employed FT	White British	Married	Heterosexual	38	22nd May	14	Boy
3	Georgia	30	University postgraduate	Christian	Employed FT	White British	Domestic Partnership	Heterosexual	38	3rd July	7	Boy
4	Daisy	40	University postgraduate	None (Atheism)	Self-Employed	White British	Domestic Partnership	Heterosexual	31	22nd May	9	Girl
5	Olivia	31	University postgraduate	Christian	Employed FT	White British	Domestic Partnership	Homosexual	35	15th July	10	Boy
6	Sienna	35	University undergraduate	None (Atheism)	Employed PT	African/Caribbean British	Co-parenting	Heterosexual	34	22nd May	10	Boy
7	Kiara	30	Doctoral Degree	Agnostic	Employed FT	Asian/ Asian British	Married	Heterosexual	32	22nd May	11	Girl
8	Tala	34	University undergraduate	Jewish	Employed FT	White British	Married	Heterosexual	30	3rd July	9	Boy
9	April	41	University undergraduate	None (Atheist)	Employed FT	White British	Single	Not disclosed	32	15th July	11	Boy
10	Rosie	31	University postgraduate	Christian	Employed FT	White British	Married	Heterosexual	31	15th July	9	Girl
11	Mia	27	University postgraduate	None (Atheism)	Employed FT	White British	Married	Heterosexual	28	15th July	9	Boy
12	Phoebe	35	University postgraduate	None (Atheism)	Employed PT	White British	Domestic Partnership	Heterosexual	26	3rd July	9	Girl

Measures:

The Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987) was used as a measure of depression and scores on this measure were collected prior to the group and at follow-up. The EPDS is one of the most used measures for assessing symptoms of perinatal mood disorders including anxiety and depression. Tested in primary care, the EPDS has an 86% sensitivity in appropriately recognising true cases and 78% specificity in appropriately recognising people who do not have a perinatal mood disorder (Cox et al., 1987). Scoring of the EPDS is as follows: none or minimal depression (0–6), mild depression (7–13), moderate depression (14–19), and severe depression (19–30) (McCabe-Beane et al., 2016). Cut-off scores are set between 10 and 13 (Cox et al., 1987). Previous studies in this area have set their cut-off score as 13 (Gao et al., 2010, 2012, 2015). As this is a feasibility trial, we did not have a strict cut-off score for this research.

The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988) was used as a measure of perceived social support prior to the group and at follow-up. The MSPSS is a measure designed to measure perceived support from three different sources: family, friends and significant other (e.g. partner). Whilst there are no population norms established for the MSPSS, research has demonstrated good internal and test-retest reliability and moderate construct validity (Zimet et al., 1988). Any mean scale score ranging from 1 to 2.9 suggests low support; a score of 3 to 5 suggests moderate support; a score from 5.1 to 7 suggests high support (Zimet et al., 1988).

Design and Procedure:

A mixed-methods, within-subjects longitudinal design was used, with all participants taking part in both the group intervention and the individual follow-up. The study was designed as a feasibility study with the aim of analysing participants' experiences of the group.

Firstly, participants registered interest and, if eligible and willing to participate in both the group session and individual follow-up, they completed a consent form (included in Appendix B). They were then invited to attend an online group session lasting 90 minutes and were asked to complete a brief questionnaire prior to attendance. The questionnaire included basic demographic information, information about prior mental and physical health difficulties and information about the pregnancy and due date (Appendix C). In addition, participants were required to complete the EPDS and the MSPSS and return these via email to the researcher prior to attending the group (included in Appendix C). Participants were also sent a document explaining how they could access Microsoft Teams for the group (Appendix D).

The intervention was developed as part of 'The Prospect Model' (Graham et al., 2019), which is a matched care model for the delivery of evidence based IPT interventions for a range of people with differing clinical needs across the Lothians in Scotland. The author developed the current intervention alongside members of her team as part of 'The Prospect Model', but it had yet to be trialled. Permission was granted to use the adaptation for the purposes of this doctoral thesis. To the best of our knowledge, this is the first of its kind to be trialled in the United Kingdom. The group was developed following Gao and colleagues (2010, 2012, 2015) brief psychoeducational delivery method, with one group session prior to birth and an individual follow-up after birth. The group also followed Stuart's (2012) suggested adaptations to IPT in the perinatal period, specifically through providing a clear focus on women's social support and the transition to motherhood.

Format of the brief "IPT-informed" Intervention:

Participants were invited to attend an online group accessed through 'Microsoft Teams'. The group contained a mixture of psychoeducation regarding mental health in the perinatal period, individual exercises, and reflections/discussions. During the psychoeducation part of the group, participants viewed a PowerPoint (Appendix E). Participants learnt about mental health in pregnancy, specifically differentiating between Baby Blues and PND. Following this, participants learnt about the basic premise of IPT and a brief background of IPT. Participants were then asked to draw their interpersonal inventories, detailing their social support networks. The interpersonal inventory is a structured method of collecting interpersonal data (Stuart and Robertson, 2012). It is a tool used in IPT to carefully review the important relationships in a person's life (Stuart & Robertson, 2012) (please see Appendix F for a blank interpersonal inventory and a worked example). Participants were asked to identify what type of support each person on the inventory offered (emotional, practical and/or social). Following this exercise, participants were asked about their reflections on their social networks and on completing the inventory. This was designed to be an unstructured conversation between participants, with prompts given by the researcher only when necessary, to facilitate conversation or to elaborate on certain points. Finally, participants discussed their feelings around the transition to motherhood and learnt about how adequate social support can facilitate the transition (Stuart, 2012). This included providing participants with an example of the "old roles and new roles" exercise. Unfortunately, due to time constraints, participants could not complete this exercise in the group. They were encouraged to complete this exercise in their own time following the group, and it was included in a summary of key materials and information on where to seek further support if needed pack (Appendix G), which was sent to them at the end of the group.

Participants were then contacted around one month after they had given birth. They were invited to take part in an online individual follow-up session (via Microsoft Teams). The individual follow-up session (Appendix H) focused on reviewing each participant's mood following birth. The session also focused on any changes to the participant's interpersonal inventory and the strength of their social support network. The individual sessions allowed participants to reflect on the transition to motherhood. Participants were informed when the individual follow-up and intervention had come to an end. Following this, a brief semi-structured interview was carried out, focusing on their experiences of the intervention as a whole (the group and the individual follow-up, see Appendix I). An attempt was made to encourage the discussion of both positive and negative experiences of the group and follow-up intervention, as well as trying to encourage a space for suggesting improvements. The researcher thanked participants for their time and involvement in the study and reminded them of the previous email directing them toward further support if required. After the individual follow-up session, participants were asked to complete the EPDS and the MSPSS again (Appendix J), ending their participation in the research (see Appendix K for an overview of the intervention).

Ethics:

Ethical approval was granted by the University College London Graduate School Research Ethics Committee (Project ID number: 16769/001, Appendix L). The main ethical concerns were implications for informed consent, possible harm to the participants and data storage. To help with this, participants were informed of their rights to withdraw from the research at any time with no negative implications. In addition, possible distress was monitored throughout the groups by the researcher and all participants were provided with signposting for further help following the groups. In addition, data was pseudonymised and kept confidential, it was stored in a secure setting in line with ethics requirements and the Data Protection Act, 1998 and GDPR, 2018. Importantly, participants were aware of how their data would be stored and used and were asked to consent to this prior to taking part.

Due to the coronavirus pandemic, an ethical amendment was submitted and accepted for the study to be delivered online via videocall using Microsoft Teams (Appendix M).

Data analysis:

This feasibility study used an uncontrolled, mixed methods design to explore the experiences of participants who attended the pilot IPT group intervention online. The MRC

guidelines (Moore et al., 2014) suggest that a mixture of quantitative and qualitative data should be collected to evaluate accessibility, acceptability, and feasibility. As noted above, quantitative data was collected through the EPDS and MSPSS. Rather than testing the efficacy of the study, the analysis aimed to look at patterns in the data due to the small sample size and lack of power. Combined and individual levels of change on both measures were analysed through a comparison of means. Furthermore, quantitative data analysed the 'process evaluation' including reach, drop-out rate, and fidelity in line with the MRC guidelines for presenting feasibility study data (Craig et al., 2008, 2013; Moore et al., 2014).

The groups and individual follow-up sessions were recorded using Microsoft Teams and verbatim transcribed. Thematic Analysis (TA) was used to analyse the data gathered from all of the sessions (groups, individual follow-ups and interviews). The decision was made to use TA for its flexibility and the fact that it is well matched in exploring questions about individuals' experiences and perspectives. This method was also chosen to identify, analyse and report on patterns that emerged within the data (Braun and Clarke, 2006). In their paper, Braun and Clarke (2006) outline 6 essential steps in TA, which was followed closely in this study's analysis. A second independent rater coded the transcripts to allow for inter-rater reliability. See Table 2 for the stages followed in the research, as suggested by Braun and Clarke (2006). The researcher's own epistemological position is realism.

Table 2: Stages of Thematic Analysis outlined in Braun and Clarke (2006)

Phase 1:	Familiarise yourself with data
Phase 2:	Generate initial codes
Phase 3:	Searching for themes
Phase 4:	Reviewing themes`
Phase 5:	Defining and naming themes
Phase 6:	Produce the report

Missing data:

All of the pre-group questionnaires were collected from the participants (12/12). In addition, all participants attended the follow-up interview. Phoebe did not provide her follow-up questionnaires (11/12), the reason for this is unknown.

Bracketing:

Throughout the analysis, the researcher, who is 29 years old, female, White British and does not have children, held the perspective that whilst she tried to put her own views, expectations, and values to one side, they would unavoidably influence certain aspects of the research. The researcher managed this through initially completing a bracketing interview exploring her own motivations for completing the research and her initial expectations. This was particularly helpful in relation to designing the study and semi-structured interview questions, to ensure that the researcher was not only asking questions that linked directly to her expectations and assumptions. The researcher also kept a reflective journal, which she used to explore her own views, expectations, and values throughout the research process. This helped particularly when analysing the qualitative data, allowing the researcher to look back over reflective logs to ensure that her own expectations were not impacting the analysis. This process assisted the researcher in entering an on-going cycle of "reflexivity", which can be described as "turning the researcher lens back onto oneself to recognise and take responsibility for one's own situatedness within the research and the effect that it might have on the setting and people being studied, questions being asked, data being collected and it's interpretation" (Berger, 2015; Dodgson, 2019).

Results:

The quantitative results section will include an overview of the individual levels of change regarding the EPDS and MSPSS. This section will also look at 'process evaluation' (reach, drop-out rates, implementation, and fidelity).

Following this, the qualitative results section will include a table of key themes and sub-themes. The key themes and sub-themes will be presented with quotes illustrating key points to conclude. The quantitative and qualitative data are helpful in answering all three research questions:

- Is this brief group intervention accessible and acceptable for expectant and new mothers?
- Does this brief group intervention have any adverse effects for expectant and new mothers?
- Could this trial provide evidence for a larger 'preventative' trial in the future?

Edinburgh Postnatal Depression Scale (EPDS):

Overall change:

Overall, scores on the EPDS did not differ notably from pre-group (M= 6.83, SD= 3.35) to individual follow up (M= 6.91, SD= 3.91).

Individual change:

Table 3 (below) highlights each participant's individual level of change on their EPDS scores. Kiara had the largest overall change (+5), showing a deterioration. Isla and April had the second largest overall levels of change, Isla showing a deterioration (+4) and April showing an improvement (-4).

Table 3: Individual Levels of change on the EPDS

Participant name	EPDS		
	Pre-score and category	Post-score and category	Change (+ indicates deterioration, - indicates improvement)
Isla	2, none/minimal	6, none/minimal	+4
Lily	3, none/minimal	3, none/minimal	None
Georgia	13, mild depression	16, moderate depression.	+3
Daisy	7, mild depression	7, mild depression	None
Olivia	7, mild depression	8, mild depression	+1
Sienna	5, none/minimal	5, none/minimal	None
Kiara	6, none/minimal	11, mild depression	+5
Tala	5, none/minimal	4, none/minimal	-1
April	6, non/minimal	2, none/minimal	-4
Rosie	8, mild depression	7, mild depression	-1
Mia	7, mild depression	7, mild depression	None
Phoebe	13, mild depression	No response	N/A

Although the study did not have a cut-off score for the EPDS, two participants (Phoebe and Georgia) had scores of 13 at pre-group, which is often considered the cut-off range for studies (Sit & Wisner, 2009). At follow-up, Georgia's individual score (16) met criteria for moderate depression. Unfortunately, Phoebe did not provide a follow-up score. Most

participants had scores in the none/minimal (6/12) to mild depression cut off ranges (6/12) at pre-group. At follow-up, five participants had scores in the none/minimal cut-off range and five participants had scores in the mild depression cut-off range. None of the participants scored within the severe range, at baseline or follow-up.

Figure 2: Pie Chart of Individual Change on EPDS scores pre/post intervention

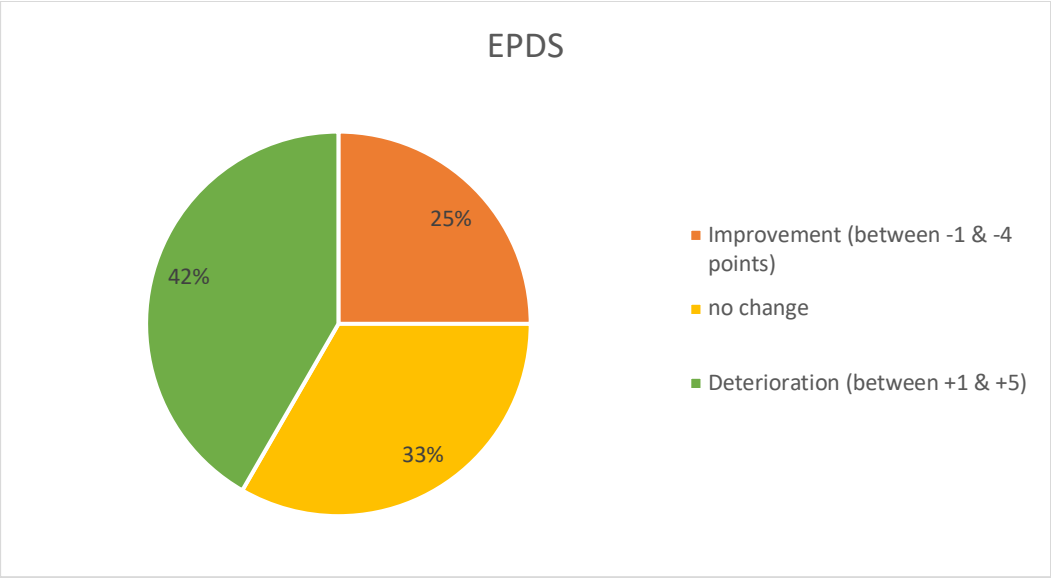


Figure 2 highlights that three participants (27%) saw an improvement in their EPDS scores, four participants (37%) saw no change and four participants (36%) saw a deterioration in their EPDS scores.

The Multidimensional Scale of Perceived Social Support (MSPSS):

As noted above, the MSPSS provides scores in four categories: family, friends, significant other and a total score.

Overall change:

In general there appeared to be very similar levels of perceived support at the time of the group (M= 6.18, SD= .63) and at follow-up (M= 6.17, SD= .58). These scores indicate a high level of perceived support in general.

Table 4: Individual levels of change on the MSPSS (total score)

Participant name	MSPSS Total		
	Pre-score	Post-score	Change (Improvement between +1 & +3. Deterioration between -1 & -3)
Isla	5.92/ high support	6/ high support	None
Lily	6.92/ high support	6.1/ high support	None
Georgia	6.6/ high support	5.75/ high support	None
Daisy	5.75/ high support	6.41/ high support	None
Olivia	6.41/ high support	7/ high support	None
Sienna	6.16/ high support	6/ high support	None
Kiara	7/ high support	6.66/ high support	None
Tala	6.83/ high support	6.83/ high support	None
April	4.83/ moderate support	4.92/ moderate support	None
Rosie	6.25/ high support	6.33/ high support	None
Mia	5.58/ high support	5.92/ high support	None
Phoebe	5.91/ high support	-	N/A

Table 4 shows the individual levels of change for participants in their total MSPSS score. April indicated a moderate level of support at the time of the group and at the follow-up, compared to the other participants who rated high levels of social support at the group and follow-up.

Table 5: MSPSS scores for specific areas (family, friends, significant other)

Participant name:	MSPSS Family			MSPSS Friends			MSPSS Significant Other		
	Pre-score:	**Post-score:**	**Change:** (+ score = improvement, - score = deterioration):	**Pre-score:**	**Post-score:**	**Change:** (+ score = improvement, - score = deterioration):	**Pre-score:**	**Post-score:**	**Change:** (+ score = improvement, - score = deterioration):
Isla	4/ moderate	5/ moderate	**+1**	6.75/ high	6/ high	**None**	7/ high	7/ high	**None**
Lily	7/ high	7/ high	**None**	6.75/ high	4.25/ moderate	**-2.5**	7/ high	7/ high	**None**
Georgia	6.75/ high	6.25/ high	**None**	6/ high	5.5/ high	**None**	7/ high	5.5/ high	**-1.5**
Daisy	5.25/ high	6.5/ high	**+1**	6/ high	6.25/ high	**None**	6/ high	7/ high	**+1**
Olivia	5.25/ high	7/ high	**+1.5**	7/ high	7/ high	**None**	7/ high	7/ high	**None**
Sienna	7/ high	7/ high	**None**	6.5/ high	5/ moderate	**-1.5**	5/ moderate	6/ high	**+1**
Kiara	7/ high	5.5/ high	**-1.5**	7/ high	7/ high	**None**	7/ high	7/ high	**None**
Tala	6.75/ high	6.75/ high	**None**	6.75/ high	6.75/ high	**None**	7/ high	7/ high	**None**
April	6.5/ high	5.75/ high	**None**	7/ high	7/ high	**None**	1/ low	2/ low	**+1**
Rosie	6.25/ high	5.5/ high	**None**	5.75/ high	5.75/ high	**None**	7/ high	7/ high	**None**
Mia	5/ moderate	5.25/ high	**None**	4.75/ moderate	5.75/ high	**+1**	7/ high	6.75/ high	**None**
Phoebe	4.5/ moderate	-	**N/A**	6.75/ high	-	**N/A**	6.5/ high	-	**N/A**

MSPSS Family: Individual change

Table 5 highlights the individual levels of change for participants regarding the MSPSS score for perceived support from family. In general, there appeared to be a similar level of perceived support between the group (M= 5.93, SD= 1.07) and follow-up from family (M= 6.14, SD= .76). Nine participants rated a high level of family support at the time of the group and three participants rated a moderate level of family support at the time of the group. At follow-up, ten participants rated a high level of family support, and one participant rated a moderate level of family support.

Figure 3: Pie Chart of Individual Change on MSPSS Family score

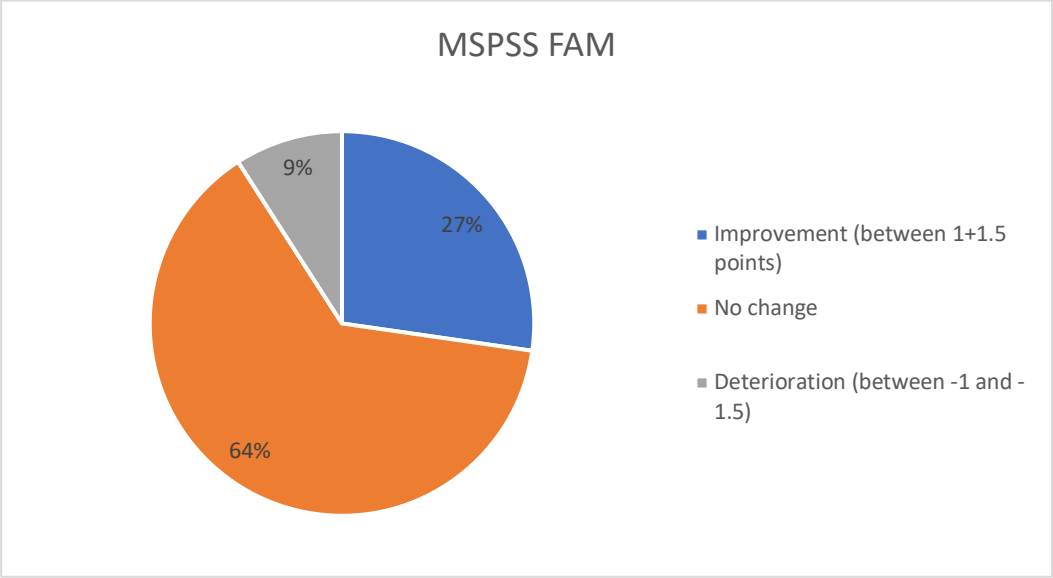


Figure 3 shows the change in each participant's score from group to follow-up. Three participants (27%) rated a higher perceived level of support from family at follow-up than at the beginning of the group. Seven participants (64%) rated the same level of perceived social support from family at follow-up. One participant (9%, Kiara) rated lower levels of perceived social support from family at follow-up. One possible reason for Kiara rating lower levels of family support at follow-up may be because her family were not able to travel to the UK to provide support for her due to the COVID-19 pandemic.

MSPSS Friends: Individual Change

Table 5 highlights individual change for participants on the MSPSS Friends score. In general, there appeared to be similar levels of perceived support at the time of the group

(M= 6.42, SD= .68) and at follow-up (M= 6.02, SD= .68). Eleven participants perceived high levels of support from friendships at the time of the group.

Figure 4: Pie Chart of Individual Change on MSPSS Friends score

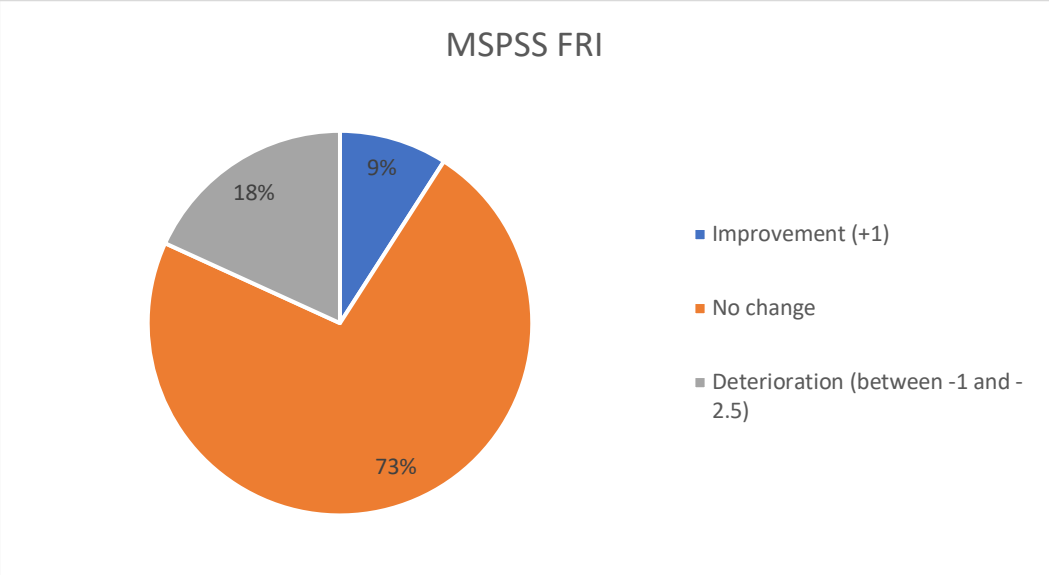


Figure 4 highlights the individual change in scores. 9% (one participant, Mia) rated a higher perceived level of support from friends at follow-up than at the beginning of the group. Eight participants (73%) rated the same level of perceived social support from friends at follow-up. Lily and Sienna (18%) rated lower levels of perceived social support from friends at follow-up.

MSPSS Significant Other: Individual Change

Table 5 highlights the individual change for participants on the MSPSS significant other score. Significant other refers to a 'special person' in the questionnaire. In general, there appeared to similar levels of perceived support at the time of the group (M= 6.31, SD= 1.75) and at follow-up (M= 6.29, SD= 1.51).

Figure 5: Pie Chart of Individual Change on MSPSS SO score

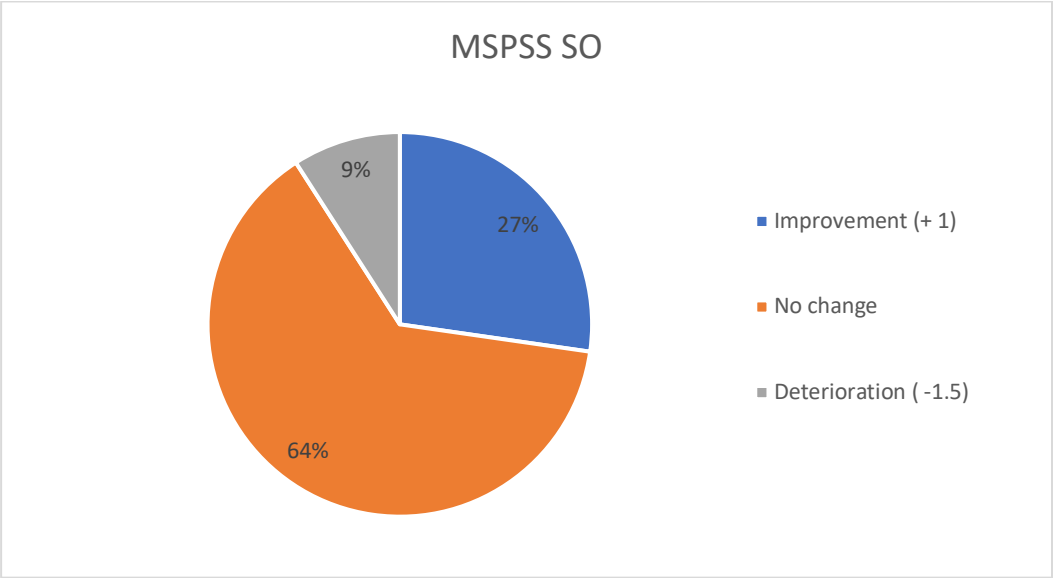


Figure 5 highlights individual levels of change. Three participants (27%) rated a higher perceived level of support from a significant other at follow-up than at the beginning of the group. Sienna's score increased from a moderate level of support at the time of the group to a high level of support at follow-up. Seven participants (64%) rated the same level of perceived social support from a significant other at follow-up. 9% (one participant, Georgia) rated a lower level of perceived social support from a significant other at follow-up. April was the only participant to report a low level of support from a significant other at the time of the group and at follow-up. April had chosen to be a single parent using a donor which may explain why she scored lower in this area.

Process evaluation (sample, reach, drop-out rates, fidelity/ implementation) (MRC framework, Craig et al., 2008, 2013; Moore et al., 2014):

As noted in the methods section, the study was advertised on Twitter and was re-tweeted by professionals working in perinatal and antenatal care, suggesting the study was relatively widely advertised. However, only twenty-two participants responded to the initial adverts, ten of whom were unable to take part due to the exclusion and inclusion criteria (reasons for ineligibility are listed in the section above). The study therefore had a total of twelve participants. Similarly, demographic information gathered about participants highlighted that the group appealed mostly to well-educated, white women. The demographic information also highlighted that all women apart from one were in either full or part-time employment suggesting a high level of general functioning. In addition, as noted above, these women already had high levels of perceived social support. However, the study did appeal to women from a range of family structures and of a variety of ages. The small sample size and lack of

diversity may be linked to the method of recruitment (e.g., via social media) and the fact that the intervention was advertised during the peak of the pandemic which was a time of great uncertainty for many first-time mothers to be. Furthermore, this may have been due to the study's inclusion and exclusion criteria which were based on similar studies in the field and developed to mirror potential criteria for a larger future RCT. Therefore, the 'reach' of this study to a population that may have hugely benefitted from the "IPT-informed" intervention was relatively weak. The low level of uptake and response to the advertisement suggests that the "IPT-informed" intervention may not be accessible or acceptable for most of the perinatal population and for the demographic who the intervention was developed to help (women at risk for developing PND).

Regarding fidelity and implementation, the twelve participants who took part in the study engaged in both the group intervention and individual follow-up with no dropouts, highlighting good adherence to the intervention. All participants verbally reported that they had enjoyed the intervention and that they would recommend the intervention to a friend. One participant did not return her questionnaires after the individual follow-up and did not provide a reason for this. As noted above, unfortunately the 'old and new role' transitions exercise was not completed in the group. However, participants did witness a worked example of this and were encouraged to complete this in their spare time prior to follow-up (seven of whom reported that they did and five did not). This highlighted a time barrier for full implementation. Therefore, the "IPT-informed" intervention was not delivered as initially intended.

Finally, the intervention was developed by the researcher and the Prospect Model team. The team consisted of clinical psychologists trained and accredited in IPT and who themselves were also IPT trainers. The model additionally had support and input from Myrna Weissman (one of the original authors of IPT). However, the researcher running this brief "IPT-informed" intervention had not received full IPT training and did not receive IPT focused supervision throughout the process, which highlights a concern regarding model fidelity. Furthermore, the researcher who facilitated the groups and the individual follow-up, was the same researcher who conducted the semi-structured interviews asking participants about their experiences. This may have meant that participants provided mostly positive feedback and felt less able to discuss the negative aspects of the intervention.

Possible refinements which may assist a future pilot/feasibility study in addressing some of these limitations regarding fidelity, implementation and sample size/demographics will be highlighted in detail in the discussion section below.

Qualitative results:

Thematic analysis of transcripts from the groups, individual follow-ups and semi-structured interviews led to the generation of four higher order themes, alongside several sub-themes (see table 6) (thematic framework presented in Appendix N)). In general, all participants reported that they had enjoyed taking part in the group and had found the group beneficial in thinking about their mental health in the perinatal period, in developing their social connections and in anticipating the transition to new motherhood.

Below, quotations from participants are presented alongside the associated themes.

Table 6: Higher order themes and sub-themes

Higher order themes	Sub-themes
"This is about you, you are important"	Emphasis on and importance of mothers' mental health Mothers' only space
"Leaving one kind of life and starting another one"	Easing Transitions: The impact of COVID-19 Sense of self "You really are just kind of firefighting"
A search for connection	Mother's network Sharing experiences Noticing differences Shortcomings of the online format
Changes to interpersonal relationships	"I think about the circles quite regularly" Strengthening relationships "It's like a bomb goes off in the middle of your life" Sense of loss: The Impact of COVID-19 Lack of time and emotional resources

1. **<u>"This is about you, you are important":</u>**

The first higher order theme referred to the importance of having a space specifically for mothers to focus on their mental health and well-being. The overall theme highlights that participants valued that the intervention provided them with a space where they felt heard, understood, and important during the perinatal period, which was something they had felt was missing in other antenatal groups.

Eight participants spoke about feeling as though their health (both physical and mental) came secondary to their babies throughout antenatal and postnatal care. Participants spoke about how the intervention provided an opportunity for women to think about their own needs and health, which felt essential.

"I think for me, with the experience that I've had with feeling a bit like everything was pretty much about the health of the baby and not really about me at all. Even though, like the woman is the one carrying the baby and delivering them and taking care of them. I think it is really important that there is a group where that is being discussed …. I think there's something to be said for really having a dedicated kind of, 'this is about you, you are important" (Georgia)

"My general experience of the whole maternity process has been that people only care about you if it's going to affect the health of the baby, and what's been really nice about this is it's about conversations about me and that I still matter" (Daisy)

Both Georgia and Daisy highlight the fact that they as mothers felt that their needs were secondary to their babies throughout their experiences of antenatal care. The perinatal period provides a unique opportunity for health care providers to assess maternal mental health. However, reviews of the literature exploring the barriers to women accessing mental health care in the perinatal period have found that a lack of mother-centred antenatal and postnatal care contributes to women not seeking help for psychological difficulties in this period (Smith et al., 2019).

<u>Emphasis on and importance of mothers' mental health:</u>

Nine participants reported that one of the most helpful aspects of the intervention was the overall emphasis and importance placed on maternal mental health. Whilst the information given to women in pregnancy is greatly improving, this highlights a key limitation in preparing

women for new motherhood. Women in the study reported that the information they received during pregnancy was focused more on their physical health and the health of the baby, rather than their own mental health.

"…the emphasis on your own mental health and kind of what to look out for. The antenatal classes did go into it in a little bit as to what to look out for as to what is not baby blues. It (the current intervention) just went into it in a bit more depth, so it just placed a lot more importance on it rather than just feeling like… it's just something that they have to talk about. Like a tick box exercise. It felt like this is something that really needs to be thought about to support you being a mum, in the same way as it's important to talk about breastfeeding vs bottle feeding" (Olivia)

The above quote from Olivia reflects the experiences of nine other participants, who also valued that the group intervention focused on mental health in the perinatal period. Participants felt that this was missing from other antenatal classes they had attended. Furthermore, Olivia's quote highlights that both the physical aspect of motherhood (e.g., breastfeeding) and mental health should be equally covered in the antenatal period, highlighting disparities in the equality between physical and mental health in our current healthcare service. In general, women found the process of having a space dedicated to their mental health and well-being to be extremely beneficial. This suggests that this aspect of intervention is acceptable and accessible for the mothers who took part in the study.

One participant had suggested that a brief overview of other perinatal mental health difficulties such as postnatal psychosis and anxiety could have been helpful.

Mothers' only space:

Seven participants noted that they were glad that the group intervention was a mothers' only space, given the nature of the conversations. This linked into the overarching theme that mothers are important and provides important information regarding the intervention's accessibility for women in the perinatal period:

"Because of what we spoke about in terms of like the relationships and the networks and that sort of thing. I think it was good that it was just us. Because I think I wouldn't have been as honest as I was if he (partner) were there. Because I think some of it was about him and some of it was about his parents and his friends and that sort of thing and I think you do need that space to be able to say those things without them there. So, for that aspect of it, it was definitely good we were on our own" (Mia)

Participants valued the opportunity to have a women's only space for the group intervention. As shown in the quote above, participants often felt that the discussions and exercises generated private and personal information which they would not have necessarily wanted to share with their partner or a loved one. This highlights a significant difference between the intervention and routine antenatal classes/ groups which are currently offered. Antenatal classes often have partners involved, if they choose to be, whereas the brief "IPT-informed" intervention is a space solely for mothers, which was appreciated by those who took part, suggesting this aspect of the intervention's accessibility.

2. "Leaving one kind of life and starting another one"

The second higher order theme referred to participants' experiences of the transition to new motherhood. The theme and sub-themes highlight the changes experienced by first-time mothers in the transition from pregnancy to the postnatal period. The transition is a key focus of the brief "IPT-informed" intervention. The sub-themes cover participants experiences in relation to the impact of the COVID-19 pandemic on the transition to motherhood, participants' sense of self and the interventions preparatory nature.

Easing transitions: The impact of COVID-19

A key aspect of the "IPT-informed" intervention was to assist first-time mothers in beginning to think about the transition to motherhood. This is something that would typically bring around a number of sudden changes for women including stopping work, spending more time at home and less time interacting with others. Interestingly, nine participants spoke about the impact of the COVID-19 pandemic forcing transitions into motherhood prior to the baby's arrival. Some women spoke about this in relation to being on furlough, losing their jobs, having space to process their new identity or regarding the reduction in socialising with others as frequently.

"So, I sort of feel in a weird kind of way, although like you say I wasn't ready for it, lockdown has forced a lot of transitions to motherhood. My friends who have new-borns have said, you know having a new-born at home and lockdown have some similarities. You know, it's not like when this little man arrives that he's going to upset my social life… he really isn't. So, I sort of feel like in some ways it's sort of like a lot of the things I was worried about happening to me and shutting me out from my friends is actually happening on a more universal basis,

and maybe sooner than I hoped but in a way there is something quite levelling that everyone has to deal with this not just me" (Isla)

Isla's quote highlights that the restrictions and lockdown have helped ease her into motherhood. She highlights that she was worried about her new-born stopping her from socialising with friends, however the restrictions of the pandemic mean that this is happening to everyone and so it has become less of a worry for her in her final stages of pregnancy. This was also shared by other participants in the group.

"Yeh there's definitely been a bit of advanced practice on the restrictions on your life because that would be one of the things that, I was, like being independent and doing what you want when you want and not having to ask people for help has always been part of how I've operated. And so having to rely on other people to do things for you and being quite restricted, I feel that I've had quite a lot of practice of having to come to terms with that" (Daisy)

In addition, Daisy highlights that the lockdown provided her with an experience of some of the restrictions that she was expecting a new baby to bring into her life. Furthermore, it gave her the opportunity to reflect on her own interpersonal style and helped her recognise that she might need to rely on others through the lockdown and when the baby arrives for certain things. This finding is essential as it highlights that COVID-19 pandemic may have eased women's transitions to motherhood and may have buffered against some of the negative experiences that the transition can often bring. The finding may also suggest that the focus on the transition to motherhood in the "IPT-informed" intervention may not be as useful or acceptable during this time.

Sense of self

However, despite participants feeling that the pandemic had eased their transitions to motherhood, ten participants spoke about feeling a loss of sense of self. Participants spoke about this in relation to their new identity as a mother. While some aspects of the transition to motherhood may have occurred earlier than usual due to the COVID-19 pandemic, participants in the study found that their sense of self remained a difficult aspect of the transition to motherhood. Mothers spoke about this feeling of loss in relation to sense of self as a loss of their 'old lives/identities' and previously enjoyed activities, socialisation and enjoyment from the workplace.

"I think because I am still in the process of working out my new identity, there have been things I haven't anticipated. I've missed somethings more than I thought I would. It almost feels like I am grieving a part of my old identity" (Kiara)

"I still had I've had some days of real sadness and I would describe it as loneliness, and I know that there's a pandemic and so a lot of people feel lonely in that might well be some of the reasons for it. But I'm trying to describe it to my partner last week when I was sad. I feel like I am missing myself and that sounds really egotistical, but I guess there is an element of that because you sort of don't get to grieve who you were for you" (Phoebe)

Both Kiara and Phoebe's quotes highlight feelings of 'grief' related to their 'old identities' prior to the births of their babies. These feeling of grief and loss for one's 'old identity' is something that the research and literature has also evidenced. Helping mothers to accept their new identity in as positive a light as possible is a key target area for IPT in the perinatal period. As noted above, unfortunately participants were not able to complete this exercise for themselves during the group due to time constraints. Although they witnessed a worked example, and the themes were covered within the group and individual follow-up, it seems several participants struggled to balance their new identities in the postnatal period.

"You really are just kind of firefighting"

Despite participants struggling to integrate their new sense of self, eight participants reported that the intervention had been beneficial in helping them to start anticipating change in some way, which was a key focus of the intervention.

"I did think the transition things were really helpful things to think about and it's still helpful now because I suppose I hadn't really thought about like the whole aspect of leaving one type of life, like starting nearly a new one. And what gets carried over and what might not, like you're not necessarily losing loads of stuff but you're also kind of gaining things. And it did make be kind of think about that and I suppose I have since thought that there have been moments where I'm like 'I really miss this', but I've also outed that with, 'yeah but look what I have.' So, I suppose practically I've put that into practice so it's useful" (Georgia)

Georgia's quote highlights that the group helped her to prepare for the transition to new motherhood through using the IPT technique of comparing 'old and new roles'. This is something she admits that she would not have necessarily considered prior to taking part in the group intervention. As noted above, unfortunately participants were not able to complete

this exercise in the group, however they did witness a worked example and learnt about the theory of the exercise, which seems to have been beneficial for Georgia.

"I've been planning this for two years and trying numerous times so this is something that I kind of made the decision on a long time ago. I've been thinking about this for years. So no, it came pretty naturally because it's been so long in the planning… but you can't really prepare for something you've never done, and people can tell you lots, but you really are just kind of firefighting for a bit because everything is new, you can't really prepare for it that much" (April)

Other participants felt that while the intervention was helpful to anticipate and think about the transition, there is still a period where women must adjust to their new role and learn while doing so. From April's perspective, no amount of preparation could have prepared her for the reality of caring for her baby. Interestingly, April had chosen to be a single parent using IVF donor sperm. She highlighted that the transitions aspect of the group had been less helpful for her since she had been anticipating and planning for her baby for a long time prior to conception. Thus, the transitions focus of the intervention may be less acceptable and accessible to single parents or those who have conceived using IVF and may have planned their pregnancies for a long time.

3. A search for connection

The third higher order theme highlights that in general, participants were looking to create a connection with other mothers who were going through similar experiences through taking part in the intervention. Sub-themes cover important aspects such as creating mothers' support networks, finding common ground, sharing experiences, learning about differences in other's experiences and shortcomings of online groups.

Mothers' network:

Eight women spoke about the importance of creating a network of mothers during the perinatal period. Participants spoke about the importance of connecting with others who were going through similar situations to themselves. It is important to note that participants discussed the importance of meeting other mothers in relation to other antenatal/ postnatal groups they had attended and were not referring to creating a social bond during the intervention in this study. Reasons for this included the interventions brief nature and online format.

"I think the biggest difference is that new people have come in. So, I did the NCT antenatal course and through that we've made like a group of friends. Like we made a WhatsApp group and they're all local and we meet up every week. So that's good, they've become like really close really quick. Because obviously we're all in the same position, all the babies were born within 3 weeks of each other. So yeh I think that was probably the biggest change, like I would now call them like… friends that are quite close in the circle" (Tala)

Through completing the Interpersonal Inventory in the group intervention, women were able to reflect on new friendships that had developed through antenatal and postnatal classes/groups, as indicated by Tala's reference to "the circle". Mothers also spoke about the benefits of meeting other mothers who have babies of similar ages:

"We joined a baby group here, which is quite nice as well, like an outdoor one where you go on walks and things. So, I'm still getting that kind of baby, other mums and things here which is nice so yeah…meeting new people has been easier because I suddenly have something in common with a whole new group of people who I potentially didn't have before" (Rosie)

Mothers who took part in this intervention recognised the importance of connecting with other women going through similar experiences to themselves. The quotes from Tala and Rosie highlight that the "IPT-informed" intervention helped them reflect on their new relationships and the benefits they have experienced from developing these friendships in the perinatal period. This highlights the benefit of using the inventory in the perinatal period to enhance social connections, however it also highlights that perhaps the intervention may not be acceptable to women in the perinatal period who are looking to develop lasting connections. This is a barrier that future research may consider addressing to improve acceptability.

Sharing experiences:

Eight participants noted that they enjoyed being able to share their experiences with other first-time mums-to-be during the group part of the intervention.

"The discussions around identity were actually quite well-timed for me. It was quite interesting to see how people were thinking about it. And also…I was about to say, so I didn't necessarily take in new information so much as actually the opportunity to share my own story with other mums going through the same thing was actually very cathartic" (Isla)

"What I do remember is the thing around people talking about their in-laws and stuff and actually there weren't many who seemed to like them… so I thought ok that's a common thing then. So, the areas where you had common ground with people and were going through the same thing…that was really useful" (Sienna)

Sienna and Isla hight that sharing their own experiences of pregnancy and listening to other participants experiences was an important aspect of the group. They enjoyed connecting with other mothers going through similar experiences. Sienna in particular enjoyed finding areas of common ground among those in her group, for example their experiences of their in-laws.

Noticing difference:

Six participants spoke about noticing differences in others' experiences and family set-ups. They found it interesting to learn about these and to hear from other's whose experiences were different to their own.

"I think it was interesting to hear the experiences of people in different situations. So almost everyone had a different situation. I know there were different situations like single mums, donor mums, I think there was a same sex couple as well. So that was really interesting. Seeing the experiences of pregnancy from different people" (Mia)

"I was quite heartened that you were featuring people with different family setups because obviously I'm not going through the traditional roots of having a baby with a partner but there was a lady there who is a lesbian whose had one with her partner and it would just be really nice because you know, the traditional family setup is the most common but more and more, like people like me are having babies on their own and it's really nice that you know, same sex couples are more have you are featuring as part of this research" (April)

Both Mia and April touched on the fact that the research contained women from different family set-ups. Others enjoyed the opportunity to learn about participant's different backgrounds/ experiences such as planed parenting styles, approaches to the transition and desires/need for social communication and support.

Shortcomings of the online format:

Seven participants spoke about the difficulty in forming meaningful and lasting relationships with other mothers during the group, because it was online. A further point was that given the group was a 'one off', mothers felt less inclined to create lasting relationships with others in the group. Two participants noted that they would have liked the group to have been 're-occurring' for them to build connections with other mothers. Four participants reported that a WhatsApp Group could have been created by the group facilitator to help participants build a connection and to buffer against some of the shortcomings of the online format.

"Just, it's a much better interaction. And there's a chance that the connections you make might turn into friendships in a way I don't think they do online" (Isla)

"All groups are weird over video call. It's very hard to, and also when we were doing it I couldn't see anyone all at once. And I don't know how to do that… so even like you know when you're talking to someone you see their facial reactions and how they're reacting to things. Not being able to see that…. I knew I was talking to you but not being able to see other people's reactions, that was hard because that's how you build a relationship with someone, you know if someone laughs or nods or agrees then you know they're thinking similarly to you. And you can't really do that on this platform" (Olivia)

Isla and Olivia's comments reflect the wider feelings of several participants who took part in this research. This finding highlights that the method of delivery for this intervention may not be the most accessible or acceptable for this population, however given the COVID-19 restrictions it was the only method that was available at the time.

4. Changes to Interpersonal Relationships:

The fourth higher order theme referred to the changes in Interpersonal Relationships that all participants experienced following the birth of their babies. The sub-themes included within this higher order theme include reflections on the interpersonal inventory, strengthened relationships, the changes to romantic and partner relationships, a sense of loss due to the COVID-19 pandemic and barriers to making changes in relationships in the perinatal period.

"I think about the circles quite regularly"

Overall, all participants reported that they had hugely enjoyed completing the interpersonal inventory exercise. Seven participants reported that the inventory helped them identify social support that may have been of help in the postnatal period, which was a key aim of this intervention.

"What I really liked about that exercise was that it helped me identity that I actually have a lot more support than I was thinking in my head… so it really helped to write it down and think well actually I have a lot of different places I can go to for help if things get hard" (Kiara)

Ten participants noted that the inventory acted as a tool which helped them reflect on their interpersonal relationships and begin to think about them in more detail and depth. Participants appear to have reflected on the inventory between the group and individual session at different points. The inventory is set up as 'ever evolving and changing' during in the group which may have facilitated this reflection.

"I was quite reflective afterwards and have been thinking about it a lot throughout the last few months, so I've come back to thinking about the circles quite regularly" (Rosie)

Overall, participants very much enjoyed completing the Interpersonal inventory in the group session and reviewing this in the individual follow-up. They found the exercise to be highly beneficial in several interpersonal areas such as identifying social support and reflecting on their available support networks. This finding suggests that the focus on social support and the interpersonal inventory exercise is highly accessible and acceptable in for women who took part in this study.

Strengthening relationships

Through reflecting on their interpersonal inventories during the individual follow-up, nine participants noticed closer and stronger relationships with certain friends and family members since the birth of their baby.

"I found that just after I gave birth, that I had both families, my family and my partners family really stepped it up like even in a pandemic like people still – I had people coming over and trying to do as much as they could for us and I think in theory I was always a bit like 'oh, yeah I'll have support' but it wasn't until I was actually in the situation that really –like that was very kind of tangible" (Georgia)

"I think I underestimated how much support – I think more emotionally than physically I needed. Yeah, I mean all my friends have been amazing, but they haven't really given me much or any kind of physical support, again it's more emotional support that they've been giving. And they've all been great" (April)

Participants reflected in the follow-up that they felt very lucky to have had as much support as they received from family and friends. Georgia and April both highlight in their quotes that they received more support than they were expecting to in the postnatal period which they felt very grateful for. This finding is important as it highlights that, through reflecting on their social support networks in the group, participants' relationships may have strengthened as a result.

"It's like a bomb goes off in the middle of your life":

When using the inventory to reflect on changes in relationships with partners, all participants reported that their partners were incredibly supportive during the postnatal period (where partners were involved - 10/12). However, a sub-theme identified was that, despite this support, all participants noticed a significant change in their relationships with their partners.

"I think, immediately after he was born we were in this like love bubble. Where we were just thinking oh my god this is amazing, I can't believe we've done this, this is so good. And then I think, like as the tiredness crept in and like the day-to-day routine happened. I feel like we're more like work mates at the moment, we're just like practically supporting each other like oh you do this, you take this, it seems more like yeh the relationship is based on physical, practical needs that need to be done. There isn't really much space for feelings and that sort of thing" (Mia)

"And you know, we've been together for seven years, like you know your ups and downs and various things like hard things have happened and you know in both of our lives and this is just like – nothing has ever come – it's like a bomb goes off in the middle of your life. It brings out all the good things and the bad things about both of your personalities, because you're both just so tired. You're just so in love as well" (Georgia)

Both Mia and Georgia speak about how their relationships have significantly changed since the birth of their babies. Participants spoke about how relationships had changed to focus more on practical needs and ensuring basic needs were met for the family, rather than the emotional aspect or closeness that may have present before the birth of the baby.

Sense of loss: Impact of COVID-19

Ten participants spoke about a sense of loss in their relationships due to the COVID-19 pandemic. Some participants spoke about being physically distanced from relatives who had not been able to provide support or to meet the baby. Others spoke about a sense of loss in not being able to celebrate the birth of a new life with those closest to them.

"I wonder if I'd be feeling the way I'm feeling if it wasn't for the pandemic. You know maybe if the pandemic wasn't there we might go out and see friends for coffee or there might have been more classes I could have taken her to. I could have gone shopping a bit more freely. And because of the pandemic, and I am so keen not to get the virus because I just don't want to make life harder than it is right now… you know I think maybe because of that I have more time to notice the losses rather than the differences that are coming" (Kiara)

Kiara highlights that the pandemic has given her more time to notice the things that she has lost and what she has missed out on during this experience. She describes this regarding a range of social activities such as seeing friends and attending baby classes, which would provide additional social interaction and communication.

"We haven't been able to connect with people as much as we normally would have… I haven't been, I mean even after you've had the time to rest, I'd have had all my friends over who were still pregnant with their babies, I had loads of people who wanted to come and see him, and we were just like it's just not really going to work out… so in that sense I think that has changed things a lot" (Sienna)

Similarly, Sienna highlights a sense of loss around connecting with other new mothers, friends, and family members. There is an emotional tone of grief within both Sienna and Kiara's quotes and this tone was reflected from the other ten participants who voiced a sense of loss due to the pandemic. This highlights the impact that COVID-19 has had on social support within the perinatal period. It therefore adds to the evidence that interventions, like the one trialled in this study, which aim to improve social support systems, may be extremely beneficial during this time. However, as an intention of the intervention is for women to develop and strengthen their support networks, this may be limited by social distancing and lockdown measures associated with COVID-19.

Lack of time and emotional resource

Eight participants spoke about the barriers to implementing change in interpersonal relationships following the intervention. Some participants spoke about the general difficulty in seeing others due to the COVID-19 pandemic but mostly participants spoke about a lack of time and emotional resource for investing time into relationships.

"I mean I did have plans to try and work through the relationships a bit more but it's so difficult toward the end of pregnancy with everything going on and with lockdown and everything. And to be honest, I didn't try hard enough, and I still haven't, but then I had the baby and to be honest it is hard to find the time to just even text someone back" (Mia)

"You've only got a certain amount of resource in terms of like your emotions, your love, your time. And it's being zapped at the moment with a baby. So I don't feel like I've got that at the moment to give. So it would be nice at the moment, for them to come to me. As opposed to me reaching out to them" (Lily)

The quotes from Mia and Lily highlight a theme endorsed by eight others in the study who felt that they had a limited amount of time and resource to make some of these changes in their interpersonal networks. Furthermore, as noted above, the global pandemic has limited social contact with others due to social distancing measures and lockdowns to prevent the spread of COVID-19. This highlights that while participants in the study may have had plans to develop or strengthen their social networks the combination of a global pandemic and the lack of time and resource new mothers have makes it very difficult to do so. Lily commented on how she would have preferred that others in her social network had reached out to her during this time given her resources are so stretched.

Discussion:

The brief IPT intervention aimed to educate mothers on the signs and symptoms of PND, strengthen mothers' perceptions of their interpersonal networks and help anticipate transition to motherhood. We aimed to answer the following three questions:

1) Is this brief group intervention accessible and acceptable for expectant and new mothers?
2) Does this brief group intervention have any adverse effects for expectant and new mothers?

3) Could this trial provide evidence for a larger 'preventative' trial in the future?

Overall, participants who took part in this intervention reported that they had enjoyed and benefitted from it, suggesting the intervention is accessible and acceptable for those who took part. Qualitative analysis highlighted that participants appreciated the opportunity to identify social support available to them during this period and to begin to anticipate and think about the transitions to motherhood. Furthermore, mothers appreciated a dedicated space specifically focused on their mental health during the perinatal period, which was something they felt was missing from other antenatal groups they had attended. In addition, qualitative analysis highlighted unique findings regarding the impact of COVID-19 on specific IPT areas covered within the intervention including the changes to social support networks, transitions, and feelings of loss. Quantitative data highlighted that generally EPDS and MSPSS scores remained relatively stable from group to follow-up.

However, the results of this study must be interpreted with caution. The 'process evaluation' highlighted that the study only had a small uptake of participants, and most participants were white, well-educated women reducing the findings generalisability and possibly highlighting that the intervention is not accessible and acceptable for this population. Furthermore, there were key difficulties regarding the fidelity/ implementation of the intervention. In addition, aspects of the thematic analysis also highlighted some short-comings of the current "IPT-informed" intervention, such as the impact of COVID-19 on easing transitions, the lack of emotional space and time new mothers have to make stronger social connections and the difficulties with engaging in this intervention online. One of the key questions in the MRC guidelines (Craig et al., 2008, 2013) asks "have you done enough piloting and feasibility work to be confident that the intervention can be delivered as intended". The current study contains several limitations and refinements which would need to be addressed in a further pilot/feasibility trial to make conclusions regarding the intervention's accessibility and acceptability for women in the perinatal period and to make recommendations regarding a future larger scale RCT.

Process evaluation, refinements, and suggestions for future trials:

Reach, sample, and drop-out rates:

Twenty-two women noted interest in the study however only twelve women decided to take part. All participants who took part completed the group and individual follow-up, with no dropouts recorded, highlighting good adherence to the intervention. Therefore, it appears that for the group of women who took part, the brief "IPT-informed" intervention was

accessible and acceptable to them. However, the 'process evaluation' data highlights that the study had relatively little interest from women in the perinatal period and in general a low uptake compared to how widely the study was advertised. The study was advertised on Twitter and relied on being self-motivated enough to follow accounts linked with perinatal mental health and well-being. It may be that this method of advertisement also impacted on recruitment and access to more vulnerable women who may have benefitted from this study. The study relied on women having access to social media accounts such as twitter and the advert most likely reached mostly women who had already paid and attended antenatal classes and who were self-motivated enough to search for research and projects in the perinatal period. Given the COVID-19 restrictions, this method of advertising the study was the best option available. Unfortunately, we do not have data on the reasons why more participants did not come forward for the intervention, therefore, it may be that the intervention did not appeal to them and therefore is not accessible or acceptable for this population. Future research would benefit from advertising in a range of different areas to potentially capture a wider range of participants and to assess the accessibility and acceptability for this population. Should a future study have similar difficulty with recruitment, outside of the context of a global pandemic, it could be argued that the intervention is not accessible or acceptable for this population.

Similarly, demographic information gathered about participants highlighted that the group appealed mostly to well-educated, white women. In addition, as noted above, these women already had high levels of perceived social support. The lack of diversity amongst the sample means that it is difficult to conclude whether this intervention is accessible and acceptable for more vulnerable women who may not have access to high levels of social support and who may benefit most from this intervention. As both lower socio-economic status (Patel et al., 2003) and lower educational attainment (Tammentie et al., 2002) have been found to be risk factors for the development of PND (Milgrom et al., 2008). The inclusion and exclusion criteria did prevent more vulnerable women from taking part in the study and this may be an area for future research to consider removing to evaluate the accessibility and acceptability for this population. The MRC guidelines (Craig et al., 2008, 2013) suggest that if the quantitative data highlights that there are relatively few members of minority ethnic groups or vulnerable groups, meetings with members of these groups may help to identify barriers to their participation. This would be a direction for future studies using this intervention to explore to remove barriers and identify if this intervention is accessible for these populations within the perinatal period.

If these refinements are made in a future pilot/ feasibility study and the study continues to recruit a low number of non-diverse participants and there is an overall lack of

interest from the perinatal population, we would likely be able to conclude that the intervention is not accessible or acceptable for most of the perinatal population.

Fidelity and Implementation:

'Process evaluation' data highlighted that the intervention was not implemented as it had been intended, with participants unable to complete the transitions exercise within the group due to timing constraints. Some participants did complete this exercise within their own time, however others did not and may have benefitted from completing it in the group (as originally planned). Future trials of the intervention would benefit from ensuring this exercise was completed in the group due to its potential benefit. This would include reviewing the content of the group and adapting it where necessary to ensure the exercise can be completed in the time frame available or by increasing the time of the intervention itself.

As noted above, although the researcher developed this intervention with trained IPT colleagues and has received some training in IPT, the researcher had not received formal and full IPT training. It would be desirable that any future pilot/ feasibility study has an IPT trained researcher who is receiving routine IPT supervision throughout the process to ensure IPT model fidelity and to assist with the implementation of the intervention.

Future trials would benefit from separating the individual follow-up session and the semi-structured interview. This would benefit participants as they would have time to digest and reflect on the intervention, without being asked to immediately evaluate their experience of it. These interviews should also be conducted by an independent researcher and not the individual who delivered the intervention to ensure participants feel able to share both positive and negative experiences of the intervention, which was a limitation of the current study.

Regarding the qualitative data, the sub-theme "short-comings of the online format" highlighted that many of the participants found it difficult to connect with other members of the group and to feel the full benefits of the group intervention due to its method of delivery (online). It could be argued that delivery of this intervention online is not accessible or acceptable for women in the perinatal period and future trials should aim to offer the option of face-to-face or online groups. A future trial could compare the two for accessibility, acceptability, and feasibility.

The study did not allow for members of the group to communicate after the group, which in hindsight would have provided them with yet another support network for the postnatal period. This was noted in the qualitative feedback with participants highlighting in the theme "searching for connection" that they were looking to build relationships with others

going through the same experience and due to the brief nature of the intervention and it's delivery method (online), they felt unable to do so. Future research would benefit from the facilitator sharing the groups contact information or setting up a WhatsApp group (with their permission) to allow women to develop stronger and lasting connections. This would arguably improve the interventions accessibility and acceptability for women in the perinatal period.

Finally, when looking to refine the intervention, it would be beneficial to include experts by experience to gather a better insight into what might be important to include for women in the antenatal/ postnatal period. The MRC guidelines (Craig et al., 2008, 2013) suggest that service users should be involved in all stages of the development, process, and outcome of a complex intervention and this is something that is missing from the current study and therefore a limitation.

Quantitative findings:

The study found preliminary evidence that the intervention has no adverse effects for first time mothers. This was reflected in scores on the EPDS and MSPSS which remained relatively stable from group to follow-up and in qualitative feedback gathered from participants.

A comparison of means on scores of the EPDS both pre and post group showed that overall, there was no notable change from pre-to post-intervention. Through exploring individual levels of change, most participants showed either an improvement on their scores on the EPDS, or their scores remained stable from pre-to-post group. In addition, the qualitative feedback gathered suggested that the group intervention and follow-up did not have any adverse effects for new mothers. However, four participants did show a deterioration in their scores on the EPDS from pre to post group. Studies exploring the typical trajectory for scores on the EPDS in the general population have not provided a consensus on whether scores typically increase (Lara et al., 2015) or decrease (Figueiredo & Conde, 2011; Bowen et al., 2012) from the antenatal to postnatal period. As noted in the results section, Georgia and Phoebe had scores which met the cut-off for probable PND at pre-group (13). Georgia's showed a further deterioration at follow-up and Phoebe did not provide a response to the questionnaires. Therefore, the question as to whether the intervention could cause harm to participants remains unclear. It is impossible for this study to conclude due to the design and nature of the feasibility study. Furthermore, the study did not have a control group and the impact of the pandemic could have been an important confounding variable that could not be controlled for. A recent systematic review and meta-analysis conducted by Hessami and colleagues (2020) found that the overall pooled EPDS

scores were higher for women during the pandemic compared to previous non-pandemic times. This result did not reach statistical significance (Hessami et al., 2020). A larger, randomised controlled trial (RCT) would be needed to deduce whether the intervention could be potentially harmful for participants.

In general, participants reported similar scores for the MSPSS at pre group and at follow-up. Overall, participants generally reported a high level of perceived social support. This was seen across the 3 different areas including with friends, family and a significant other. Where participants reported lower scores on perceived social support, they often cited the pandemic as a reason for this. For example, Kiara had family in another country who could not visit or provide practical support. Others felt this in relation to their friendships where they had not seen friends due to the pandemic.

Overall participants who took part in this research rated high levels of overall perceived social support prior to the group intervention (T1). Thus, it may be that the research attracted individuals with an already high level of social support and therefore limiting the effectiveness of the intervention for this population. It may be that future research aims to target women who may have lower levels of perceived social support (for example, some single mothers, refugees, individuals in or who have escaped difficult relationships or domestic violence).

Qualitative findings:

In general, the qualitative findings highlighted that women who took part in the intervention enjoyed it and felt it helped them to think about their own needs, evaluate their social support and begin to anticipate the transition to new motherhood, which were the aims of this intervention. These findings suggest that the intervention's content and approach is mostly acceptable to the women who took part in this study. However, the qualitative analysis also highlighted some of the shortcomings of the current intervention which might limit its accessibility and acceptability. These should be refined and assessed in future trials. The main themes and sub-themes will be explained in detail below, with recommendations for refinements also stated throughout.

"This is about you, you are important"

This key theme and sub-themes highlighted that participants in this study valued the opportunity to have a space dedicated to thinking about them and their needs throughout the antenatal and postnatal period. They appreciated the chance to learn more about common mental health conditions in the perinatal period and the warning signs to be aware of. The

study appears to highlight a gap in the current care being delivered to women in the antenatal period. Often antenatal classes mostly focus on labour and the birth, meaning that women often feel underprepared for the period after birth which can negatively impact their transition (Huppatz, 2018). The focus on maternal mental health throughout the brief "IPT-informed" intervention was something that participants within this study found accessible and acceptable. This is an aspect of the intervention that should be retained in any future refinements.

Research has found that there are multiple barriers to women accessing help for perinatal mood disorders (Smith et al., 2019). In the UK, around 60,000 women are unable to access perinatal mental health services (Smith et al., 2019). Organisational level barriers include shortages of staff (e.g., health visitors and midwives) and long waiting lists for psychological therapies (Smith et al., 2019). Other barriers include fears from mother's regarding negative feelings and attitudes from health care providers around mental health disclosures (Smith et al., 2019). Furthermore, research has highlighted that health care providers often feel they have an insufficient amount of knowledge or information around mental health difficulties in the perinatal period which prevents them from identifying warning signs and delays help-seeking for mothers who are struggling (Smith et al., 2019). The NICE guidelines on Antenatal and Postnatal Mental Health states that pregnant women should be asked about symptoms of depression during their initial contact with primary care (NICE, 2014). However, a recent survey found that only 31% of women were asked by their GP about their mental health (Royal College of Obstetricians and Gynaecologists, 2017). The reasons for this may be twofold. Firstly, women may not feel comfortable discussing their experiences of symptoms with their GP and secondly GP's may not have adequate training to help them identify perinatal mood disorders (Ford et al., 2019). The findings from our research highlight the current gaps within services and that educating women on the signs and symptoms of PND and the differentiation between baby blues is essential. Psychoeducation based interventions are also successful in decreasing levels of stress and symptoms of depression (Steardo Jr et al., 2019).

The sub-theme 'mother's only space' highlights that participants in the intervention valued having the space for mothers only. Participants noted that this differed from the other antenatal classes they had attended and given the relatively sensitive and personal material in the group, participants valued completing the intervention as an individual exercise rather than with their significant others. Future refinements may benefit from continuing to offer the intervention to mothers only based on this feedback, as it appeared to be accessible and acceptable for those who took part in this study.

"Leaving one kind of life and starting another one"

This theme and its sub-themes captured the difficulties and changes associated with the transition to motherhood. Mothers who took part in the study reportedly appreciated the opportunity to think about the transition to motherhood. Participants valued the opportunity to think about their new roles as mothers using a more balanced view, thinking about both the benefits and negatives of both their old and new roles. It is argued that nearly everyone who goes through a major transition will find change stressful (Stuart & Robertson, 2012). Individuals often have a sense of loss around the old role which feels to have been left behind (Stuart & Robertson, 2012). The literature has highlighted that a sense of loss has been identified as a key aspect of the transition to motherhood (Shelton & Johnston, 2006). The loss is felt in women's autonomy and time, identity, occupation and in their appearance (Shelton & Johnson, 2006).

This was found in the sub-theme *'Sense of self'* where women spoke about feeling a loss related to their old roles and sense of self. Stuart & Robertson (2012) have highlighted that becoming a mother is a major life transition, where women may idealise their old role advantages such as freedom, leisure time and career progression/focus. Furthermore, depression has been linked with the conflict that can arise between a women's expectation of motherhood and their subsequent experiences (Mauthner, 1999; Shelton & Johnson, 2006). IPT helps women to address the need for social support in their new role and to develop a more balanced and realistic view of the transition (Stuart & Robertson, 2012). As noted above, the difficulties identified with women struggling to accept their new identity may have been linked to the timing difficulties within the intervention and that the new/old role exercise was not completed within the group. Refinements of the current intervention should consider allowing time to complete this exercise in the group, as originally intended.

The sub-theme *'Easing Transitions: The Impact of COVID-19'* highlights a unique finding of the study as prior to the pandemic, women would have rarely experienced an early transition to motherhood in the same way they have in the current circumstances. Participants spoke about this in relation to taking earlier maternity leave, spending more time at home and not being able to socialise with others as they normally would have. While there were sub-themes that emerged in relation to the difficulties associated with the perinatal period and the pandemic, the easing of transitions appeared to be a relatively positive experience for participants in this study. This finding suggests that the transitions focus of the "IPT-informed" intervention may have been less acceptable to participants during the context of the pandemic and may have been more beneficial during earlier stages of pregnancy.

The sub-theme, *'You really are just kind of firefighting'* reflects that while most participants found that the intervention provided them with a space to begin to think about the transition to motherhood, some participants felt that no amount of preparation could prepare them for the changes that a baby would bring to their lives. Georgia's quote, as presented in this sub-theme's results section, provides a real example of how she utilised the 'old and new role' exercise when reflecting on her new role as a mother. It has been well reflected in the literature that retaining a balanced view of motherhood, through recognising the rewards and the challenges, is essential for mothers' mental health (Shelton and Johnson, 2006). This is essential as Georgia scored highest in her EPDS scores at pre group (13) and at follow-up (16). Perhaps, this highlights that the brief "IPT-informed" intervention helped Georgia buffer against more severe symptoms of depression. Alternatively, April, who is a single mother by choice and who conceived using IVF donor sperm noted that the transitions aspect of the intervention felt less relevant for her since she had been planning to conceive for a long period of time and had experienced some difficulty in conceiving. Therefore, it is possible that the transitions focus of the "IPT-informed" intervention may be less acceptable for women who have conceived using IVF and who have been planning for a long time, as their transition to motherhood may be uniquely different to those who have conceived 'naturally'. Refinements of the current study should take this into consideration and could perhaps have an open discussion regarding the differences in the transition in the group/ individual follow-up, should it feel appropriate to do so.

A search for connection:

Participants in this study voiced a desire to connect with others who are going through the same or similar experiences of pregnancy and motherhood. This key theme and its sub-themes highlight this desire to connect.

The sub-theme, *'mothers' network',* reflects that participants' valued the importance of having a network of mothers during the perinatal period. The interpersonal inventory exercise had helped participants think about the importance of these bonds in the individual follow-up sessions. Most of the participants had created this network through attending antenatal classes (NCT) and joining postnatal baby groups. Unfortunately, participants had not created a bond with others in the brief "IPT-informed" intervention due to the method of delivery (online) and its brief nature (one-off group). This sub-theme mirrors the findings of Nolan and colleagues (2012), who found that first time mothers who met in antenatal classes developed 'unique bonds' with other mothers who had babies of similar ages (Price et al., 2018). Participants reported that these bonds were created on a deeper level than other

relationships because of their shared experiences of mothering and the exchange of validation, compassion, and empathy that they were doing a 'good job' as a mother (Price et al., 2018; Nolan et al., 2012). This is essential given social connection with other mothers, created or strengthened throughout pregnancy, could support the transition, and impact mothers experiences of new motherhood (Darvill et al., 2010). Furthermore, new relationships facilitate an individual's attachment needs in their transition to motherhood and are a source of social support (Stuart, 2012).

The sub-theme, *'Sharing experiences',* reflects that participants' valued the opportunity to share their experiences with other participants in the brief "IPT-informed" intervention. The literature has highlighted the importance of peer support in motherhood, noting that those who are going through similar life experiences are more likely to relate to one another and consequently may offer more authentic validation and empathy (Mead & MacNiel, 2006; McLeish & Redshaw, 2017). A study conducted by Tammentie and colleagues (2004) found that mothers were not willing to speak with their own family and friends about their feelings for fear that they would either not understand or may be upset and deny the validity of their feelings. They were also fearful of criticism, gossip, and inappropriate advice (McLeish & Redshaw, 2017). It has been argued that this does not occur to the same extent when women speak with their peers in similar situations (McLeish & Redshaw, 2017). This finding that participants valued the opportunity to share their experiences highlights the acceptability of the group for women who took part.

The sub-theme, 'Noticing differences', highlights that participants' enjoyed hearing and learning about other participants situations and family set-ups that were different to their own. The study included a single mother and a child-bearing woman from a same-sex relationship, both of whom had conceived using IVF donor sperm. This is essential, as research in the perinatal period continues to be focused 'within a heteronormative framework' (Darwin & Greenfield, 2019; Charter et al., 2018). Despite this, within maternity services in the UK lesbian couples are one of the fastest growing groups (Darwin & Greenfield, 2019). Data from fertility treatment and live births show an increase of 15-20% in this group, continuing year on year over the past decade (Darwin & Greenfield, 2019). Furthermore, the experiences of women who choose to have a baby in a same-sex relationship or through not following 'traditional' method are likely to experience a number of differences in the perinatal period (such as methods of contraception, different parenting roles, disclosure of sexual orientation and on occasion discrimination). Therefore, research must appropriately represent these families, rather than relying on the assumption of heteronormative families. In addition, interventions must be inclusive and meet the needs of a wide range and variety of individuals.

A sub-theme identified in the analysis *'short comings of the online format'* highlighted that in this study, participants found it difficult to form lasting bonds with other participants due to the online format. Quotes from Isla and Olivia highlight the difficulties experienced with partaking in the group online including not being able to read other participants responses or facial reactions. Unfortunately, the platform used for the groups, 'Microsoft Teams', did not allow all participants to see one another during the presentation aspect of the intervention. It is possible that an alternative platform may be better suited for running online groups and may have at least partially reduced some of the limitations felt by participants in this study. An additional factor which may have impacted the development of bonds between participants may have been that the group was a 'one off', compared to other antenatal groups and classes. Furthermore, studies have found that certain aspects are important for antenatal groups to develop into supportive groups in the postnatal period (Nolan et al., 2012). Nolan and colleagues (2012) reported that action is needed by the group facilitator to open the lines of communication between women through sharing each other's contact details and through creating a space which allows for frequent discussions and meetings. Furthermore, Nolan and colleagues (2012) found that whilst antenatal and postnatal groups are helpful in building friendships, friendships may not be formed if the shared experience of pregnancy is not matched with a similarity in lifestyle and background (Price et al., 2018).

The research highlights that face-to-face connections with other new mothers are essential in new mothers' perinatal experiences (Price et al., 2018; Nolan et al., 2012; Strange et al., 2014; Wilkins, 2006). Researchers have identified that mother and baby groups include multiple benefits such as allowing mothers to build both empathetic and supportive networks and improved baby and self-care (Nolan et al., 2012; Strange et al., 2014). Whilst this group offered this space and women reportedly benefitted from talking to other new mothers-to-be, it is possible that the method of delivery (i.e., being online) and its brief nature prevented women from creating these lasting strong and supportive networks. Even though the group was a one off, had women met in person they may have been able to develop stronger and lasting connections. However, some women may prefer to access the group online and may feel that they have already developed a new friendship base in other antenatal classes they have attended. Creating further relationships in this group may not have been a priority for some participants. Refinements of this intervention, may include providing both online and in-person groups, to offer participants the choice of which they would like to attend.

Overall, the finding supports studies that have been conducted showing the benefits and positive aspects of peer support groups in pregnancy, where safe spaces are allowed for women to explore their feelings (both positive and negative) of pregnancy and the

anticipation of a new-born. However, it is important to note that participants in this study self-selected and therefore the results may not be generalisable to all women. It may be that only women who like to share their experiences opted to take part in the study and those who may not like to do so did not. Therefore, the brief "IPT-informed" intervention may not be accessible or acceptable to other women in the perinatal period who did not self-select for this study.

Changes to Interpersonal Relationships:

This key theme and sub-themes highlight important aspects around changes to mothers' social networks following the brief "IPT-informed" intervention. Importantly, participants enjoyed completing the 'interpersonal inventory' exercise in the group. The sub-theme *'I think about the circles quite regularly'* highlights that participants' in the study reflected on their inventories regularly following the group stage of the intervention. Participants particularly spent time considering which relationships had grown stronger and which had grown further apart since the birth of their babies. Mostly, participants spoke about the fact that their relationships had grown stronger with a few key relationships in their lives, this was reflected in the sub-theme, *'strengthening relationships'*. Georgia and Rosie's quotes highlight that they felt their closest friends and family really supported them in the postnatal period, even in the middle of a global pandemic. Similarly, this was felt by other participants within the group. This is essential as a study conducted by Darvill and colleagues (2010) found that a lack of social support led to women feeling a greater sense of vulnerability at different points in their transition to new motherhood. Conversely, a sense of feeling supported by others allowed women to feel more confident in their perceptions of their new roles (Darvill et al., 2010).

When reflecting on changes in their interpersonal inventories, mothers' also spoke about the changes to their romantic relationships with their partners in the sub-theme *'It's like a bomb goes off in the middle of your life'*. All participants who had a partner felt very supported by them. This is essential as partner support is critical in supporting a woman's psychological well-being during pregnancy and in the postpartum period (Raymond, 2009). However, participants noted that the romantic and social aspect of their relationship had completely changed since the birth of their babies. This change in romantic relationships has documented within the literature (Doss & Rhoades, 2016). For example, Social Learning Theory suggests that a change in roles and demands explains the shift and decline in relationship functioning (Doss & Rhoades, 2016). Other moderators of change in partner relationships include the attachment style of the partner, mental health during pregnancy,

relationship functioning, planned nature of the pregnancy and infant characteristics (Doss & Rhoades, 2016).

A further sub-theme identified was *'a sense of loss'* which was related to the COVID-19 pandemic. Women in the study spoke about feeling a sense of loss around not being able to celebrate the birth of their babies with close friends and family. They often reflected on how different their experiences may have been if they had not given birth during a pandemic. This is a unique finding of the study and highlights that the COVID-19 pandemic has had a negative impact on perinatal women's abilities to socialise with others in a time where it is critical for them to do so for support and their mental wellbeing. This finding also suggests that although participants may have planned to strengthen and work on relationships through completing their interpersonal inventories, the restrictions associated with COVID-19 may have prevented them from doing so.

Finally, participants spoke about how they found it difficult to create change in their interpersonal relationships in the sub-theme "lack of time and emotional resource". Participants noted that they found themselves so busy with their new-born babies that it felt very challenging to work on other relationships and to strengthen them. This highlights that participants ability to improve and strengthen relationships as a result of the "IPT-informed" intervention after birth appeared to be limited and future developments should consider addressing this barrier.

Limitations:

There are several limitations to the above study, most of which have already been highlighted in the process evaluation, refinements, and suggestions for future trials section. The study is uncontrolled meaning that it is impossible to detect whether the "IPT-informed" intervention was responsible for the deterioration in four participants EPDS scores. Secondly, the study contains a relatively small sample size. This is partially due to difficulty trying to recruit during a global pandemic. Whilst this feasibility study did not aim to determine the efficacy of the group and individual follow-up intervention, the lack of participants meant that preliminary statistical analysis could not be completed.

This piece of research took place in the United Kingdom during the COVID-19 pandemic. It is important to note that the follow-up's took place from July to December 2020, where the rules and regulations surrounding COVID-19 were frequently changing. Some of the women who received the follow-up session and interview in earlier stages were subject to fewer restrictions than those who were followed-up in the later months during regional lockdowns. As mostly all women were experiencing different regulations during their follow-up session and interviews, this would have likely been represented in their mood and

responses during the session and when completing their questionnaires, again limiting the generalisability of the study.

Clinical implications:

All participants reported that they enjoyed taking part in the group and found the content interesting and valuable to their mental health in the postnatal period. However, a further pilot/feasibility trial which address the limitations and refinements noted above, is required to decisively conclude whether this brief "IPT-informed" intervention is feasible, accessible, and acceptable for a range of women in the perinatal period.

Regarding clinical implications, this piece of research has highlighted a gap in current antenatal and postnatal care, in that women are very infrequently provided with the space to talk about their own emotional well-being during this time. In addition, the content of this brief "IPT-informed" intervention is not covered anywhere else in antenatal and postnatal care in the UK.

As noted above, many women with perinatal mood disorders do not seek treatment or receive help. The barriers associated with this have been detailed above and mostly focus on a lack of education and confidence in GP's, Health Visitors and Midwives in identifying perinatal mood disorders. Thus, there is a gap in practice regarding not only educating mothers-to-be on the signs and symptoms of PND but also in educating various health care practitioners (HCPs). In practice, Clinical Psychologists could either provide training to HCP's regarding perinatal mood disorders or they could train them to deliver this intervention and provide on-going supervision of the groups and experience. This would help to develop HCP's skills and knowledge and would hopefully allow women with perinatal mood disorders to feel more confident in discussing these concerns with their HCP. A future RCT could compare treatment as usual, enhanced HCP psychoeducation regarding perinatal mood disorders and HCP's offering this intervention.

Conclusions:

Whilst the twelve women who took part in this study reported that they benefitted from and enjoyed the intervention, due to several limitations and refinements identified throughout the feasibility trial process, we are unable to conclude whether this intervention is accessible and acceptable for women in the perinatal period. A further pilot/feasibility study is required to address some of the concerns regarding recruitment (sample size and diversity), implementation and fidelity of the intervention and to assess the accessibility and

acceptability of this intervention for the wider perinatal population. However, to the best of our knowledge, the content of this brief “IPT-informed” intervention is not covered in any other antenatal or postnatal group, thus highlighting a gap in the current provision of antenatal and postnatal care in the UK. In general, participants did not detail any adverse experiences as a result of taking part in the intervention and scores on the EPDS and MSPSS remained stable from group to individual follow-up. Although this was not an aim of the study, due to the small sample size and lack of a control condition, there is a limit to the conclusions we can draw about the effectiveness of the intervention on reducing symptoms of depression and increasing perceived social support in pregnant first-time mothers. A further pilot/feasibility study addressing the limitations and refinements noted above would also assist in identifying whether a larger scale RCT would be beneficial in assessing the efficacy of the intervention in preventing PND in the postnatal period.

References:

Arendell, T. (2000). Conceiving and investigating motherhood: The decade's scholarship. *Journal of marriage and family*, *62*(4), 1192-1207.

Ayers, S., & Shakespeare, J. (2015). Should perinatal mental health be everyone's business?. *Primary Health Care Research & Development*, *16*(4), 323-325.

Barclay, L., Everitt, L., Rogan, F., Schmied, V., & Wyllie, A. (1997). Becoming a mother—an analysis of women's experience of early motherhood. *Journal of advanced nursing*, *25*(4), 719-728.

Bauer, A., Parsonage, M., Knapp, M., Iemmi, V., Adelaja, B., & Hogg, S. (2014). The costs of perinatal mental health problems. *London: Centre for Mental Health and London School of Economics*.

Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative research*, *15*(2), 219-234.

Bledsoe, S. E., & Grote, N. K. (2006). Treating depression during pregnancy and the postpartum: a preliminary meta-analysis. *Research on Social Work Practice*, *16*(2), 109-120.

Bowen, A., Bowen, R., Butt, P., Rahman, K., & Muhajarine, N. (2012). Patterns of depression and treatment in pregnant and postpartum women. *The Canadian Journal of Psychiatry,* 57(3), 161-167.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Bright, K. S., Charrois, E. M., Mughal, M. K., Wajid, A., McNeil, D., Stuart, S., ... & Kingston, D. (2019). Interpersonal psychotherapy for perinatal women: a systematic review and meta-analysis protocol. *Systematic reviews*, *8*(1), 1-9.

Brooks, S. K., Weston, D., & Greenberg, N. (2020). Psychological impact of infectious disease outbreaks on pregnant women: Rapid evidence review. *Public Health*, *189*, 26-36.

Caparros-Gonzalez, R. A., & Alderdice, F. (2020). The COVID-19 pandemic and perinatal mental health. *Journal of Reproductive and Infant Psychology*, *38*(3), 223-225.

Choi, P., Henshaw, C., Baker, S., & Tree, J. (2005). Supermum, superwife, supereverything: performing femininity in the transition to motherhood. *Journal of reproductive and infant psychology*, *23*(2), 167-180.

Claridge, A. M. (2014). Efficacy of systemically oriented psychotherapies in the treatment of perinatal depression: a meta-analysis. *Archives of women's mental health*, *17*(1), 3-15.

Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression: development of the 10-item Edinburgh Postnatal Depression Scale. *The British journal of psychiatry*, *150*(6), 782-786.

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *Bmj*, *337*.

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2013). Developing and evaluating complex interventions: the new Medical Research Council guidance.

Darvill, R., Skirton, H., & Farrand, P. (2010). Psychological factors that impact on women's experiences of first-time motherhood: a qualitative study of the transition. *Midwifery*, *26*(3), 357-366.

Darwin, Z., & Greenfield, M. (2019). Mothers and others: The invisibility of LGBTQ people in reproductive and infant psychology. *Journal of Reproductive and Infant Psychology*, 37:4, 341-343

Deave, T., Johnson, D., & Ingram, J. (2008). Transition to parenthood: the needs of parents in pregnancy and early parenthood. *BMC pregnancy and childbirth*, *8*(1), 1-11.

Dodgson, J. E. (2019). Reflexivity in qualitative research. *Journal of Human Lactation*, *35*(2), 220-222.

Doss, B. D., & Rhoades, G. K. (2017). The transition to parenthood: Impact on couples' romantic relationships. *Current Opinion in Psychology*, *13*, 25-28.

Figueiredo, B., & Conde, A. (2011). Anxiety and depression in women and men from early pregnancy to 3-months postpartum. *Archives of women's mental health*, *14*(3), 247-255.

Ford, E., Roomi, H., Hugh, H., & van Marwijk, H. (2019). Understanding barriers to women seeking and receiving help for perinatal mental health problems in UK general practice: development of a questionnaire. *Primary health care research & development*, *20*.

Gao, L. L., Chan, S. W. C., & Sun, K. (2012). Effects of an interpersonal-psychotherapy-oriented childbirth education programme for Chinese first-time childbearing women at 3-month follow up: randomised controlled trial. *International journal of nursing studies*, *49*(3), 274-281.

Gao, L. L., Chan, S. W. C., Li, X., Chen, S., & Hao, Y. (2010). Evaluation of an interpersonal-psychotherapy-oriented childbirth education programme for Chinese first-time childbearing women: a randomised controlled trial. *International journal of nursing studies*, *47*(10), 1208-1216.

Gao, L. L., Xie, W., Yang, X., & Chan, S. W. C. (2015). Effects of an interpersonal-psychotherapy-oriented postnatal programme for Chinese first-time mothers: A randomized controlled trial. *International journal of nursing studies*, *52*(1), 22-29.

Graham, P., Irvine Fitzpatrick, L., Bowyer, D., Black, S., Cooke, S., Wilson, H., Williams. S. (2019). Delivery of Interpersonal Psychotherapy in Scotland: The Prospect Model. *DCP-S Review: The British Psychological Society*; 20, 15-20.

Grigoriadis, S., & Ravitz, P. (2007). An approach to interpersonal psychotherapy for postpartum depression: focusing on interpersonal changes. *Canadian Family Physician*, *53*(9), 1469-1475.

Henderson, A. C., Harmon, S. M., & Houser, J. (2010). A new state of surveillance? Applying Michel Foucault to modern motherhood. *Surveillance & Society*, *7*(3/4), 231-247.

Hessami, K., Romanelli, C., Chiurazzi, M., & Cozzolino, M. (2020). COVID-19 pandemic and maternal mental health: a systematic review and meta-analysis. *The Journal of Maternal-Fetal & Neonatal Medicine*, 1-8.

Huppatz, K. (2018). 'What Have I Done?': An Exploration of the Ambivalent, Unimaginable Emotions of New Motherhood. In *Paths to Parenthood* (pp. 145-164). Palgrave Macmillan, Singapore.

Khan, L. (2015). Falling Through the Gaps. *London: Royal College of General Practitioners and Centre for Mental Health*.

Klerman, G. L., Weissman, M. M., Rounsaville, B. J., & Chevron, E. S. (1984). Interpersonal psychotherapy of depression. 1984. *Northvale, NJ: Jason Aronson*.

Lara, M. A., Navarrete, L., Nieto, L., Martín, J. P. B., Navarro, J. L., & Lara-Tapia, H. (2015). Prevalence and incidence of perinatal depression and depressive symptoms among Mexican women. *Journal of affective disorders*, *175*, 18-24.

Liss, M., Schiffrin, H. H., & Rizzo, K. M. (2013). Maternal guilt and shame: The role of self-discrepancy and fear of negative evaluation. *Journal of Child and Family Studies*, *22*(8), 1112-1119.

MacGregor, R., Hillman, S., & Bick, D. (2020). Falling through the cracks: the impact of COVID-19 on postnatal care in primary care.

Marshall, H. (1991). The social construction of motherhood: An analysis of childcare and parenting manuals.

Matvienko-Sikar, K., Meedya, S., & Ravaldi, C. (2020). Perinatal mental health during the COVID-19 pandemic. *Women and birth : journal of the Australian College of Midwives*, *33*(4), 309–310.

Mauthner, N. S. (1999). " Feeling low and feeling really bad about feeling low": Women's experiences of motherhood and postpartum depression. *Canadian Psychology/Psychologie Canadienne*, *40*(2), 143.

McCabe-Beane, J. E., Segre, L. S., Perkhounkova, Y., Stuart, S., & O'Hara, M. W. (2016). The identification of severity ranges for the Edinburgh Postnatal Depression Scale. *Journal of Reproductive and Infant Psychology*, *34*(3), 293-303.

McLeish, J., & Redshaw, M. (2017). Mothers' accounts of the impact on emotional wellbeing of organised peer support in pregnancy and early parenthood: a qualitative study. *BMC pregnancy and childbirth*, *17*(1), 1-14.

Mead, S., & MacNeil, C. (2006). Peer support: What makes it unique. *International Journal of Psychosocial Rehabilitation*, *10*(2), 29-37.

Meeussen, L., & Van Laar, C. (2018). Feeling pressure to be a perfect mother relates to parental burnout and career ambitions. *Frontiers in psychology*, *9*, 2113

Milgrom, J., Gemmill, A. W., Bilszta, J. L., Hayes, B., Barnett, B., Brooks, J., ... & Buist, A. (2008). Antenatal risk factors for postnatal depression: a large prospective study. *Journal of affective disorders*, *108*(1-2), 147-157.

Moore, G., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., ... & Baird, J. (2014). Process evaluation of complex interventions. *UK medical Research Council (MRC) guidance*, 1-133.

National Collaborating Centre for Women's and Children's Health (UK). (2007). *Intrapartum Care: Care of Healthy Women and Their Babies During Childbirth*. RCOG Press.

National Institute for Health and Care Excellence. (2019). Intrapartum care for healthy women and babies [NICE Guideline No. CG190]. Available from: https://www.nice.org.uk/guidance/cg190 (Accessed on: 18th February 2021).

Nolan, M. L., Mason, V., Snow, S., Messenger, W., Catling, J., & Upton, P. (2012). Making friends at antenatal classes: A qualitative exploration of friendship across the transition to motherhood. *The Journal of perinatal education*, *21*(3), 178-185.

Patel, V., DeSouza, N., & Rodrigues, M. (2003). Postnatal depression and infant growth and development in low income countries: a cohort study from Goa, India. *Archives of disease in childhood*, *88*(1), 34-37.

Price, S. L., Aston, M., Monaghan, J., Sim, M., Tomblin Murphy, G., Etowa, J., ... & Little, V. (2018). Maternal knowing and social networks: understanding first-time mothers' search for information and support through online and offline social networks. *Qualitative health research*, *28*(10), 1552-1563.

Raymond, J. E. (2009). 'Creating a safety net': Women's experiences of antenatal depression and their identification of helpful community support and services during pregnancy. *Midwifery*, *25*(1), 39-49.

Shelton, N., & Johnson, S. (2006). 'I think motherhood for me was a bit like a double-edged sword': the narratives of older mothers. *Journal of community & applied social psychology*, *16*(4), 316-330.

Sit, D. K., & Wisner, K. L. (2009). The identification of postpartum depression. *Clinical obstetrics and gynecology*, *52*(3), 456.

Smith, M. S., Lawrence, V., Sadler, E., & Easter, A. (2019). Barriers to accessing mental health services for women with perinatal mental illness: systematic review and meta-synthesis of qualitative studies in the UK. *BMJ open*, *9*(1), e024803.

Sockol, L. E. (2018). A systematic review and meta-analysis of interpersonal psychotherapy for perinatal women. *Journal of affective disorders*, *232*, 316-328.

Sockol, L. E., Epperson, C. N., & Barber, J. P. (2011). A meta-analysis of treatments for perinatal depression. *Clinical psychology review*, *31*(5), 839-849.

Steardo Jr, L., Caivano, V., Sampogna, G., Di Cerbo, A., Fico, G., Zinno, F., ... & Fiorillo, A. (2019). Psychoeducational intervention for perinatal depression: study protocol of a randomized controlled trial. *Frontiers in psychiatry*, *10*, 55.

Strange, C., Fisher, C., Howat, P., & Wood, L. (2014). Fostering supportive community connections through mothers' groups and playgroups. *Journal of Advanced Nursing*, *70*(12), 2835-2846.

Stuart, S. (2012). Interpersonal psychotherapy for postpartum depression. *Clinical psychology & psychotherapy*, *19*(2), 134-140.

Stuart, S., & Robertson, M. (2012). *Interpersonal psychotherapy 2E a clinician's guide*. CRC Press.

Tammentie, T., Paavilainen, E., Åstedt-Kurki, P., & Tarkka, M. T. (2004). Family dynamics of postnatally depressed mothers–discrepancy between expectations and reality. *Journal of Clinical Nursing*, *13*(1), 65-74.

Topalidou, A., Thomson, G., & Downe, S. (2020). COVID-19 and maternal mental health: Are we getting the balance right?. *MedRxiv*.

Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... & Willer, R. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature human behaviour*, *4*(5), 460-471.

van Ravesteyn, L. M., Lambregtse-van den Berg, M. P., Hoogendijk, W. J., & Kamperman, A. M. (2017). Interventions to treat mental disorders during pregnancy: a systematic review and multiple treatment meta-analysis. *PLoS One*, *12*(3), e0173397.

Werner, E., Miller, M., Osborne, L. M., Kuzava, S., & Monk, C. (2015). Preventing postpartum depression: review and recommendations. *Archives of women's mental health*, *18*(1), 41-60.

Wilkins, C. (2006). A qualitative study exploring the support needs of first-time mothers on their journey towards intuitive parenting. *Midwifery*, *22*(2), 169-180.

Zanardo, V., Manghina, V., Giliberti, L., Vettore, M., Severino, L., & Straface, G. (2020). Psychological impact of COVID-19 quarantine measures in northeastern Italy on mothers in the immediate postpartum period. *International Journal of Gynecology & Obstetrics*, *150*(2), 184-188.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, *52*(1), 30-41.

Part 3: Critical appraisal

3334 Words

Introduction:

This critical appraisal will include my own reflections on the process of completing this piece of research. This will include my motivations for completing the research including my own beliefs, values, and expectations and how these changed over the course of the research. This critical appraisal will also highlight my reflections on the impact of the COVID-19 pandemic on the research and my reflections on the findings. It will conclude with my reflections on the potential implications of the findings and how these may be applied in/ to clinical practice.

Reflections on the subject area

My motivation and desire to complete this project started a long time before I started clinical training. Whilst I did not have any personal or family experience in the area, my first Assistant Psychologist post was in Perinatal Mental Health. While the post was only for six months, it sparked a passion and interest in the field for me. I went onto work in different areas before training but when I began a post working on developing IPT for different populations, I jumped at the chance to develop a brief model for the perinatal population. My motivation for developing this intervention was based on my experience clinically, alongside a noticeable gap in the research focusing on brief models in the perinatal period for both the general and at-risk population (Sockol, 2018). With my team's assistance, we reviewed the literature on IPT used in the perinatal period and found that the model appears to be highly applicable, acceptable, and effective for this population (Stuart, 2012; Sockol, 2018). We then created a brief model that we felt incorporated the essential aspects of IPT (with a specific focus on social support and anticipating transitions) and that would be accessible and appropriate for the perinatal period. I then left my assistant post to start clinical training at UCL but kept in touch with my team who kindly allowed me to use the project as my chosen topic for my thesis.

I felt very strongly about trialling the intervention as my doctorate thesis project, however I had slight hesitations as to whether I could really tackle a project that required so much work. However, with a very supportive internal and external supervisor in place, I decided to take the challenge on. During the initial stages of the project, I became very aware of my own position in the research. This was mostly in relation to my identify. Firstly, as a Heterosexual, White British female completing research at a doctorate level. I was very aware that my life experiences and my expectations might not be the same as those of the

participants in the research. I tried to hold this in mind throughout the process, taking note of anytime in which an assumption arose and challenging it, through keeping a research diary. Secondly, I was acutely aware that I was conducting this research as someone who has not experienced pregnancy or childbirth. This manifested itself in worries and anxieties that participants in the research might somehow be aware of this and may think *'what does she know?'* or *'how can she give any advice if she has not been through the experience herself'*. I managed these concerns through keeping track of them in a diary and holding the position that I have the research, evidence and clinical experience to provide something of real value and worth to participants. I dreaded the question *'do you have kids?'* which I felt participants might ask, but they never did. Furthermore, their reflections and comments on their experience of the group and individual follow-up suggest that, although this was something of which I was acutely aware of, it did not seem to concern the participants themselves. This then brought around concerns about 'power' in relation to my position as a researcher and as a developer of this study. Ultimately, I wanted this project to be collaborative and wanted to minimise the 'researcher-participant' power dynamic as much as is possible.

Reflections on the design of the study:

Initially when thinking together with my supervisor and colleagues about the design of this study, I had thought to use a multiple case study design. Our initial aims were to identify whether the intervention could prevent the development of PND in new mothers and whether it could increase perceived social support for participants. However, after submitting my research proposal, there were concerns about the timeframe I had in which to complete this research and the fact that I did not have a control group. Therefore, a feasibility study exploring the accessibility and acceptability of the brief "IPT-informed" intervention, was identified for the design as it felt like an appropriate first stage for this piece of research. Reflecting on this, a multiple case study design may have been better suited this project and the analysis, as it would have allowed us to focus on patient outcomes in more depth. It may have also provided us with further information regarding the process evaluation and helped to further evaluate the feasibility, acceptability, and accessibility of this intervention. A paper conducted by Morley and colleagues (2017) highlights the steps in which a multiple case study can be conducted without the need for control groups, which may have been appropriate for this piece of research. This design may be something for future research to consider in order to evaluate the impact of the brief "IPT-informed" intervention in the perinatal period.

Reflections on the impact of COVID-19

The COVID-19 pandemic caused disruptions to the project. Fortunately, most of the changes included shifting the project to being delivered online. As a task, this was relatively easy to accomplish. However, emotionally this was a very difficult aspect of the project for me. This shift happened at this time everything had moved to being online including, my clinical work, my socialisation with friends and family, university teaching and my thesis project. Thus, I was experiencing my own significant life transitions during this time whilst trying to also complete a project which was also interested in life transitions. Whilst I was thankful for the existence of online platforms, which allowed for my studies, clinical work, and social communication to continue, I was also suffering from something now termed 'Zoom fatigue' (Wiederhold et al., 2020). 'Zoom fatigue' is a term researchers and journalists have coined to include feelings of tiredness, anxiety and worry as a result of overusing virtual videoconferencing platforms (Wiederhold et al., 2020). I was feeling exhausted after each online video call and so the thought of shifting my research to an online platform then brought about new expectations and thoughts about the research (as shown in the diary entry below):

"We made the decision to switch the research to being delivered online due to the pandemic. I have mixed feelings about this. Firstly, I am grateful that my research project can be easily moved to being delivered online and that in general, this research may be very timely for pregnant first-time mums given everything that is going on. However, I can't help but feel a little disappointed. I was so looking forward to conducting this research in person and being 'in the room' with participants. I wonder whether participants will enjoy this format or whether they will find it tiring too. Everything is online at the moment and I am finding it exhausting, so I wonder how participants will find it."

15th April 2020

In addition, UCL ethics requirements at this time meant that I had to run the groups using a platform that I was not familiar with and that did not lend itself well to a group format. This new format brought about a number of weaknesses and strengths for the study. Firstly, it meant that recruitment was limited only to women who used social media (Twitter & Instagram) or who were already connected to certain pregnancy groups such as the National Childbirth Trust (NCT) or the Positive Birth Movement (PBM). Furthermore, access to the group depended on access to a computer, Wi-Fi and on women feeling confident in using online platforms to discuss and talk about relatively sensitive matters. In one group, I was not able to see any of the participants' faces during the presentation part of the group. This

was extremely difficult as I relied on verbal feedback from participants and was unable to "read the room" and pick up on non-verbal cues. Eventually, I decided to stop the presentation to allow myself and participants to see one another. I remember feeling incredibly frustrated following this group and struggled to gauge how the participants had found the group, based on the lack of visual feedback. However, a relative strength of the study was that participants were able to take part from areas from across the UK, rather than having to be relatively local to London to attend the groups in person. This is likely to have increased its accessibility for pregnant first-time mothers.

Participants also felt the impact of the group being delivered online highlighted in the key theme sub-theme, *'searching for connection'*. I encouraged participants to join the session using a computer or a tablet. However, a couple of participants did not have access to these devices so had to join using their mobile phones. When using a mobile phone, the *'Microsoft Teams'* software only allows you to see one person's face at a time. Therefore, I wonder about whether these participants would have felt the full benefits of a group intervention. They could not see other participants or observe their visual feedback, which is essential for validation when sharing sensitive information in groups (Bright et al., 2019).

Reflections on the findings

My initial expectations when I set out to complete this research was that all participants would find the transition to motherhood more difficult than they had anticipated. I also suspected that social networks for all mothers would change and worsen as a result of the birth of their new-borns. As the research continued my expectations changed drastically as a result of the COVID-19 pandemic. When the pandemic hit, I believed that it would negatively impact women in the perinatal period, reducing their access to social support networks and increasing distress. Discussions around the COVID-19 pandemic in both the groups and the individual follow-up were unavoidable and were extremely important. One of the sub-themes *'a sense of loss due to COVID-19'* highlighted that mothers' who took part in this project did feel a sense of loss in many ways as a result of the pandemic. This was apparent as I spoke to women in their follow-up interviews, some of whom were very upset that their family had yet to meet their new-born baby due to travel restrictions (again restricting social support networks). However, another sub-theme that was identified in the analysis was *'strengthening relationships'*, where women spoke about how some of their relationships had become closer and stronger as a result of the birth of their baby. This was a finding I was not expecting to find, especially during a global pandemic. An unforeseen impact on my findings was the change in regional restrictions in the UK. Some mothers who I was following up with

were living in relatively 'normal' circumstances where they could socialise with others, whereas other mothers were in strict lockdowns during the follow-up interviews. Therefore, uniquely, this study provided a variety of responses at different stages/times for women in the pandemic. I was surprised by the sub-theme *'Easing Transitions: The Impact of COVID-19'*. It was highly interesting to me that the pandemic had helped ease the transition to new motherhood for many participants. I had been tending to focus on the negative consequences of the pandemic and so to find a sub-theme which was in some ways quite positive was surprising for me. This highlights an overall difficulty that I experienced in that I found it difficult during the research to put my own feelings around the pandemic to one side. During my research, I was feeling the strain of isolation, social distancing and staying indoors. I wanted to be sure that my own feelings and views on the pandemic did not influence the analysis. I did so through reflecting in my journal around my feelings around the pandemic.

Today feels really difficult. I miss my parents, friends and just my 'normal life'. Conducting my research during this time is especially hard. There is nothing to look forward to, to push me through. There are no 'mini breaks' to break-up the day like socialising with friends or playing hockey. I can go for a run or a walk, but that feels lonely, and I have done that every day for the past few months and it is getting boring. I am struggling to find the motivation for small tasks, and tasks I do complete are taking me a lot longer than usual. I know that I am extremely fortunate to have my health and my family safe and well. But it doesn't change the fact that doing a thesis in the middle of the pandemic is hard and not what I expected!

10th February 2021

Another aspect of the research that I had not expected to find was the differences in experiences of participants from heterosexual relationships, same-sex relationships, and the participant who had chosen to be a single mother. A blind spot for me in the earlier stages of the research was a lack of understanding around how the method of conception (e.g., 'conception without medical intervention' vs donor sperm/egg) may potentially impact on the transition to motherhood. When conducting the individual follow-up's, mostly participants from heterosexual relationships reported more difficulties in their transition to motherhood. However, the participant from a same-sex relationship and the single mother participant spoke about how they had been planning their babies for a long period of time and therefore did not feel as impacted by the transition to motherhood. When I began this research, I did not consider that the process would be quite so different for lesbian women and solo parents. For example, lesbian couples experience unique difficulties even in the early stages in choosing who to designate as the biological mother (Chabot & Ames, 2004) and must

consider options for their method of conception (Steele & Straatman, 2006). These are aspects which most fertile heterosexual couples do not need to consider when deciding to conceive (Steele & Straatman, 2006). Interestingly, this may be a systemic blind spot. Initially when I was completing this project, I wanted to conduct a systematic review on the experiences of same-sex couples in routine maternity care and perinatal mental health. However, there was a lack of literature in the area meaning that I was unable to do so. This is especially interesting given the research has found that compared to heterosexual women, several studies have shown a greater prevalence of depression amongst lesbians (Maccio & Pangburn, 2011). Therefore, this might be an area for further investigation in studies in the future.

Reflections on the potential impact of this research (academic and clinical):

Academic:

As highlighted in the empirical paper, this feasibility study has identified a number of refinements which are required in order to further assess the accessibility and acceptability of the brief "IPT-informed" intervention. This piece of research feels like an important first step in evaluating the accessibility of the intervention, however identifying so many barriers and refinements did feel slightly disappointing. Through completing the 'process evaluation', I identified the importance of continuously checking for blind spots as a researcher, which is something I had been careful to follow during the qualitative aspect of this research. I had been so eager for the intervention to be a success that I perhaps did not initially pay attention to some of the shortcomings of the research. That has been a learning curve for me and is something that I hope I will take with me into future pieces of research. This piece of research provides a basis for a future pilot/ feasibility study to make refinements to the intervention and to further evaluate the accessibility and acceptability of the intervention for women in the perinatal period.

Future research would benefit from the following refinements based on the limitations of this study:

Reach, recruitment, sample:

- Consider meeting with experts-by-experience to gather a more in-depth understanding of what would be beneficial to cover within the group.

- Consider meeting with individuals from ethnic and vulnerable groups, whose voices were lacking in the current research, to identify any barriers to engagement and to rectify these.
- Advertise the group more widely, in different areas where vulnerable women may access more readily to ensure the intervention reaches those who may benefit most.
- Enquire further about reasons why individuals may not want to take part in the intervention (if they decline to take part after reading more information).

Implementation/ Fidelity:

- Ensure the time allocated for the groups allows for the 'old/new' role exercise to be completed. This may include altering the content of the group and removing some of the less 'practical' elements such as the background and theory of IPT.
- Ensure that the researcher is trained in IPT and is offered on-going supervision in IPT to ensure fidelity to the IPT model.
- Separate the individual follow-up session and the semi-structured interview. Ensure that a separate researcher conducts the semi-structured interview to allow participants to more freely share both negative and positive experiences.
- Consider using a multiple case study design for future research.
- Continue to offer the group as a mother's only space.
- Continue to have a strong focus on mental health in the perinatal period.
- Continue to offer the interpersonal inventory exercise and have a focus on social support.
- Dependent on the context of COVID-19, perhaps tailor discussions around transitions to include the pandemic and possible early transitions for new mothers.
- Consider the differences in the transition for mothers who have conceived 'naturally' and those who have conceived using IVF.
- Consider offering both online and in-person groups and allow participants to decide which they'd prefer during this period.
- Allow for participants to communicate following the group by setting up a WhatsApp group (should participants consent to this).
- Consider with participants in the group/ individual follow-up the barriers that might get in the way of them making changes in their interpersonal lives (e.g., COVID-19 restrictions or a lack of time/ emotional resource).

Clinical:

Despite the limitations and refinements stated above, an important finding within the study was the key theme, *'This is about you, you are important'* which included the sub-theme *'the importance of mothers' mental health'*. This finding was expected, following my experience as an Assistant Psychologist and latterly my experience on placement during clinical training in Perinatal Mental Health. However, I did not expect so many of the participants to feel this way and for the finding to be so universal amongst participants. Women in this study felt unheard and unimportant. They noticed a serious lack of care for and attention to their wellbeing throughout their pregnancy and postnatal period. Through my experiences of working with women in these settings, it was clear that there was a lack of psychoeducation for mothers and for HCPs around Perinatal Mental Health disorders, including how to identify signs and symptoms and signposts for treatment. This finding is not isolated to this piece of research. It is one that has been highlighted as a larger systemic issue in the UK's provision of antenatal and postnatal care. A recent review conducted by MacGregor and colleagues (2020) stated, "we cannot afford, as a society, for these women and their children to fall 'through the cracks'".

A recent systematic review conducted by Smith and colleagues (2019) found that there are multiple barriers to women accessing mental health services which occur at four different levels: organisational (such as resource inadequacies), individual (stigma, lack of awareness), structural (unclear policies) and sociocultural (language and cultural barriers). At the individual level, a lack of awareness is cited as a key barrier to accessing appropriate care in the perinatal period (Smith et al., 2019). Frequently women reported concerns about disclosing Perinatal Mental Health disorders to others due to fear of being labelled a 'bad mum', not wanting to cause distress to other family members or for fear of not fulfilling the perceived societal expectations set for motherhood (Smith et al., 2019). Inadequate resources such as limited-service provision and staff shortages were reported by health care workers as a key organisational barrier in providing effective services for women in the perinatal period (Smith et al., 2019). Midwives have spoken about not having enough time to build-up rapport with women and worried about criticisms from other health care workers who may criticise them for being 'too slow' if they did take more time (Smith et al., 2019).

Prior to the COVID-19 pandemic, postnatal care varied across the country (MacGregor et al., 2020). In 2014, a report concluded that England's postnatal care for women was not 'fit for purpose' (MacGregor et al., 2020). Since this finding, further funding cuts have occurred (e.g., health visitor provision) which has caused greater fragmentation to services

(Macgregor et al., 2020). Furthermore in 2017, The Royal College of General Practitioners (RCGP) published a statement which reported that GPs are best placed to link-up care across services for women in the perinatal period, yet acknowledged that their current training was not adequate in relation to caring for maternity care within the community (MacGregor et al., 2020). At the time of the height of the pandemic, women who had given birth were sent home with HCP's able to offer only one/two home visits (MacGregor et al., 2020). In addition, guidance from the RCGP recommended that postnatal checks GP surgeries should be completed remotely, with the understanding that if there was an issue afterwards a face-to-face appointment could be added onto the infants first vaccination appointment (MacGregor et al., 2020). Reducing the number of face-to-face contacts due to the COVID-19 pandemic greatly increases the risk of HCPs failing to identifying early warning signs for mental health problems (MacGregor et al., 2020). In addition, severe consequences as a result of complications during pregnancy or birth which could lead to mortality may also be missed as a result of a lack of face-to-face appointments (MacGregor et al., 2020). A 'Better for Women' report conducted by The Royal College of Obstetricians and Gynaecologists' and released in December 2019 stated that GP's have a vital role to play in improving postnatal care and linking-up services involved in a woman's care.

The above research and findings from the study highlight a clear need for further training for HCP's in this area. This is an area where Clinical Psychologists can make a difference to the experience of antenatal and postnatal care through increasing HCP's skills through the following options:

1. Offering training for HCPS on risk factors for PND and on the signs and symptoms of common mental health difficulties in the perinatal period.
2. Offering training on screening for perinatal mood disorders (such as using the EPDS) and where to make an appropriate referral if concerns arise.

In addition, it may be that HCP's could be trained to deliver the brief IPT intervention as part of their routine care (if time is carved out for them to do so). Clinical Psychologists could then provide on-going supervision around the groups and any issues that arise. However, it may also be that the role of the Clinical Psychologist is invaluable in this intervention to be able to offer the session separately, where participants may be less likely to feel judged or that there are other motives, such as the well-being of the baby. Future trials could study and determine this.

Conclusion

Overall, I really enjoyed conducting this piece of research, however I definitely felt the strain of doing so in the middle of a global pandemic. Conducting this research required a great deal of patience and an open-minded approach. This was my first experience of developing, delivering, and analysing an intervention that has not been trialled before and that I helped to create. I found this to be challenging and at first, I believe I was slightly naïve to how much work was required. However, I believe this is a piece of work that I will look back on in years to come and be extremely proud of. The findings from this research will assist in creating some refinements to the model and guide future pilot/feasibility trials in addressing the questions regarding the accessibility and acceptability of this intervention. It is my hope that these will be appropriately addressed and that the results of a future feasibility trial will provide evidence for a larger scale RCT. My hope is that this research helps in reducing the barriers women face in accessing perinatal care and helps to reduce the stigma of perinatal mental illness. Furthermore, I hope that the research helps in highlighting the necessity for mother centred care during the perinatal period.

References:

Bright, K. S., Charrois, E. M., Mughal, M. K., Wajid, A., McNeil, D., Stuart, S., ... & Kingston, D. (2019). Interpersonal psychotherapy for perinatal women: a systematic review and meta-analysis protocol. *Systematic reviews*, *8*(1), 1-9.

Chabot, J. M., & Ames, B. D. (2004). “It wasn’t ‘let's get pregnant and go do it’:” Decision Making in Lesbian Couples Planning Motherhood via Donor Insemination. *Family Relations*, *53*(4), 348-356.

Maccio, E. M., & Pangburn, J. A. (2011). The case for investigating postpartum depression in lesbians and bisexual women. *Women's Health Issues*, *21*(3), 187-190.

MacGregor, R., Hillman, S., & Bick, D. (2020). Falling through the cracks: the impact of COVID-19 on postnatal care in primary care.

Morley, S., Masterson, C., & Main, C. J. (2017). Why single-case research? In *Single-Case Methods in Clinical Psychology* (pp. 1-18). Routledge.

Smith, M. S., Lawrence, V., Sadler, E., & Easter, A. (2019). Barriers to accessing mental health services for women with perinatal mental illness: systematic review and meta-synthesis of qualitative studies in the UK. *BMJ open*, *9*(1), e024803.

Sockol, L. E. (2018). A systematic review and meta-analysis of interpersonal psychotherapy for perinatal women. *Journal of affective disorders*, *232*, 316-328.

Steele, L.S., & Stratmann, H. (2006) Counselling lesbians about getting pregnant. *Canadian Family Physician*, 52, 605-11.

Stuart, S. (2012). Interpersonal psychotherapy for postpartum depression. *Clinical psychology & psychotherapy*, *19*(2), 134-140.

Wiederhold, B. K. (2020). Using social media to our advantage: alleviating anxiety during a pandemic. *Cyberpsychology, Behavior, and Social Networking*, *23*(4), 197-198.

Appendices

Appendix A

Online Advertisements

A GROUP FOR EXPECTANT NEW MOTHERS

ARE YOU:

- Pregnant for the first time and will be 6+ months in either May or July 2020?
- Interested in learning about the importance of social support and life transitions during this period?
- Interested in taking part in exciting new research to help improve support for new mothers?
- Willing to attend one 90 minute group delivered online and be contacted for an individual follow-up after the birth of your baby (either in your home, online or at UCL)?
- Looking to connect with other expectant mothers who are also interested in the above?

If you are interested in taking part in a new and exciting piece of research and would like more information, please email Holly at ***ucjuhmw@ucl.ac.uk***

RESEARCH PROJECT WITH UCL

Take part in an online group for pregnant first time mothers

Focused on the importance of social support and anticipating transitions to new motherhood.

Are you:

- Pregnant for the first time and will be 6+ months in May to July 2020?
- Interested in learning about the importance of social support and life transitions during this period?
- Willing to attend one 90-minute group held online and be contacted for an individual follow-up after the birth of your baby (either in your home, online or at UCL)?
- Looking to connect with other expectant mothers who are also interested in the above?

If so....register your interest and ask further questions on: mumologist.com/holly-research or email Holly at ucjuhmw@ucl.ac.uk

Appendix B

Participant Information Sheet & Consent Form

Patient Information Sheet:

Title of study: Feasibility study of a brief Interpersonal Psychotherapy (IPT) informed online group intervention for expectant and new mothers.

Department: University College London, Research Department of Clinical, Educational and Health Psychology.

Name and Contact details of the researcher: Holly Wilson, ucjuhmw@ucl.ac.uk

Name and contact details of the principal researcher: Katharine Alcock, k.alcock@ucl.ac.uk

You are being invited to take part in a research project. Before you decided if you'd like to take part, it is important for you to understand why the research is being done and what participation will involve. Please take the time to read the following information and carefully discuss it with others. If you wish, ask us if there is anything that is not clear or if you would like more information. Thank you for reading this.

What is the research project?

The research project is interested in exploring pregnant and new mothers experiences of attending an online group (using the video meeting app Microsoft Teams) focused on improving social support and the role transitions to motherhood. If you take part in the research project, it would involve attending **one 90 minute online group** for mothers who are **6 (+) months pregnant**. The group will be run by a **Trainee Clinical Psychologist from University College London** and closely **supervised by both internal and external Clinical Psychologist supervisors with knowledge and expertise in the field of perinatal mental health. If you decide to take part in the group you would be asked to complete two brief questionnaires, the Edinburgh Postnatal depression Scale (EPDS) and a measure of social support.**

The online group will focus on looking into who is around to provide you with social support during pregnancy and the birth (such as friends, family, colleagues etc). The group will also focus on thinking about the upcoming arrival of your baby and the changes that might occur once they arrive. There will be a chance for group discussions about these topics. In addition, the group will also help you identify the symptoms of postnatal depression.

Follow up:

If you take part in the online group mentioned above, you will be contacted around **2 months after birth**. This is so that the Trainee Clinical Psychologist can provide you with **a brief 60 minute individual online session.** The purpose of this session is to think about how you are coping with new motherhood and any challenges you might be having to adjusting to motherhood. The session continues to think about your social support since birth.

You will be asked to complete the **same 2 brief questionnaires** during the follow up

session. You will also be asked to answer a couple of brief questions about the online group you attended and your online individual session by the trainee clinical psychologist.

Both the group session and the individual session will be recorded using the record option on Microsoft Teams.

What is the Purpose of this project?

The brief Interpersonal Psychotherapy (IPT) online group intervention is part of a study conducted with University College London, aimed at:

- Educating mothers on the signs and symptoms of postnatal depression.
- Strengthening mothers' interpersonal relationships as to provide social support, as poor social support is a key risk factor in the development of postnatal depression.
- Anticipating the role transition which mothers are about to go through and any worries or concerns which arise from that.

Essentially and most importantly, we want to know about your experiences of the online group. We would like to know whether this group is easily accessible and acceptable for pregnant and new mothers.

Why have I been asked to participate?

You will have been invited to participate in this online group if you are in your second/third trimester of your pregnancy (6 months+), speak fluent English and are above 18 years of age.

You will not be eligible to take part in this study if you have any of the following apply to you: current substance abuse; concurrent medication/treatment for a mental health condition; active suicidal thoughts/plan; diagnosis of bipolar or personality disorder; active psychosis.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and will be asked to sign a consent form. You can withdraw at any time without giving a reason and without it affecting any benefits that you are entitled to. If you decide to withdraw you will be asked what you wish to happen to the data you have provided up that point.

Will I be recorded and how will the recorded media be used?

The recordings the online group session and individual session will be used only for analysis and for illustration in conference presentations. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings or know that they are linked to you.

What are the potential benefits and disadvantages of taking part?

We expect that the research will help you anticipate the role transition to motherhood and to think carefully about this, meaning that it doesn't come as a surprise/shock to you when it happens.

We expect that the research will help you feel more connected to others through both the online group setting but also through identifying social connections in your lives and

identifying ways in which to strengthen these connections.

We expect that the research will help educate you on the symptoms of postnatal depression and separating these symptoms from baby blues.

Whilst there are no direct disadvantages to taking part, it is possible that some of the conversations that occur could cause distress. If you are distressed during the online group or individual session, the researcher will be there to provide you with support. In addition, all participants will be provided with a list of further support resources and information on how to access further help with mental health services if required.

Will my taking part in this project be kept confidential?

All the information that we collect about you during the course of the research will be kept strictly confidential. There will be no personally identifiable data included in the presentation of the report.

Limits to confidentiality

Please note that confidentiality will be maintained as far as it is possible, however the researcher has a duty of care to report to the relevant authorities possible harm/danger to the participant or others. In addition, we cannot guarantee confidentiality in the online group session, however the researcher will address this with the group and ask all members to uphold confidentiality.

What will happen to the results of the research project?

The results of this feasibility study will be written up as part of the trainee clinical psychologist's doctorate thesis at UCL in September 2021. Those who take part in the study can request to read a copy of the final report.

There may the possibility that the results could be published in journals, professional publications and presentations may be made at relevant conferences. The results will be reported in such a way that protects the identity of those who have taken part.

Local data and privacy:

The categories of personal data used will be as follows:
Name, address, telephone number, age, gender, ethnicity, marital status, history of physical/mental illnesses and number of children.

Your personal data will be processed so long as it is required for the research project. We will destroy your personal data 3 months after completion of the intervention. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this, and will endeavor to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk. The lawful basis that would be used to process your *personal data* will be performance of a task in the public interest.

What if something goes wrong?

If you need to make a complaint regarding the group, individual session, handling of data or

the researcher you can contact the principal researcher of the project Kat Alcock (k.alcock@ucl.ac.uk). If you feel that your complaint has not been handled to your satisfaction you can contact the Chair of the UCL Research Ethics Committee (ethics@ucl.ac.uk).

Who can I contact if I have any further questions?

Please contact Holly Wilson if you have any further questions about the group intervention. holly.wilson.18@ucl.ac.uk

Thank you for reading this information sheet and for considering to take part in this research study. This information sheet is yours to keep and if you choose to take part in the study you will also be given a copy of your signed consent form to keep.

Consent Sheet

Title of study: Feasibility study of a brief Interpersonal Psychotherapy (IPT) informed online group intervention for expectant and new mothers.

Department: University College London, Research Department of Clinical, Educational and Health Psychology.

Name and Contact details of the researcher: Holly Wilson, ucjuhmw@ucl.ac.uk

Name and contact details of the principal researcher: Katharine Alcock, k.alcock@ucl.ac.uk

Name and contact details of the UCL Data Protection Officer:

This study has been approved by the UCL Research Ethics Committee: Project ID number Z6364106/2019/12/09

Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to take part. If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this consent form to keep and refer to at any time.

I confirm that I understand that by ticking/ initialling each box below I am consenting to this element of the study. I understand that it will be assumed that unticked/initialled boxes means that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element that I may be deemed ineligible for the study.

	Please initial boxes
1. I confirm that I have read and understand the Intervention Information Sheet for the study. I have also had the opportunity to consider the information and what will be expected of me. I have also had the opportunity to ask questions which have been answered to my satisfaction.	

2. I understand that I will be able to withdraw my data up to December 2020.	
3. I consent to participate in the study. I understand that my personal information (name, address, telephone number, age, marital status, ethnicity, physical/mental health history, answers to questionnaires and answers to a semi-structured interview) will be used for the purposes explained to me. I understand that according to data protection legislation, 'public task' will be the lawful basis for processing.	
4. I understand that all personal information will remain confidential and that all efforts will be made to ensure that I cannot be identified. I understand that data gathered in this study will be stored anonymously and securely. It will not be possible to identify me in any publications.	
5. I understand that my information may be subject to review by responsible individuals from the University for monitoring and audit processes.	
6. I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason. I understand that if I decide to withdraw, any personal data I have provided up to that point will be deleted unless I agree otherwise.	
7. I understand the potential risks of participating and the support that will be available to me should I become distressed during the course of the research.	
8. I understand the benefits of participating.	
9. I understand that the data will not be made available to any commercial organisations but is solely the responsibility of the researcher(s) undertaking the study,	
10. I understand that I will not benefit financially from this study or from any possible outcome it may result in in the future.	
11. I understand that the information I have submitted will be published as a report and I wish to receive a copy of it (YES / NO)	
12. I consent to the group session and my individual session taking part on Microsoft Teams (online video meeting forum) and being audio recorded. I understand that the recordings will be destroyed immediately following transcription.	
13. I hereby confirm that I understand the inclusion criteria as detailed in the Information Sheet and explained to me by the researcher.	
14. I hereby confirm that: a) I understand the exclusion criteria as detailed in the Information Sheet and explained to me by the researcher; and b) I do not fall under the exclusion criteria.	
15. I agree that my GP may be contacted if any unexpected results are found in relation to my health.	
16. I have informed the researcher of any other research in which I am currently involved or have been involved in during the past 12 months.	

17. I am aware of who I should contact if I wish to lodge a complaint.	
18. I voluntarily agree to take part in this study.	

If you would like your contact details to be retained so that you can be contacted in the future by UCL researchers who would like to invite you to participate in follow up studies to this project, or in future studies of a similar nature, please tick the appropriate box below.

	Yes, I would be happy to be contacted in this way	
	No, I would not like to be contacted	

Name of participant	Date	Signature
Researcher	Date	Signature

Appendix C

Questionnaires (Pre-Group)

Participant Information (Group):

Thank you for agreeing to take part in this study. Please complete the below questionnaires (ideally electronically) and return the completed version to Holly (ucjuhmw@ucl.ac.uk) by no later than Thursday 21st May. Group attendance is dependent on completion of this document.

If completing these questionnaires electronically, you can highlight your response in a different colour or delete the options that do not apply.

Name:

Age & D.O.B:

Telephone number to contact you for the follow up:

Education:
What is the highest level of education you have completed?

1) Primary school
2) GCSE's or equivalent
3) University undergraduate program
4) University postgraduate program
5) Doctoral Degree
6) Other: (please write here)

Religion:
Do you practice a religion, and if so, which one?

1) None (atheism)
2) Buddhism
3) Christianity
4) Hinduism
5) Islam
6) Judaism
7) Sikhism
8) Other: (please write here)

Employment:
What is your current employment status?

1) Employed full-time
2) Employed part-time
3) Unemployed (currently looking for work)
4) Unemployed (currently not looking for work)
5) Student
6) Self-employed
7) Unable to work

Ethnicity:
How would you best describe your ethnic origin?

1) White
2) Mixed
3) Asian or Asian British
4) Black or Black British
5) Chinese
6) Other ethnic group:

Marital status:
How would you best describe your marital status?

1) Single
2) Married
3) In a domestic partnership
4) Divorced
5) Widowed
6) Other: (please write here)

Stage of pregnancy (weeks):

Do you have a diagnosed mental health condition?
YES/NO

If yes, please state here:

Do you have a diagnosed physical health condition?
YES/NO

If yes, please state here:

Questionnaires:

EPDS:

The Edinburgh Postnatal Depression Scale (EPDS) is a set of 10 screening questions that can indicate whether a parent has symptoms that are common in women with depression and anxiety during pregnancy and in the year following the birth of a child. This is not intended to provide a diagnosis – only trained health professionals should do this.

It is strongly recommended that this set of questions is completed with a health professional.

To complete this set of questions, the parent should select the number next to the response that comes closest to how they have felt in the past seven days.

If completing this on a computer, please highlight your chosen answer in a different colour.

Question 1. I have been able to laugh and see the funny side of things
- 0 As much as I always could
- 1 Not quite so much now
- 2 Definitely not so much now
- 3 Not at all

Question 2. I have looked forward with enjoyment to things
- 0 As much as I ever did
- 1 Rather less than I used to
- 2 Definitely less than I used to
- 3 Hardly at all

Question 3. I have blamed myself unnecessarily when things went wrong
- 3 Yes, most of the time
- 2 Yes, some of the time
- 1 Not very often
- 0 No, never

Question 4. I have been anxious or worried for no good reason
- 0 No, not at all
- 1 Hardly ever
- 2 Yes, sometimes
- 3 Yes, very often

Question 5. I have felt scared or panicky for no very good reason
- 3 Yes, quite a lot
- 2 Yes, sometimes
- 1 No, not much
- 0 No, not at all

Question 6. Things have been getting on top of me

3 Yes, most of the time I haven't been able to cope
2 Yes, sometimes I haven't been coping as well as usual
1 No, most of the time I have coped quite well
0 No, I have been coping as well as ever

Question 7. I have been so unhappy that I have had difficulty sleeping
3 Yes, most of the time
2 Yes, sometimes
1 Not very often
0 No, not at all

Question 8. I have felt sad or miserable
3 Yes, most of the time
2 Yes, quite often
1 Not very often
0 No, not at all

Question 9. I have been so unhappy that I have been crying
3 Yes, most of the time
2 Yes, quite often
1 Only occasionally
0 No, never

Question 10. The thought of harming myself has occurred to me
3 Yes, quite often
2 Sometimes
1 Hardly ever
0 Never

Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

If completing this on a computer, please highlight your chosen answer in a different colour.

Choose the "1" if you Very Strongly Disagree
Choose the "2" if you Strongly Disagree
Choose the "3" if you Mildly Disagree
Choose the "4" if you are Neutral
Choose the "5" if you Mildly Agree
Choose the "6" if you Strongly Agree
Choose the "7" if you Very Strongly Agree

1. There is a special person who is around when I am in need.
1 2 3 4 5 6 7 SO

2. There is a special person with whom I can share my joys and sorrows.
1 2 3 4 5 6 7 SO

2. My family really tries to help me.
1 2 3 4 5 6 7 Fam

4. I get the emotional help and support I need from my family.
   1 2 3 4 5 6 7 Fam

5. I have a special person who is a real source of comfort to me.
   1 2 3 4 5 6 7 SO

6. My friends really try to help me.
   1 2 3 4 5 6 7 Fri

7. I can count on my friends when things go wrong.
   1 2 3 4 5 6 7 Fri

8. I can talk about my problems with my family.
   1 2 3 4 5 6 7 Fam

9. I have friends with whom I can share my joys and sorrows.
   1 2 3 4 5 6 7 Fri

10. There is a special person in my life who cares about my feelings.
   1 2 3 4 5 6 7 SO

11. My family is willing to help me make decisions.
   1 2 3 4 5 6 7 Fam

12. I can talk about my problems with my friends.
   1 2 3 4 5 6 7 Fri

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri) or significant other (SO).

Thank you for completing this questionnaire, if you have any questions please do not hesitate to ask Holly.

Appendix D
How to use teams for the study

Feasibility study of a brief Interpersonal Psychotherapy (IPT) informed group intervention for expectant and new mothers.

Microsoft teams- how to use it

This group session is taking place using online video conferencing software called Microsoft Teams. This will mean that you are not in the same room as other people but can see and hear them by video link.

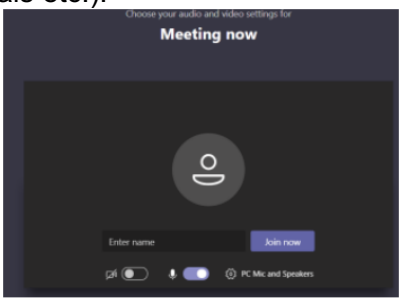
In order to take part you either need access to a smartphone with a camera or computer with camera and microphone.

Before the call please choose a private, quiet space. Think about where best to take the call. If you are using video then anyone in your background could be seen by people in the group session. Anything behind you may be visible to others on the call. So, have a look to check there isn't anything that you do not wish to be seen.

To help with background noise it usually works best if you can wear headphones and speak into a microphone. But don't worry if you do not have these to hand – they are not essential.

Already using Teams?

If you already use Teams and have a username then when you join the call, Teams will share some of your personal information e.g. your full name and company name. We therefore recommend logging out of the Teams app and joining as a guest. When you join as a guest this is the login screen and you can choose how you wish to be identified on the call (e.g. first name, nickname, initials etc.):



Using a mobile phone to join?

If you are going to join the call on your mobile phone then you need to first download the Microsoft Teams app and install it onto your phone. You do not need to register or login to this app – you can just join the meeting as a guest.

Using a Mac to join?

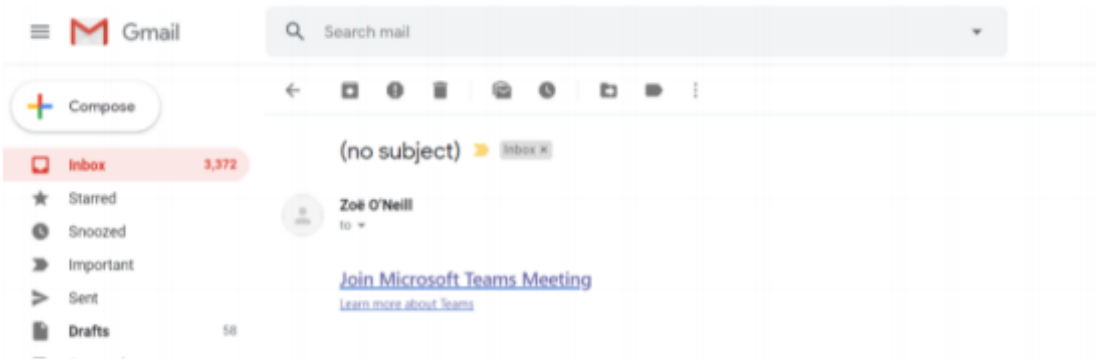
If you are using a Mac we would recommend using Google Chrome instead of Safari as your browser. Alternatively, you can download the Microsoft Teams app onto your computer.

Joining a group session on Teams:

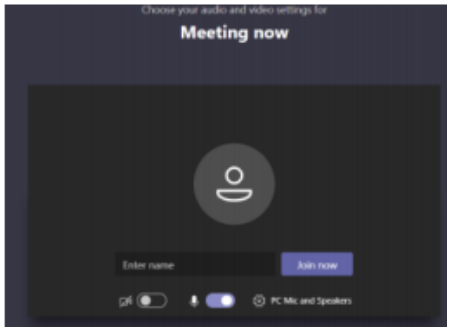
The researcher will arrange the dates and times for your video calls and you will receive an email with a link that says 'Join Microsoft Teams Meeting'.

If you haven't received this link let the person know who is arranging the session so it can be sent to you again.

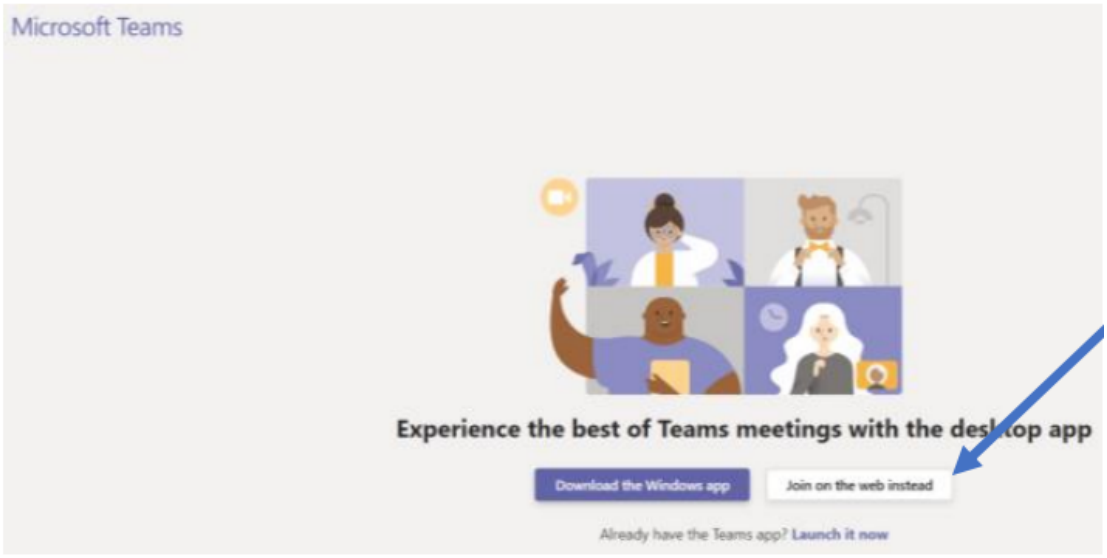
1. Shortly before the call is due to start click on the link 'Join Microsoft Teams Meeting'. This will launch a browser window.



2. If you have downloaded the app it will open automatically. This is the screen you will see. You can choose how you wish to be identified on the call (e.g. first name, nickname, initials etc.)

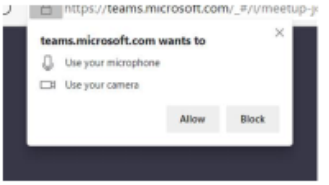


3. If you have not downloaded the app then Click the grey button "Join in the web instead" and do NOT choose 'Download the Windows app'



4. The first time you join the conference it will advise you that the application will use your microphone and camera.

Click “Allow” to enable your microphone and camera devices – if you say Block then you won’t be able to join but there is an option later on to turn off your camera if you prefer.

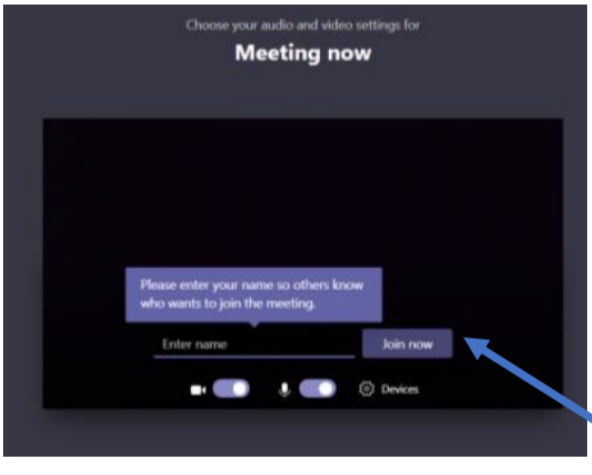


The following window will show. It allows you to decide how and when to join the conference.

Video
This icon with a purple line shows you will join **with** video enabled – click to join with no video).

Audio
This icon with a purple line shows you will join **with** audio enabled – click to join with mute enabled .

5. Enter your name. Whatever you write will be seen by all participants of the session. You may prefer to use only your first name, initial or a nickname rather than your full name.

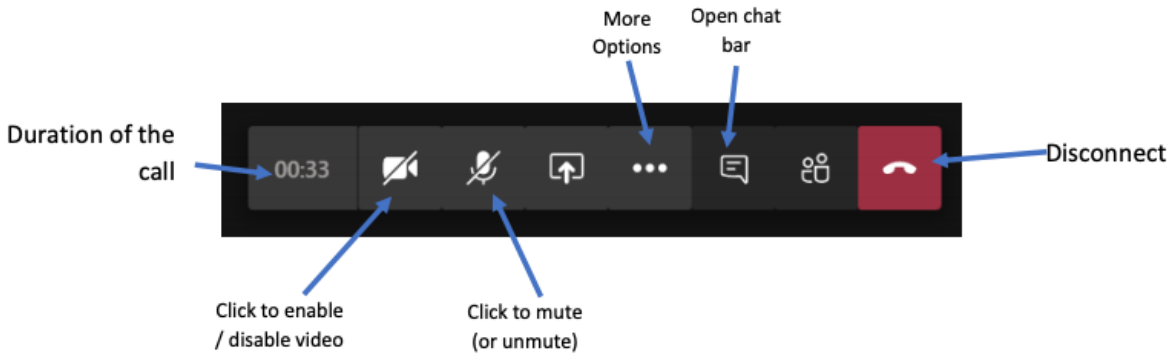


6. When you are ready, click “Join Now”

7. The following window will appear. As soon as your session is ready, your host will accept you into the conference and you will join the other participants.

During the call:

You will have the following tool bar whilst on the video conferencing session.



Muting your microphone during the group:

It can be helpful if you mute your microphone when others are talking, specifically when the researcher is presenting some key information in the group. However, there are lots of spaces for group discussions to take place and the researcher will make it obvious when she wants you to engage. When that does happen please unmute and engage with the group discussions.

Using Chat

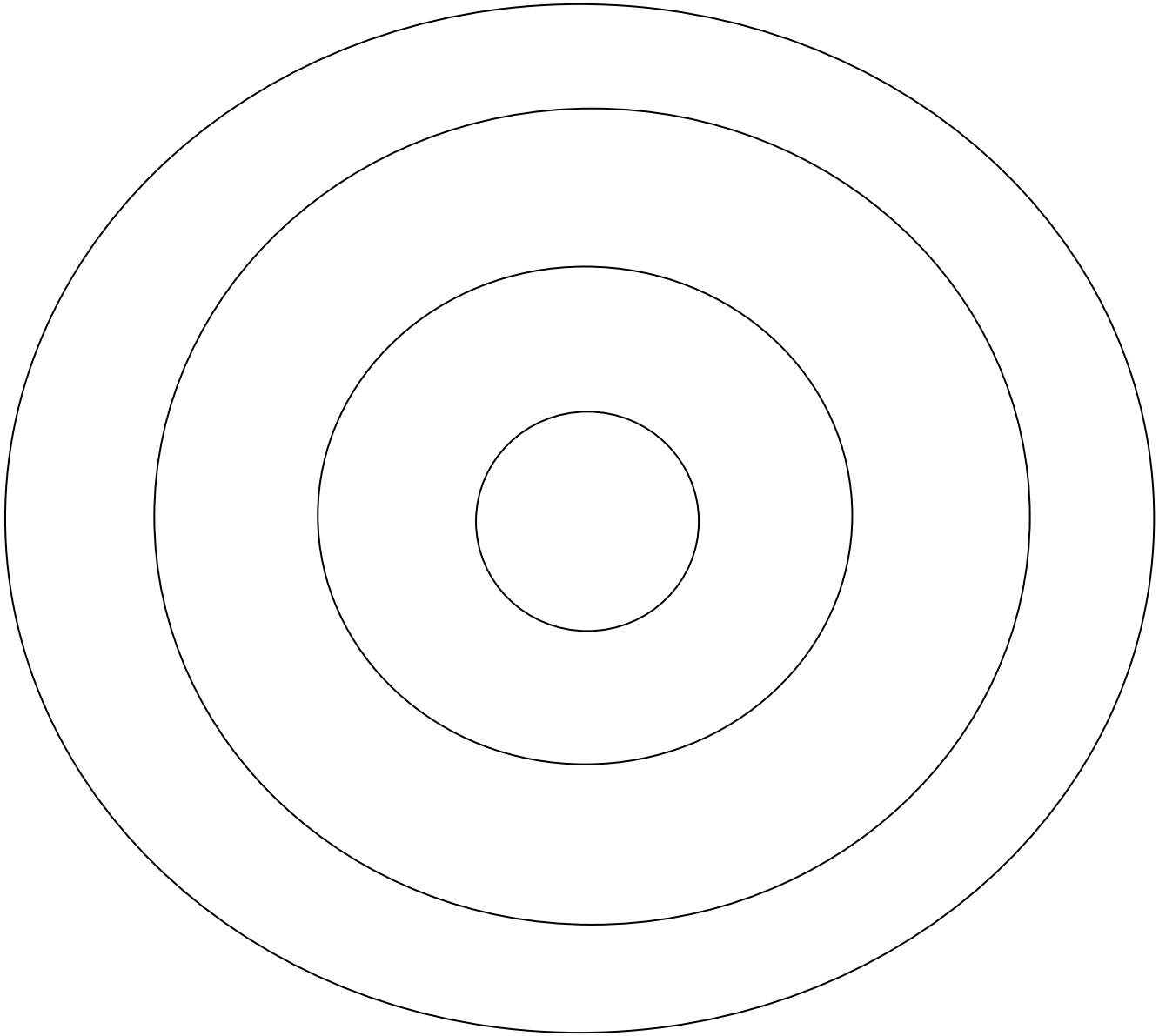
When you click on “Open Chat Bar”you can write a note. This can be really helpful to write something e.g. if you are finding it difficult to hear what is being said or you have a specific question you would like to ask. I would ask that you do not use the chat apart from the above-mentioned circumstances as it can distract members of the group.

Be aware that all participants of the videoconference can see the chat message it is not confidential between you and the clinician who arranged the call. Anything written in Chat is recorded for 90 days.

Appendix E (removed for copyright)
Power Point Presentation

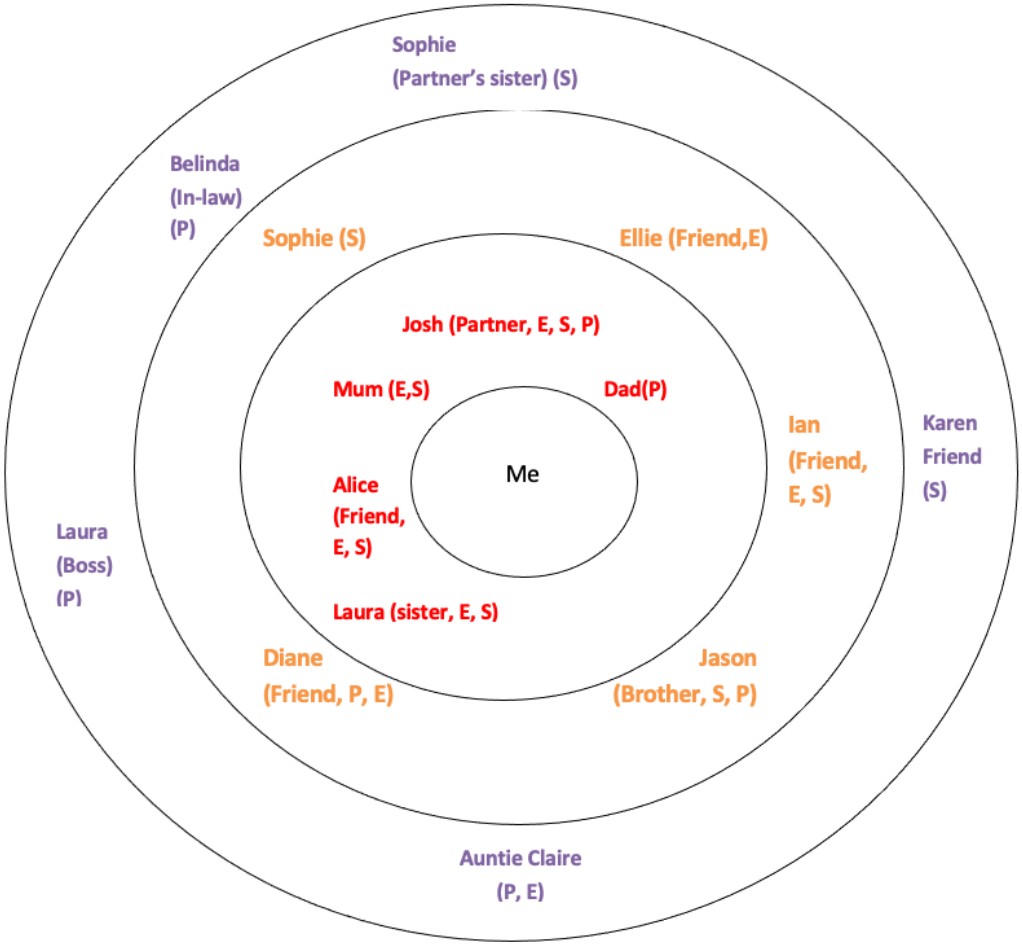
Appendix F
Interpersonal Inventory

Interpersonal Inventory: Circle of Relationships



Worked Example of The Interpersonal Inventory

Interpersonal Inventory: Circle of Relationships (worked example)



Intimates: (Closest to centre)	Those closest to you.
Casual Friends (going out from the centre)	Those who you see quite frequently or from time to time.
Associates (The outer rings of the circle)	Those that you are not as close to or have less contact with

E=	Emotional Support
S=	Social Support
P=	Practical Support

Appendix G

End of group email and material

Dear _

Thank you so much for taking part in today's group. I wish you the best of luck with the birth and will be in touch in the coming months to arrange an individual follow-up session.

As promised, I have attached some of the information from today's group for you to use and review.

In addition, if you do find that your mood deteriorates and you require additional help, please note our advice below:

- Ask your GP/ midwife/ health visitor for a referral for further mental health support.
- If you feel that you are unable to keep yourself safe, please go to A&E.
- https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/perinatal-mental-health-toolkit.aspx provides a variety of resources for pregnant and postnatal women.

In the meantime if you have any feedback that you'd like to provide about the group, it would be hugely appreciated. It would be especially helpful if you could provide a testimonial about how you found the group which I could use to help recruit for the groups coming up in the summer.

If you have any further questions or comments about the group today, please do not hesitate to contact me.

Best wishes,

Holly

Baby Blues & PND

Baby Blues	**PND**
Short-term drop in mood	Low mood
Experienced by 80% of new mothers	Constant exhaustion
Transient	Inability to cope
Overwhelmed, tearful, tired, irritable	Feelings of guilt regarding their inability to cope/ not loving baby enough
Resolves naturally with:	Overwhelming anxiety
Good support	Difficulty sleeping
Rest	Lack of appetite
Nutrition	**Difficulties bonding with the baby and relationship difficulties with the partner**
Does not last beyond 2 weeks	**Social withdrawal (from family and friends)**
	Crying for no reason

The importance of the Interpersonal Inventory:

Please keep your copy of the Interpersonal Inventory; we will be reviewing this in your individual session.

Transitions:

The process of becoming a mother is an amazing time for many women but it can also be very challenging. A loss of sense of self can occur. We will discuss this further in our individual follow-up but if you'd like to reflect on this now, feel free to do so. Some important transitions:

- Becoming a mother leads to an identity shift, and one of the most significant physical and psychological changes a woman will experience.
- Change in family dynamics.
- Fantasy vs reality.
- Juggling with emotions such as guilt, shame and being the 'good enough mother'.
- Social changes.
- Having a dependent.

As discussed in the group, the strategies for life transitions/changes include:

1. Moving away from the past and dealing with loss by reconstructing what was lost.
2. Accepting the new role in as positive a light as possible.
3. Developing new skills and relationships to support change.

To accomplish transitions or life changes, it's important to think about positive and negative aspects of the 'old role'.

E.g:

Positives	**Negatives**
Social aspect – I enjoyed socialising with my colleagues.	The stress involved in fighting to meet targets
Having routine to my life.	Working full time made it difficult for me to focus on any hobbies.
Achieving targets and projects set	As my husband works long days, we would sometimes go days without spending any time together.

Close friendships with colleagues, going out for lunch.	

Space for your own reflections:

Positives	**Negatives**

Then, the same is done for the ‘new role’, see below for an example:

Positives	**Negatives**
I can focus on spending more time with my husband and new baby.	Sometimes it’s really hard taking care of a new baby.
I can have a routine with my baby.	Although I try, there isn’t as much of a social atmosphere throughout the day
I can focus on my hobbies and wellbeing.	I am really tired all the time!
I have flexibility in my week and can socialise with other mums and friends.	

Space for your positives and negatives of your ‘new role’:

Positives	**Negatives**

Finding ways to make the new role more positive:

- Looking at what has been lost and whether it can be re-created in the 'new role'.
- Can the positives of the 'new role' be enhanced?
- Experiment with new activities and new social situations.
- What activities would improve any symptoms of low mood or anxiety?
- Who on the inventory can offer you support?

Goals:

You may set some goals during this point, for example *'I want to tell my partner that he is working too much and that I'd like some more support from him'*. Note down any goals that you have set and will work on between now and the next session:

Appendix H

Individual Follow-up Session Schedule

You would not ask all of the prompt questions in the main headings below, only the questions that appropriately come up in the conversation or that are appropriate to the participant and their situation.

To be recorded and analysed for key themes in the data.

1. Review mood using EPDS.

2. Review perceived social support using the MSPSS questionnaire.

3. Thoroughly review and identify helpful relationships from the Interpersonal Network:

    - *'I am going ask you again about some of the most important people in your life right now and in the past'*
    - *'Looking at the inventory you created in the group, are there any clear relationship changes which stand out to you?'*

    - **Who have you seen in the last week?**
    - *'Compared to how you answered in the group, what has changed?'*
    - *'Who is no longer there?'*
    - *'Has this changed due to the birth of your baby?'*
    - *'Does this feel about right for this busy time in your life or would you like to be seeing X more frequently?'*

    - **Who would you phone at 4am if you had to? (identifying practical support)**
    - '*If you needed someone to look after the baby for a short period of time, who could you rely on?'*

- *'If you needed some time to relax or do something nice for yourself, who could you ask to help you with the baby?'*

- **Identify specific individuals on the inventory, consider some of the following questions:**
- '*You mentioned..... how often do you get to see..... now?'*
- *'We all have expectations, what we hope for in a relationship, can you say what they were with .....?'*
- *'Has your relationship with … changed since the birth of your baby? Can you say how?'*
- *'How would you describe your relationship?'*
- *'Who does all the phoning/ texting/ organising?' (reciprocity)*
- *'What sort of things do you do together?' (get a sense of nature)*
- *'What are the particularly satisfying aspects of your relationship?'*
- *'What are the unsatisfying aspects?'*
- *'Would you like to change anything about the relationship?'*
- *'Would you like to change anything about **your behaviour** in the relationship?'*
- *'Is there anything you'd like to change about **.....'s behaviour** in the relationship?'*

- **Identify partner relationship (if appropriate)**

- *'How is your relationship with X… has it changed since the birth of your baby?'*
- *'How so?'*
- *'Do you feel well supported by X?'*
- *'How would you describe your relationship?'*
- *'What are the particularly satisfying aspects of your relationship?'*
- *'What are the unsatisfying aspects?'*
- *'Would you like to change anything about the relationship?'*
- *'Would you like to change anything about **your behaviour** in the relationship?'*
- *'Is there anything you'd like to change about **.....'s behaviour** in the relationship?'*

4. Review of role transition to motherhood:

   - *'How do you feel you are managing with the transition to motherhood'?*
   - *'What would you say has changed?'*
   - *'Is there anything you'd say you miss about life before ….. and how so?'*
   - *'Have you felt well supported by your partner/ family/ friends?'*
   - *'What has been difficult?'*
   - *'Is there anything that has been easier than you'd imagined?'*
   - *'Did discussing the transition in the group help you prepare in anyway?'*

5. Review any goals that may have been set at the end of the group session and any interpersonal changes.

   - *'Remind me, did you set any goals in the group session to work toward?'*
   - *'Have you managed to achieve these goals?'*
   - *'What has been difficult in doing so?'*
   - *'What has made it possible to achieve these goals?'*
   - *'Have you noticed any changes in overall in your friendships/ relationships with others?'*
   - *'What changes have you noticed?'*

Appendix I

Brief semi-structured interview

To be recorded and transcribed

Ask the following questions regarding experience of the group:

Q1: *Overall what did you think of the group/ individual session?*
→ What were the most helpful and interesting aspects of the group/ individual session and why?
→ What aspects were less helpful and why?

Q2: *Did the group/ individual session help you to think about your social network?*
→ How so/ please explain?
→ Did you make any changes to any of your relationships as a result of the group/ individual session?

Q3: *Did the group/individual session help you to anticipate the transition to motherhood?*
→ How so/ please explain?
→ Did you make any changes as a result of this?

Q4. *In what ways did this group differ from other antenatal groups you've attended?*

Q5: *Is there anything that could have been done to make the group/ individual session more helpful?*
→ Why/ please explain?
→Do you feel the group missed anything important or did not cover what you expected it to?
→ Is there anything you would add to improve the group?

Q6: *Did you experience any difficulties in engaging with the group/ individual session?*
→ What made it difficult for you to attend/ engage?
→ Is there anything that could have made it easier for you to attend/engage?

Q7. *Who do you think would most benefit from this group and why?*

Q8. *When and where do you think it should be offered?*

Q9. *Would you recommend this group to a friend?*

Appendix J

Follow-up Questionnaires

Participant Information (Follow-up):

Thank you for agreeing to take part in this study. Please complete the below questionnaires (ideally electronically) and return the completed version to Holly (ucjuhmw@ucl.ac.uk).

If completing these questionnaires electronically, you can highlight your response in a different colour or delete the options that do not apply.

Name:

Date of baby's birth:

Gender of baby:

Briefly describe your experience of the birth:

Questionnaires:

EPDS:

The Edinburgh Postnatal Depression Scale (EPDS) is a set of 10 screening questions that can indicate whether a parent has symptoms that are common in women with depression and anxiety during pregnancy and in the year following the birth of a child. This is not intended to provide a diagnosis – only trained health professionals should do this.

It is strongly recommended that this set of questions is completed with a health professional.

To complete this set of questions, the parent should select the number next to the response that comes closest to how they have felt in the past seven days.

If completing this on a computer, please highlight your chosen answer in a different colour.

Question 1. I have been able to laugh and see the funny side of things
- 4 As much as I always could
- 5 Not quite so much now
- 6 Definitely not so much now
- 7 Not at all

Question 2. I have looked forward with enjoyment to things
- 4 As much as I ever did
- 5 Rather less than I used to
- 6 Definitely less than I used to
- 7 Hardly at all

Question 3. I have blamed myself unnecessarily when things went wrong
- 3 Yes, most of the time
- 2 Yes, some of the time
- 1 Not very often
- 0 No, never

Question 4. I have been anxious or worried for no good reason
- 0 No, not at all
- 1 Hardly ever
- 2 Yes, sometimes
- 3 Yes, very often

Question 5. I have felt scared or panicky for no very good reason
- 3 Yes, quite a lot
- 2 Yes, sometimes
- 1 No, not much
- 0 No, not at all

Question 6. Things have been getting on top of me
3 Yes, most of the time I haven't been able to cope
2 Yes, sometimes I haven't been coping as well as usual
1 No, most of the time I have coped quite well
0 No, I have been coping as well as ever

Question 7. I have been so unhappy that I have had difficulty sleeping
3 Yes, most of the time
2 Yes, sometimes
1 Not very often
0 No, not at all

Question 8. I have felt sad or miserable
3 Yes, most of the time
2 Yes, quite often
1 Not very often
0 No, not at all

Question 9. I have been so unhappy that I have been crying
3 Yes, most of the time
2 Yes, quite often
1 Only occasionally
0 No, never

Question 10. The thought of harming myself has occurred to me
3 Yes, quite often
2 Sometimes
1 Hardly ever
0 Never

Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

If completing this on a computer, please highlight your chosen answer in a different colour.

Choose the "1" if you Very Strongly Disagree
Choose the "2" if you Strongly Disagree
Choose the "3" if you Mildly Disagree
Choose the "4" if you are Neutral
Choose the "5" if you Mildly Agree
Choose the "6" if you Strongly Agree
Choose the "7" if you Very Strongly Agree

3. There is a special person who is around when I am in need.
1 2 3 4 5 6 7 SO

2. There is a special person with whom I can share my joys and sorrows.
1 2 3 4 5 6 7 SO

4. My family really tries to help me.
1 2 3 4 5 6 7 Fam

4. I get the emotional help and support I need from my family.
1 2 3 4 5 6 7 Fam

5. I have a special person who is a real source of comfort to me.
1 2 3 4 5 6 7 SO

6. My friends really try to help me.
1 2 3 4 5 6 7 Fri

7. I can count on my friends when things go wrong.
1 2 3 4 5 6 7 Fri

8. I can talk about my problems with my family.
1 2 3 4 5 6 7 Fam

9. I have friends with whom I can share my joys and sorrows.
1 2 3 4 5 6 7 Fri

10. There is a special person in my life who cares about my feelings.
1 2 3 4 5 6 7 SO

11. My family is willing to help me make decisions.
1 2 3 4 5 6 7 Fam

12. I can talk about my problems with my friends.
1 2 3 4 5 6 7 Fri

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri) or significant other (SO).

Thank you for completing this questionnaire, if you have any questions, please do not hesitate to ask Holly.

Appendix K

Outline of the IPT informed psychoeducational group and individual follow-up.

Objectives:	Content:
1.Over the 90-minute group the aim is for participants to: • Get to know each other • Understand the aims of the group. • Have a brief understanding about the history of IPT and its theoretical underpinnings • Understand the signs/ symptoms of PND and the differentiation between baby blues. • Identify sources of social support and establish support systems for the postnatal period. • Discuss the role transition to motherhood.	• Introductions and ice breaker • Objectives of the group. • Brief overview of IPT as a full intervention- including Attachment Theory underpinning and the 4 focus areas. • Signs/symptoms of PND & Baby blues. • Questions and discussion around PND/ Baby blues. • Education regarding the importance of social support in the perinatal period. • Interpersonal Inventory exercise.

• Discuss any conflict or difficulties expected with the transition as a group. 2.Individual follow-up session 2 months after delivery: • Review mood, coping styles, experience of birth. • Explore changes to relationships since the birth of the baby (partner, social, family). • Thoroughly review support network. • Explore the role transition to motherhood and any difficulties experienced. • Review participants experiences of the group and follow-up experience.	• Space for reflections about the exercise. • Discussions around how to strengthen/ support interpersonal relationships. • Role transition to motherhood. • Challenges associated with the transition. • Overview of the role transition exercise in IPT (pros/cons) • Review scores on EPDS & MSPSS • Review interpersonal inventory. • Discussions regarding issues related to role transition. • Brief semi-structured interview regarding experiences.

Appendix L

Ethical approval

UCL RESEARCH ETHICS COMMITTEE OFFICE FOR THE VICE PROVOST RESEARCH

14th February 2020

Dr Katharine Alcock
Research Department of Clinical, Educational and Health Psychology UCL

Cc: Holly Wilson

Dear Dr Alcock

Notification of Ethics Approval with Provisos
Project ID/Title: 16769/001: Feasibility study of a brief interpersonal psychotherapy (IPT) informed Group intervention for expectant and new mothers

Further to your satisfactory responses to the Committee's comments, I am pleased to confirm in my capacity as Joint Chair of the UCL Research Ethics Committee (REC) that your study has been ethically approved by the UCL REC until **1st June 2021.**

Ethical approval is subject to the following conditions:

Notification of Amendments to the Research

You must seek Chair's approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing an 'Amendment Approval Request Form' http://ethics.grad.ucl.ac.uk/responsibilities.php

Adverse Event Reporting – Serious and Non-Serious

It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Joint Chairs will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Joint Chairs of the Ethics Committee should again be notified via the Ethics Committee Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Joint Chairs will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Final Report

At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research i.e. issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.

In addition, please:

- ensure that you follow all relevant guidance as laid out in UCL's Code of Conduct for Research: https://www.ucl.ac.uk/srs/file/579
- note that you are required to adhere to all research data/records management and storage procedures agreed as part of your application. This will be expected even after completion of the study.

With best wishes for the research. Yours sincerely

Professor Michael Heinrich
Joint Chair, UCL Research Ethics Committee

Appendix M

Amended Ethical approval due to COVID-19

Email from: ethics@ucl.ac.uk
Subject: APPROVED: Amendment Application 16769/001

To: holly.wilson.18@ucl.ac.uk

Dear Holly

The REC Chair has approved your attached amendment request. Please take this email as confirmation of that approval.

IMPORTANT: For projects collecting personal data only
You should inform the Data Protection Team – data-protection@ucl.ac.uk of your proposed amendments to include a request to extend ethics approval for an additional period.

Best wishes,

Lola

Lola Alaska
Research Evaluation Administrator

Office of the Vice-Provost (Research)
University College London, Gower Street, London WC1E 6BT
Email: l.alaska@ucl.ac.uk
Web: www.ucl.ac.uk/research

UCL Internal:
2 Taviton Street, London WC1H 0BT

Please do not feel obliged to reply to this email outside of your normal working hours.

Appendix N

Initial and final thematic frameworks

Initial thematic framework: Themes| Sub-themes
1. Mum's matter Experience of birth during COVID-19 Mothers network
2. Pressures of new motherhood Expectations of society Expectations of self
3. Connecting with other mothers Common ground Sharing experiences Noticing differences
4. Interpersonal Inventory as a tool Identifying support Allowing support Reflection
5. Adjustment Forced transitions due to COVID-19 Sense of self Me time Anticipating change- preparative
6. Changes to Interpersonal relationships Strengthening relationships Lack of intimacy Reciprocity Flexibility Sense of loss due to COVID-19 Resources in relationships
7. Fit of the group For all Deserving of its own space Opt-in Reoccurring
8. Emphasis and importance of Mothers' mental health Emotional
9. Developing meaningful relationships online Developing connections Improvements

Final thematic framework: Themes| Sub-themes
1. “This is about you, you are important” Mothers only space Emphasis and importance of mothers’ mental health
2. “Leaving one kind of life and starting a new one” Easing Transitions: The Impact of COVID-19 Sense of self “You really are just kind of firefighting”
3. A search for connection Mother’s network Sharing experiences Noticing differences Shortcomings of the online format
4. Changes to interpersonal relationships “I think about the circles quite regularly” Strengthening relationships “It’s like a bomb goes off in the middle of your life” Sense of loss: The impact of COVID-19 Lack of time and emotional resources