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Table of Contents

Word Counts **2**
Table of Contents **3**
Abstracts **4**
Systematic Review of the Literature **7**
Abstract 8
Introduction 9
Materials and Methods 11
Results 15
Discussion 43
References 48
Service Improvement Project **59**
Abstract 60
Improving LGBTQ+ Individuals' Experiences of Berkshire Talking Therapies 61
Introduction 61
Materials and Methods 64
Results 66
Discussion 76
References 83
Theoretically Driven Research Project **87**
Abstract 88
Introduction 89
Materials and Methods 92
Results 96
Discussion 101
References 105
Executive Summary **113**
Connecting Narrative **116**
Acknowledgements **119**
Appendix A: Instructions to Authors for Nominated Journals **121**
The Journal of Reproductive and Infant Psychology Submission Guide 121
Journal of Culture, Health, and Sexuality Submission Guide 132
Appendix B: SRL Search Strategies **141**
Medline Search Strategy 141
Embase Search Strategy 142
PsycINFO Search Strategy 143
Appendix C: TDRP Assumptions Testing **144**
Appendix D: TDRP Copies of Measures **147**
Appendix E: SIP Client Semi-Structured Interview Schedule **148**
Appendix F: SIP Clinician Survey **149**
Appendix G: SIP Lay Summary for Clients **150**

Abstracts
Systematic Review of the Literature

Review Investigating the Factors Impacting Risk and Resilience for Post Traumatic Stress following Incidents of Reproductive Loss in Mothers

Aims/Background: This systematic review aimed to update the review by Christiansen (2017) on the prevalence estimates and risk and resilience factors related to Post Traumatic Stress Disorder (PTSD) following incidents of reproductive loss.

Design/Methods: A search was conducted across Embase, Medline, and PsycINFO using key terms related to reproductive loss and PTSD. Studies published between October 2015 – March 2025 were included if they investigated relevant risk or resilience factors. Reproductive loss was defined as pregnancy loss including miscarriages, stillbirths, terminations for medical reasons, and neonatal deaths up to 28 days after birth.

Results: Twenty-two studies fit the inclusion criteria. There was heterogeneity across studies in definitions of types of loss and time since the loss. Prevalence rates ranged from 3% to 99.5% though representativeness of samples limited the reliability of this finding. PTSD severity decreased across time, however prevalence remained high years after loss indicating the long-lasting impact of reproductive loss. Risk and resilience factors were organised into categories including psychiatric, cognitive, demographic, obstetric, and psychosocial factors. Perinatal grief, depression, and previous trauma were significantly correlated to increased PTSD. Social support was an important resilience factor. Similar to the previous review, gestational age and prior losses did not consistently predict PTSD. Novel findings include number of curettages being positively corelated to symptom severity, and the impact of religiosity and culturally relevant coping strategies.

Conclusion: Results were compared to those of the previous review. Methodological limitations and directions for future research are discussed.

Keywords: PTSD, reproductive loss, perinatal, trauma, miscarriage, stillbirth

Service Improvement Project

Improving LGBTQ+ Individuals' Experiences of Berkshire Talking Therapies

This project aimed to explore LGBTQ+ individuals' experiences of Berkshire Talking Therapies to identify what changes can be implemented to improve the service offering for this specific group. This was explored from both clinician and client perspectives. Qualitative interviews were run with 10 clients who were in therapy with the service at the time. A quantitative survey was emailed to clinicians with items intended to assess their confidence and competence meeting this group's needs. Thematic analysis was used to analyse interview data, and descriptive statistics were used to present data from the clinician survey. Five themes and four subthemes were identified from the interviews that highlighted ideas around creating safety, avoiding assumptions and maintaining curiosity. The clinician survey evidenced that most clinicians felt confident meeting the needs of LGBTQ+ individuals though there was variation within this. Disparity between data sets highlighted that clinicians were perhaps making assumptions about individuals' LGBTQ+ identities and the relevance of this to their presenting problems. Both clinicians and clients expressed that the service could do more to create a safe space for this community. Based on this data, recommendations for the service were drafted along with a dissemination plan.

Keywords: LGBTQ+, minority stress, service improvement, Talking Therapies, mixed methods

Theoretically Driven Research Project

Exploring the Link Between Imagery, Fear of Childbirth, and Maternal-Foetal Attachment

Aims/Background: Imagery plays an important role in maintaining mental disorders such as PTSD and bipolar disorder. Expectant mothers with a fear of childbirth (FoC) experience negative imagery related to the upcoming birth. Maternal-foetal attachment also has an imagery component as mothers imagine what it might be like to hold their baby after birth. These images may be competing for capacity. The present study explored the links between these variables. It was hypothesised that women highly impacted by birth-related imagery and FoC would have lower antenatal attachment, and that high FoC would be linked to a higher tendency to use imagery in everyday life.

Design/methods: Pregnant women (n=133) were recruited mainly through social media. They were invited to complete a self-report survey measuring sociodemographic factors, FoC, antenatal attachment, intrusive birth-related imagery, mood, anxiety, and stress, and the general tendency to use mental imagery in everyday life.

Results: Intrusive birth-related imagery was associated both with higher levels of FoC and antenatal attachment. FoC was not associated with lower levels of attachment. The general tendency to use imagery in everyday life predicted more variance in attachment than other factors and was not significantly associated with FoC.

Conclusion: Birth-related imagery could be positive and negative and therefore linked to increased antenatal attachment and FoC respectively. Intrusive imagery may have a stronger effect on distress than the general capacity to visualise, highlighting its potential as a target for FoC interventions. Limitations with the FoC measure may have impacted the results. Clinical implications are discussed.

Keywords: maternal-foetal attachment, fear of childbirth, intrusive imagery, perinatal mental health, pregnancy

Systematic Review of the Literature

Title: Review Investigating the Factors Impacting Risk and Resilience for Post Traumatic Stress following Incidents of Reproductive Loss in Mothers

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Abstract

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Conclusion: Results were compared to those of the previous review. Methodological limitations and directions for future research are discussed.

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Review Investigating the Factors Impacting Risk and Resilience for Post Traumatic Stress following Incidents of Reproductive Loss in Mothers

Introduction

It is estimated that approximately 25% of couples of childbearing age experience some form of reproductive loss (Armstrong, 2004). Although the definition of reproductive loss varies, it is broadly understood as the experience of losing an infant shortly after birth, or losing a pregnancy for example through miscarriage, stillbirth, or failed in vitro fertilisation (IVF; Herbert et al., 2022). Reproductive loss, perinatal loss, and infant loss are often used interchangeably with the former being the term used throughout this review.

The trauma of losing an expected child has psychological and social impacts on bereaved parents and their families. This includes impacts on parenting style, attachments to future children, family planning, the parents' relationship or marriage, and family dynamics including effects on siblings (Bennett et al., 2005). Parents who experience reproductive loss have poorer mental health outcomes - particularly in the year following the loss - such as increased suicidality, moderate to severe depression, and increased hospitalisations due to stress (Youngblut et al., 2013). They report feelings of fear and helplessness and liken the loss to that of losing a child or family member (Walker & Davidson, 2001; Youngblut et al., 2013). As such, reproductive loss can be characterised as a traumatic event (Berry, 2022) and can lead to the development of Post Traumatic Stress (PTS) symptoms (Hamama et al., 2010; Walker & Davidson, 2001).

Post Traumatic Stress Disorder (PTSD) following reproductive loss has been distinguished from other disorders such as postnatal depression or complicated grief (Carter et al., 2007; Lee & Slade, 1996). The reported prevalence of PTSD in mothers who have

experienced reproductive loss varies widely across studies from 0.6 – 39% (Christiansen, 2017). This heterogeneity in estimates can be explained by methodological differences such as variations in types of loss, time since loss, and recruitment methods (Christiansen, 2017). Identifying the factors that impact the development of PTSD following an incident of reproductive loss will help identify those most at risk and highlight relevant protective or resilience factors. This knowledge will increase the awareness and availability of support following perinatal loss and help identify treatment targets.

The most recent systematic review search on PTSD and reproductive loss was conducted in 2015 (Christiansen, 2017). This review included infant death up to one year postpartum, included fathers, and excluded medical abortions. Christiansen found that, whilst type of loss and gestational age at time of loss did not consistently predict PTSD, social support was a significant protective factor, and further research on this topic was necessary. Since this review, several papers have been published within this field investigating factors such as culturally relevant coping strategies (Henry et al., 2024) and religiosity (Horesh et al., 2018). No other upcoming reviews addressing this topic were identified on PROSPERO. Therefore, in line with guidance on updating systematic reviews (Garner et al., 2016) it was deemed appropriate to update the evidence base synthesis for this topic.

This systematic review aimed to improve upon the methodology of the previous review by modifying the inclusion/exclusion criteria, using appropriately expanded search terms, and focussing exclusively on mothers. In this study, pregnancy terminations for medical reasons – here on referred to as medical terminations - such as foetal abnormalities were included considering the urgency and limited sense of agency that often accompany this form of reproductive loss. This ties into the definition of trauma more than elective terminations for non-medical reasons. Furthermore, medical terminations are usually

categorised as reproductive loss except in more conservative countries (Herbert et al., 2022). There is evidence that the mental health outcomes of medical terminations do not significantly differ from those following acute loss (Salvesen et al., 1997). This paper narrowed the scope of the Christiansen paper to reproductive loss including miscarriages, stillbirths, medical terminations, and neonatal death up to 28 days after birth (Herbert et al., 2022). Only losses up to 28 days after birth were included rather than losses up to one year after birth as this fits more with the commonly used definition of reproductive loss (Charrois et al., 2020; Herbert et al., 2022; Limbo & Kobler, 2010).

The questions this review aimed to answer were

(1) What are the prevalence rates of PTSD/PTS in mothers following incidents of reproductive loss?
(2) What are the factors associated with risk and resilience for PTSD/PTS in mothers following incidents of reproductive loss?

Materials and Methods

Search Strategy

A review protocol was registered on the PROSPERO database (registration number CRD42024512153). The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines were followed for the study selection process and reporting (see Figure 1; Page et al., 2021). The following searches were run across Embase (Ovid), Medline (Ovid), and PsychINFO (Ovid). The limits on the searches were ‘English Language’ and ‘2015 till current’. See Appendix B for further detail on the search strategy for each database.

(Trauma or PTSD or "posttraumatic stress disorder" or "posttraumatic stress" or "post-traumatic" or "posttraumatic" or "traumatic stress").ab,ti.

AND

("fetal death" or "foetal death" or "fetal loss" or "foetal loss" or miscarriage or "spontaneous abortion" or "unwanted abortion" or "prenatal death" or "pre-natal death" or "prenatal loss" or "pre-natal loss" or "prenatal bereavement" or "pre-natal bereavement" or "intra-uterine death" or "intrauterine death" or "Intra-uterine loss" or "intrauterine loss" or "pregnancy loss" or "reproductive loss" or "perinatal death" or "peri-natal death" or "perinatal loss" or "peri-natal loss" or "perinatal bereavement" or "peri-natal bereavement" or stillbirth or "infant death" or "infant loss" or "infant bereavement" or "neonatal death" or "neonatal loss" or "neonatal bereavement" or "sudden infant death syndrome" or "SIDS" or "neonatal care unit" or "NICU death").ab,ti.

Inclusion Criteria

- Quantitative studies investigating PTSD/PTS as one of the outcomes with a validated measure of PTSD or PTS symptoms
- Findings included results related to risk or resilience/protective factors for PTSD/PTS
- Participants were mothers who experienced reproductive loss (including miscarriages, stillbirths, medical terminations, and neonatal death up to 28 days after birth)
- Peer-reviewed journal articles
- English language
- October 2015 – March 2025

Exclusion Criteria

- Case reports, editorials, treatment studies including randomised controlled trials (RCTs), commentaries
- Protocols, pilot studies, feasibility studies
- Other systematic reviews

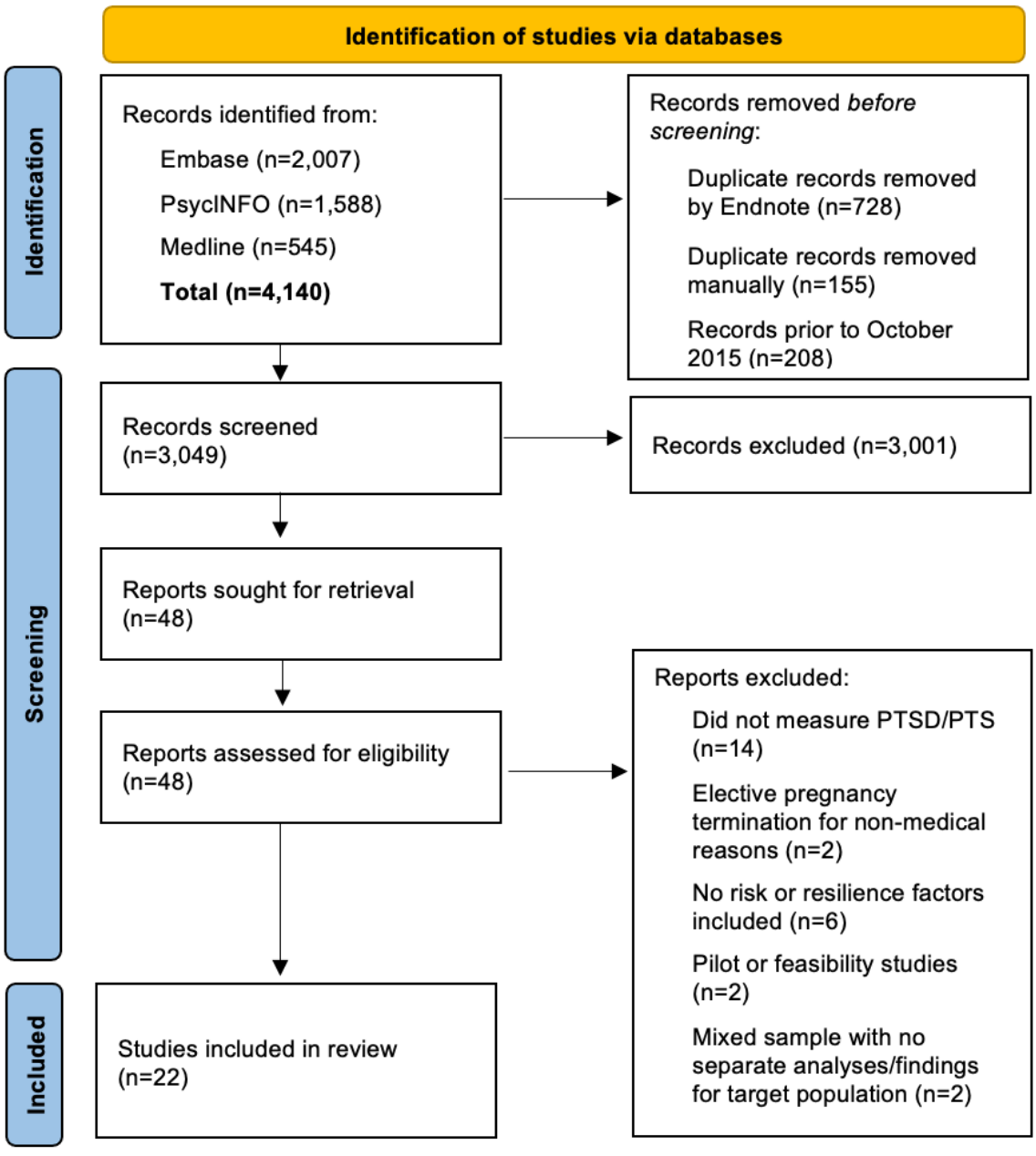
Procedure and Synthesis

The search was run on 07/03/2025. All papers were first screened for inclusion criteria by title and abstract by the author AEB. A second reviewer AL screened 20% of papers and inter-rater reliability was satisfactory (Cohen's kappa >.81). In the next phase, the full texts of included papers were screened by AEB, of which AL screened 25% and inter-rater reliability was also satisfactory (Cohen's kappa >.81). Any discrepancies between reviewers were resolved in discussion between AEB, AL and AM. The final set of included papers were then quality assessed by AEB using the Kmet Quality Assessment tool (see Table 2; Kmet et al., 2004), of which AL assessed 30% and inter-rater reliability was satisfactory (Cohen's kappa >.81).

With this tool, studies are rated using a scale from 0 to 2 for criteria relating to appropriateness of study design, recruitment strategy, and reporting of results. The option to select "not applicable" is available for some items that can only be applied to specific study designs such as controlled experimental designs. Scores are summed and divided by the total possible score to produce a number between 0 and 1. The higher the number, the higher quality of the study. The authors of the tool did not propose standard cut-off points for including studies in the synthesis of reviews (Kmet et al., 2004). In this review no cut-off points were used; however, scores were taken into consideration when synthesising the results. Studies with scores below 0.55 were interpreted with caution.

Figure 1

PRISMA Flow Diagram for Study Selection



Data was extracted by AEB, and 50% of data extraction was carried out in duplicate by AM and AL to confirm accuracy. All the extracted data are included in Tables 1 and 3. Sample characteristics are presented alphabetically, and the summary of risk and resilience factors is organised by study quality. The aim of the review was to identify prevalence estimates and both risk and resilience factors, with the primary focus of the synthesis being the categorisation of risk variables into thematic groupings. These thematic categories were derived inductively from the extracted data and were intended to highlight potential areas that might represent targets for intervention. Thematic categories were discussed and agreed between AEB and AM.

Results

Study Characteristics

Twenty-two studies met the inclusion criteria following full text screening (see Figure 1). Study characteristics are presented in Table 1. The sample sizes ranged from 28 to 873 participants, encompassing a total of 5,065 bereaved mothers. Most studies had more than 100 participants (15 [68%]) and were cross-sectional in design (16 [73%]). Participants across most studies were predominantly from white ethnic backgrounds. There were few exceptions with some samples including exclusively black (Henry et al., 2024), Iranian (Alipanahpour et al., 2021, 2023),Turkish (Baransel & Uçar, 2020), Israeli (Levy & Avitsur, 2022), or Chinese participants (Sun et al., 2020). This introduced more cultural diversity than studies included in the Christiansen review (2017). The majority of participants were married or with a partner and educated beyond high school. Mean ages ranged from 29 to 37 years old.

Eight studies used the Impact of Events Scale – Revised (IES-R), one study used the Impact of Events Scale (IES), six used the PTSD Checklist for Diagnostic and Statistical

Manual of Mental Disorders 5 (PCL-5). Two studies by the same authors used the Mississippi PTSD scale to measure PTSD (Alipanahpour et al., 2021, 2023). This scale was originally created for combat related PTSD (Keane et al., 1988), and a version for civilians was later developed which has been well validated (Lauterbach et al., 1997). The authors referenced a study which validated this measure in Iran, the country where they conducted their study. However, this study was written in Persian and no translations could be found (Goodarzi, 2003). It is hence unclear which version of the scale they used. It was assumed that the civilian version was used.

Studies used different criteria and labels for types of reproductive loss. For example, studies from the United States of America (USA) defined miscarriage as reproductive loss prior to 20 weeks of gestation, and stillbirth as reproductive loss after 20 weeks of gestation (Freedle & Kim, 2025; Henry et al., 2024). Whereas another study from Turkey used the term "perinatal loss" and defined it as loss from 22 weeks of gestation to 28 days after birth (Baransel & Uçar, 2020). Due to this heterogeneity, results were not presented according to type of loss.

Table 1

Study Characteristics

Quality Rating	Authors (Country)	Parent group[a] (N)	Type of loss (GA at loss)[b]	Design	Time since loss[c]	PTSD measure	Prevalence (%)[d]
0.72	Abiola et al., 2022 (France)	T1: Mothers (95) T2: Mothers (91) T3: Mothers (88)	Late foetal demise including termination and miscarriage (M[SD] = 23.7 weeks [5.9])	Longitudinal	T1: 15 days T2: 1 month T3: 3 months	IES-R	T1: 44% T2: 34% T3: 9%
0.36	Alipanahpour et al. 2021 (Iran)	Mothers who experienced stillbirth (40) Mothers who experienced pre-term birth (40)	Stillbirth (>20 weeks)	Cross-sectional	4-6 weeks	Mississippi PTSD Scale	90%
0.45	Alipanahpour et al., 2023 (Iran)	Mothers (104)	Induced abortion due to foetal abnormalities or maternal complications (CD) Induced abortion with other medical causes (CD) Spontaneous abortion (CD)	Longitudinal[e]	T1: immediately after loss T2: 1 month	Mississippi PTSD Scale	T1: 8% T2: 3%
0.55	Baransel & Ucar, 2018 (Turkey)	Mothers (154) Fathers (154)	Foetal demise (>22 weeks)	Cross-sectional	12 to 24 hours	IES	39.51 (15.31)[f]

			Neonatal death (<28 days after birth)				
0.82	Borrell et al., 2025 (Spain)	T1: Mothers (125) T2: Mothers (87)	Early pregnancy loss (>13 weeks)	Longitudinal	T1: 1 week T2: 5 weeks	IES-R	T1: 51% T2: 26%
1.00	Chung & Reed, 2017 (UK)	Mothers who experienced stillbirths (50) Mothers who experienced live births (50)	Stillbirth (>24 weeks)	Cross-sectional	>1 month	PDS	60%
0.89	Druguet et al., 2018 (Spain)	Mothers (28)	Foetal loss (M [SD] = 20.3 weeks [3.1])	Cross-sectional	1 to 3 years	IES-R	CD
0.91	Farren et al., 2020 (England)	Mothers with early pregnancy loss (303) Mothers with viable pregnancies (87)	Early pregnancy loss (<20 weeks)	Longitudinal	T1: 1 month T2: 3 months T3: 9 months	PDS	T1: 29% T2: 21% T3: 18%
0.89	Farren et al., 2022 (England)	Mothers (487)	Early pregnancy loss (<20 weeks)	Cross-sectional	1 month	PDS	CD
0.95	Fernandez-Pineda et al, 2024 (USA)	Mothers (71)	Miscarriage (<20 weeks)	Cross-sectional	14 to 31 months	PC-PTSD-5	64.8%
0.91	Freedle & Kim, 2025 (USA)	Mothers (219)	Miscarriage (<20 weeks) Stillbirth (>20 weeks)	Longitudinal	T1: 3 months T2: 6 months T3: 12 months	IES-R	T1: 99.5% T2: 97.9% T3: 92.8%

			Termination of pregnancy for foetal abnormality (CD)				
0.95	Gold et al., 2016 (USA)	Mothers (377) Mothers with live births (232)	Stillbirth (>20 weeks) Infant death (<28 days)	Cross-sectional	6 months	PCL-5	37%
0.86	Henry et al., 2023 (USA)	Mothers (91)	Stillbirth (>20 weeks)	Cross-sectional	6 months to 3 years	PCL-5	35%
0.82	Horesh et al., 2018 (Israel)	Mothers (97)	Pregnancy loss (>14 weeks)	Cross-sectional	M (SD) =19.86 months (26.85)	PCL-5	33%
0.86	Krosch and Shakespeare-Finch, 2016 (Australia)	Mothers (328)	Miscarriage (<20 weeks) Stillbirth (>20 weeks)	Cross-sectional	M (SD) = 4 years (5.95)	IES-R	44%
0.59	Kuhlmann et al., 2022 (Germany)	Mothers (122) Fathers (105)	Recurrent pregnancy loss (CD[g])	Cross-sectional	M (SD) = 5.04 months (4.95)	IES-R	13.7%
0.73	Kukulskiene & Žemaitiene, 2022 (Lithuania)	Mothers (839)	Early miscarriage (<14 weeks) Late miscarriage (≥14 weeks)	Cross-sectional	0 to 29 years	IES-R	44.7%
0.91	Levy & Avitsur 2022 (Israel)	Pregnancy loss: mothers (90), fathers (112) Live Birth: mothers (78), fathers (55)	Miscarriage (M [SD] = 9.9 weeks [3.3]) Stillbirth (M [SD] = 28.6 weeks [7.6]) Induced abortion (M[SD]= 13.6 [8.1])	Cross-sectional	Miscarriage M (SD)= 5.2 months (3.6) Stillbirth M (SD)= 5.4 months (3.8)	PCL-5	22.9 (17.3)[h]

		No pregnancy: mothers (245), fathers (148)					
0.68	Mendes et al 2023 (Portugal)	Mothers (873)	Early pregnancy loss (<20 weeks)	Cross-sectional	0-37+ months	PCL-5	0-1 months: 29% 2-3 months: 24.4% 4-6 months: 25.3% 7-12 months: 25.2% 13-24 months: 17.8% 25-36 months: 15.4% 37+ months: 15.2%
0.59	Ravaldi et al., 2023 (Italy)	Mothers (261)	Stillbirth (>20 weeks)	Cross-sectional	0 to 10 years	NSESSS	CD
0.91	Sun et al., 2019 (China)	Mothers (214)	Termination of pregnancy due to foetal abnormality (>14 weeks)	Cross-sectional	0 days	IES-R	CD
0.73	Wesselmann & Paris 2022 (USA)	Mothers (97)	Miscarriage (CD)	Cross-sectional	M (SD) = 20.25 years (17.7)	PCL-5	CD

Note. GA = gestational age, CD = could not be determined, M = mean, SD = standard deviation, PDS = The Posttraumatic Stress Diagnostic Scale, PC-PTSD-5 = Primary Care for PTSD screen for DSM-5 scale, PCL-5 = PTSD Checklist for DSM-5, M= mean, SD = standard deviation, NSESSS = The National Stressful Events Survey PTSD Short Scale

[a] Unless otherwise specified "mothers" and "fathers" refer to those who experienced reproductive loss
[b] For studies where gestational age at time of loss not specified in study inclusion criteria, M(SD) reported if available
[c] For studies where time since loss not specified by study inclusion criteria or imposed by study design, M(SD) reported if available
[d] For studies where prevalence was not reported, M(SD) reported if available
[e] Longitudinal data collected, however unclear whether only cross-sectional correlational analyses were run
[f] Score above 24 indicates concern for PTSD, and above 38 indicates PTSD
[g] 94.3% of pregnancy losses were early losses (<12 weeks) (94.3%), 5.7% were late losses (12-24 weeks)
[h] PCL-5 cut off is 38

Quality Assessment

Consistent with existing reviews, papers with scores above 0.80 were classified as excellent quality, 0.70 to 0.79 as good quality, 0.50 to 0.69 as fair quality, and less than 0.50 as poor quality (see Lee et al., 2020; Teixeira-Machado et al., 2019). Two studies were of poor quality, four of fair quality, three of good quality, and the remaining 13 of excellent quality (see Table 2).

The majority of studies defined their research question(s) appropriately. Many studies employed a cross-sectional design to investigate risk factors related to developing PTSD following incidents of reproductive loss (e.g. Baransel & Uçar, 2020). Higher quality cross-sectional studies defined their study aims as investigating the relationship between the factors in question, rather than their predictive validity (e.g. Druguet et al., 2018; Fernandez-Pineda et al., 2024). All studies used convenience or purposive sampling to obtain participants by recruiting them either from hospitals, support organisations, or online through social media or relevant internet forums. This sampling method is suitable for investigating sociocultural and other factors related to a target outcome (Andrade, 2021). However, this limited the representativeness of the samples and thus limited the generalisability of the findings.

Four studies measured PTSD symptoms prior to one month following the loss incident (Alipanahpour et al., 2023; Baransel & Uçar, 2020; Borrell et al., 2025; Sun et al., 2020), and seven did not specify the amount of time since the loss in their inclusion/exclusion criteria (Horesh et al., 2018; Krosch & Shakespeare-Finch, 2017; Kuhlmann et al., 2023; Kukulskienė & Žemaitienė, 2022; Levy & Avitsur, 2022; Ravaldi et al., 2023; Wesselmann & Parris, 2022). Ranges for mean time since loss varied greatly in those studies from five months (Kuhlmann et al., 2023) to 20 years (Wesselmann & Parris, 2022). Recall bias may

have affected the data for studies including those who experienced reproductive loss years ago. One limitation of studies assessing PTS symptoms prior to 1 month after the loss was that PTSD cannot be diagnosed until one month or several weeks following a traumatic incident (American Psychiatric Association, 2013). Nevertheless, the purpose of this review was to identify risk factors for developing symptoms of PTSD/PTS following reproductive loss rather than for a definitive diagnosis of PTSD. Furthermore, those with high severity of PTS symptoms shortly after the loss may be at higher risk of developing PTSD further down the line. Hence this may be a key risk factor to consider.

The majority of studies defined outcomes appropriately with references to validity, reliability, and standardised cut-off scores where relevant. Eleven studies did not provide a justification for their sample size nor report an estimate of variance, or had some statistically significant results with large standard errors (e.g. Baransel & Uçar, 2020; Kuhlmann et al., 2023; Mendes et al., 2023; Wesselmann & Parris, 2022).

The majority of analyses were either correlational or included some form of regression. For the cross-sectional studies using regression analyses, if the research question or conclusions implied some form of causality partial points were awarded for item 10 "analysis described and appropriate" on the quality assessment tool (e.g. for Krosch & Shakespeare-Finch, 2017). Outcomes and exposures require assessment of their temporal relationship to infer causality, as is the case when determining risk and resilience factors for mental health outcomes (Reichenheim & Coutinho, 2010). Criteria 5, 6, and 7 only applied to controlled experimental studies, hence these criteria were not applicable to any studies included in this review.

Most studies controlled for potential confounding variables such as postnatal depression (Chung & Reed, 2017) or trauma prior to reproductive loss (Fernandez-Pineda et al., 2024). Only three studies were descriptive or exploratory and did not require controlling for confounding (Abiola et al., 2022; Druguet, Nuño, et al., 2018; Farren et al., 2022). Overall, most studies consistently reported results in sufficient detail and results supported the conclusions.

Table 2

Quality Assessment

Year	Authors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
2017	Chung & Reed	2	2	2	2	n/a	n/a	n/a	2	2	2	2	2	2	2	1.00
2024	Fernandez-Pineda et al.	2	2	2	2	n/a	n/a	n/a	2	2	1	2	2	2	2	0.95
2016	Gold et al.	1	2	2	2	n/a	n/a	n/a	2	2	2	2	2	2	2	0.95
2025	Freedle & Kim	2	2	2	2	n/a	n/a	n/a	1	2	2	2	1	2	2	0.91
2022	Levy & Avitsur	2	1	2	2	n/a	n/a	n/a	2	1	2	2	2	2	2	0.91
2019	Sun et al.	2	1	1	2	n/a	n/a	n/a	2	2	2	2	2	2	2	0.91
2020	Farren et al	2	2	2	1	n/a	n/a	n/a	2	1	2	2	2	2	2	0.91
2022	Farren et al	1	2	2	2	n/a	n/a	n/a	2	2	2	n/a	n/a	1	2	0.89
2018	Druguet et al.	2	2	2	2	n/a	n/a	n/a	1	1	2	n/a	n/a	2	2	0.89
2023	Henry et al.	2	1	2	2	n/a	n/a	n/a	1	1	2	2	2	2	2	0.86
2016	Krosch & Shakespeare-Finch	2	1	1	2	n/a	n/a	n/a	2	2	1	2	2	2	2	0.86
2025	Borrell et al	2	2	1	2	n/a	n/a	n/a	2	2	1	1	2	1	2	0.82
2018	Horesh et al.	2	1	1	2	n/a	n/a	n/a	1	1	2	2	2	2	2	0.82
2022	Kukulskiene & Žemaitiene	1	1	1	2	n/a	n/a	n/a	1	2	1	2	2	2	1	0.73
2022	Wesselmann & Paris	2	2	1	1	n/a	n/a	n/a	2	1	2	0	1	2	2	0.73
2022	Abiola et al	1	2	2	1	n/a	n/a	n/a	2	1	1	n/a	n/a	1	2	0.72
2023	Mendes et al	2	1	1	2	n/a	n/a	n/a	2	1	2	0	0	2	2	0.68
2022	Kuhlmann et al	1	1	1	1	n/a	n/a	n/a	2	1	2	0	1	1	2	0.59
2023	Ravaldi et al.	1	1	1	2	n/a	n/a	n/a	2	2	0	2	0	1	1	0.59
2018	Baransel & Ucar	2	1	1	2	n/a	n/a	n/a	1	1	1	0	0	2	1	0.55
2023	Alipanahpour et al.	1	2	1	1	n/a	n/a	n/a	1	2	1	0	0	0	1	0.45
2021	Alipanahpour et al.	2	1	1	1	n/a	n/a	n/a	1	1	1	0	0	0	0	0.36

Note. On the following 14 items criteria were rated as 0 = no, 1 = partial, 2 = yes, and n/a = not applicable. 1. Question or objectives sufficiently described? 2. Design evident and appropriate to answer study question? 3. Method of subject selection described and appropriate? 4. Subject characteristics sufficiently described? 5. If random allocation was possible, is it described? 6. If interventional and blinding of investigators to intervention was possible, is it reported? 7. If interventional and blinding of participants to intervention was possible, is it reported? 8. Outcomes and (if applicable) exposure measure(s) well defined and robust to measurement/misclassification

bias? 9. Sample size appropriate? 10. Analysis described and appropriate? 11. Some estimate of variance is reported for the main results/outcomes? 12. Controlled for confounding? 13. Results reported in sufficient detail? 14. Do the results support the conclusions?

Prevalence

Prevalence rates of PTSD/PTS varied widely from 3% to 99.5%. Sampling of studies was opportunistic with recruitment taking place through support organisations, internet forums, or in hospitals. The former two settings increase the risk of self-selection bias as mothers seeking such support or information may have higher symptom levels and are not representative samples. Thus, in line with the Christiansen review (2017) prevalence rates may be under or over estimated. Studies sampling across various time points evidence that the prevalence of PTSD decreased over time. This is consistent with natural recovery in the PTSD literature (Hiller et al., 2016). Despite this, it was clear that in many cases PTS symptoms persisted over time having long lasting impacts months and even years after the loss.

Psychiatric Risk Factors

Psychiatric factors included pre-existing diagnoses or symptoms of mental illness. All studies investigating psychiatric factors except one (Kuhlmann et al., 2023) were of good or excellent quality.

Severity of perinatal grief following an incident of loss was related to increased PTS with a moderate to strong effect size (Druguet et al., 2018; Krosch & Shakespeare-Finch, 2017). Krosch and Shakespeare-Finch (2017) found that grief explained the variance in PTS symptoms above and beyond other factors such as core belief disruption. Though Christiansen (2017) referenced the importance of distinguishing mothers experiencing natural grief from those with PTS symptoms, no studies in their review investigated grief as a risk factor. Future longitudinal studies could investigate whether assessing severity of perinatal

grief may be a way to identify women at high risk of developing PTS.

Depression has been established as an important construct in perinatal mental health with links to adverse emotional and behavioural outcomes (Howard & Khalifeh, 2020). Symptoms of depression were significantly associated with increased PTSD symptomatology (Chung & Reed, 2017; Henry et al., 2024; Horesh et al., 2018; Kuhlmann et al., 2023). Substance use, anxiety, and other psychiatric disorders were also associated with increased PTSD scores with medium to large effect sizes (Farren et al., 2022; Henry et al., 2024; Kuhlmann et al., 2023). One study, albeit cross-sectional, found that prior history of depression and prior PTSD were both independent predictors of PTSD for women who experienced reproductive loss compared to those who experienced live births (Gold et al., 2016).

History of prior traumas such as natural disasters, car accidents, or physical abuse – excluding prior traumatic incidents of reproductive loss - increased the risk of PTS (Fernandez-Pineda et al., 2024; Freedle & Kim, 2025; Gold et al., 2016). Prior trauma was therefore a key risk factor, irrespective of whether these experiences led to previous diagnoses of PTSD. This highlights the compounding effect of trauma on the development of PTSD. One study by Henry et al (2024) also found this effect, however they measured prior trauma using the modified version of the Life Stressors Check List-Revised (LSC-R). The unmodified version of this checklist includes questions about reproductive loss, and it was unclear whether Henry et al removed these questions or not.

Interestingly, Freedle and Kim's study (2025) found that while PTSD was a predictor of post traumatic growth (PTG) following an incident of reproductive loss, PTG was not a predictor of PTSD.

Psychiatric Resilience Factors

None identified.

Cognitive Risk Factors

Cognitive risk factors included mental processes related to coping with or understanding of the experience of reproductive loss. All studies investigating cognitive factors were of good or excellent quality. In line with Christiansen's review (2017), developing negative beliefs about the self, the world, and the future positively predicted PTS with weak to moderate effect sizes (Chung & Reed, 2017; Krosch & Shakespeare-Finch, 2017). However, in multivariable analyses this effect was no longer significant after symptoms of perinatal grief were accounted for (Krosch & Shakespeare-Finch, 2017). While negative beliefs may be important, other psychiatric factors may have stronger influences on PTS.

Appraisals of the incident of reproductive loss were associated with significant increases in PTS (Fernandez-Pineda et al., 2024; Levy & Avitsur, 2022). The more personal meaning was attributed to the miscarriage - including self-blame, personal sense of loss, and the subjective severity rating of the loss as a life altering event – the higher the likelihood of PTSD (Fernandez-Pineda et al., 2024).

Results regarding attributions of responsibility were inconclusive. Mothers who experienced a spontaneous miscarriage had more severe PTS if they attributed the loss to chance (Levy & Avitsur, 2022). The same effect was not found for those who experienced a stillbirth or medical termination (Levy & Avitsur, 2022). Another study on women who experienced stillbirth found that locus of control, whether internal or external, was not significantly related to PTS (Chung & Reed, 2017). Christiansen's review (2017) included one study investigating this risk factor and they found that attributions of responsibility

explained 43-45% of the variance of PTS in bereaved parents (Jind, 2003). It may be that the importance placed on determining a causal attribution plays a bigger role in the development of PTSD symptoms rather than the attribution itself.

One study of excellent quality investigated the Strong Black Woman (SBW) construct which is a set of beliefs sometimes held by Black women about having to manage trauma independently with stoicism and strength (Henry et al., 2024). Greater levels of these beliefs were associated with increased PTS (Henry et al., 2024).

Consistent with the Christiansen review (2017), maladaptive avoidant coping strategies such as distraction were positively correlated to increased PTS with small to medium effect sizes (Henry et al., 2024; Kuhlmann et al., 2023).

Similar to Christiansen's (2017) findings, peri-traumatic dissociation was found to be predictive of PTS scores at one month after the loss (Abiola et al., 2022). However, this effect was not significant at three months (Abiola et al., 2022).

Results around the correlation between conceptualising the pregnancy as "real" (i.e. thinking of the foetus as a future baby with personality traits) and PTS were inconclusive (Krosch & Shakespeare-Finch, 2017; Wesselmann & Parris, 2022). This would be an interesting factor to explore further.

Cognitive Resilience Factors

None reported.

Demographic Risk Factors

Demographic risk factors included general characteristics about individuals such as age, income, and ethnicity. The majority of studies investigating these factors were of good or

excellent quality, except two which were of fair quality (Baransel & Uçar, 2020; Kuhlmann et al., 2023). In a study conducted in the USA, women with public insurance had twice the odds of screening positive for PTSD (Gold et al., 2016).

Demographic Resilience Factors

Two studies employing multivariable analyses found that older age was associated with a reduced risk of PTS with a medium effect size (Henry et al., 2024; Horesh et al., 2018), with Horesh et al., finding it to be the strongest predictor of PTSD. One study of fair quality also found this effect but only for the intrusion subscale on the IES-R (Kuhlmann et al., 2023). Three other studies did not find age to be significant; however analyses were correlational (Chung & Reed, 2017; Farren et al., 2022; Gold et al., 2016). This factor was not mentioned in Christiansen's review (2017). Future studies should therefore consider controlling for the effect of age.

In line with Christiansen's review (2017), other demographic factors such as education (Baransel & Uçar, 2020; Chung & Reed, 2017; Farren et al., 2022; Gold et al., 2016; Henry et al., 2024; Kukulskienė & Žemaitienė, 2022), income (Baransel & Uçar, 2020; Chung & Reed, 2017), or race (Farren et al., 2022; Gold et al., 2016) were not associated with PTSD.

In one study of fair quality, the text suggested that employed women had lower PTSD scores, whereas the tables indicated that unemployed women had lower scores (Baransel & Uçar, 2020). The authors were emailed for clarification and no response was received.

Obstetric Risk Factors

Obstetric factors included current or historical characteristics or conditions related to pregnancy or childbirth. Most studies investigating these factors were of good or excellent

quality, except for three studies which were of fair quality (Baransel & Uçar, 2020; Kuhlmann et al., 2023; Mendes et al., 2023), and one of poor quality (Alipanahpour et al., 2023).

Similar to Christiansen's review (2017) findings, prior losses may increase PTSD however results remain inconclusive. Two studies by Farren et al. found that having a history of reproductive loss was positively related to PTS (Farren et al., 2020, 2022). The 2020 study was longitudinal and found that women who experienced previous losses were five times more likely to experience PTS. Those who experienced further loss during the follow up period of the study were almost 15 times more likely to experience PTS. However, confidence intervals were very wide, precluding drawing any conclusions about these findings. The 2022 study was exploratory and found that history of loss was moderately effective in distinguishing individuals with and without PTS with an Area Under the Curve (AUC) of 0.57 (CI = 0.52-0.63). However, AUC's under 0.8 are considered of limited clinical utility (Çorbacıoğlu & Aksel, 2023). Four other studies that examined this factor did not find a significant effect (Baransel & Uçar, 2020; Gold et al., 2016; Horesh et al., 2018; Krosch & Shakespeare-Finch, 2017). Number of previous miscarriages was also not found to be significant (Kukulskienė & Žemaitienė, 2022).

Later week of gestation at the time of loss may be positively related to PTS (Baransel & Uçar, 2020; Horesh et al., 2018), but this was inconclusive (Farren et al., 2022; Krosch & Shakespeare-Finch, 2017). Though findings regarding gestational age were also inconclusive in the Christiansen review (2017), there was some evidence that earlier losses were associated with higher symptom levels. This inconsistency may be the result of methodological issues with sampling and heterogeneity in definitions and cut off points for different types of loss.

Conceiving using a form of assisted reproduction such as IVF was not related to PTS (Abiola et al., 2022; Farren et al., 2020, 2022). Farren et al. (2022) found that amount of time to conceive was moderately effective in distinguishing individuals with and without PTS with an AUC of 0.58, CI (0.52-0.64). As described above, this study was exploratory and AUC's under 0.8 are of limited clinical utility. This suggests that the desire to have a baby may not be related to PTS severity.

In a novel finding, women with curettages – a procedure to clear the lining of the uterus following reproductive loss - had significantly higher PTS scores than women with no curettages (Kuhlmann et al., 2023). This was a plausible finding as a curettage is an invasive procedure and may increase the number of complications and recovery time following reproductive loss.

Consistent with the Christiansen study (2017), results were inconclusive regarding interacting with the foetal corpse post-loss. Two studies found that seeing or holding the infant post-loss did not impact PTS (Baransel & Uçar, 2020; Chung & Reed, 2017), whereas Abiola et al. found that this positively predicted PTS three months post-partum (Abiola et al., 2022). Women who did not see or hold their baby reported not being told that this was possible, or their baby being described in a way that made them scared to do so (Gold et al., 2016). Half of women who did not hold their baby expressed regret, and the other half were glad (Gold et al., 2016). Perhaps the more relevant factor may be giving the mother a sense of agency to make an informed decision about the management of the loss (Wesselmann & Parris, 2022). The more women recalled feeling able to confront people that were insensitive or dismissive about their loss, and the more they recalled their wishes being respected regarding their care following the loss, the fewer trauma symptoms they reported (Wesselmann & Parris, 2022).

Obstetric Resilience Factors

Having other children was negatively associated with PTS with medium to strong effect sizes (Fernandez-Pineda et al., 2024; Krosch & Shakespeare-Finch, 2017; Kukulskienė & Žemaitienė, 2022). Kukulskienė and Žemaitienė's study recruited women who experienced reproductive loss between 1993 to 2022, but did not specify in their outcome measures whether participants had children before or after the loss. However, Koresh and Shakespeare-Finch (2017) and Fernandez-Pineda et al. (2024) specified that this effect related to having children after the loss, and did not find a significant effect for having children before the loss. This updated the finding in the Christiansen review where no study examined whether children born after or before the loss affected PTSD differently (Christiansen, 2017). Horesh et al's study on the other hand did not find that having children was significantly correlated to PTS (Horesh et al., 2018). No study has qualitatively examined why having children may be protective or not. This may provide some insight into the nuances around why some studies may find this effect and others not.

Six studies found an inverse relationship between time since the loss and severity of PTS symptoms (Borrell et al., 2025; Farren et al., 2020; Freedle & Kim, 2025; Horesh et al., 2018; Mendes et al., 2023; Wesselmann & Parris, 2022). Three of these studies were longitudinal and examined PTS over the course of 1, 9, and 12 months post-loss (Borrell et al., 2025; Farren et al., 2020; Freedle & Kim, 2025). Three other cross-sectional studies did not find the effect of time to be significant, one of which was of poor quality (Alipanahpour et al., 2023; Gold et al., 2016; Krosch & Shakespeare-Finch, 2017). In one of the two other high quality studies, it was not significant when entered into final multivariate regression model including perinatal grief and core belief disruption (Krosch & Shakespeare-Finch, 2017). However it was among the three predominant loss context factors explaining 18% of

the variance in PTS symptoms (Krosch & Shakespeare-Finch, 2017). There is therefore some evidence that time since loss may contribute to decreases in PTS, consistent with the Christiansen review (2017) and consistent with natural recovery in the general PTSD literature.

Psychosocial Risk Factors

Interpersonal interactions and perceptions of social support were significant predictors of PTS. Intimate Partner Violence (IPV) during the pregnancy was associated with significantly increased odds of developing PTSD (OR 2.12; Gold et al., 2016). Perceived social ostracism was also correlated to PTS with a strong to moderate effect size (Wesselmann & Parris, 2022).

Another study found that partners' psychological processes could impact the development of PTS symptoms (Kuhlmann et al., 2023). Partners using trivialisation or avoidance as coping strategies was positively correlated to PTS symptoms in women (Kuhlmann et al., 2023). However, partners' depression, anxiety, and perception of social support did not impact PTS (Kuhlmann et al., 2023). This adds to Christiansen's (2017) findings that in couples partner blame, self-blame, and partner's PTSD were associated to increased PTSD. Therefore, partner's reactions to the loss may be an important psychosocial risk factor for PTSD. This aligns with the wider literature regarding the importance of social support, particularly from partners, in perinatal mental health (Antoniou et al., 2021). This also highlights the potential for couple focussed interventions.

One study by Henry et al., (2024) investigated the impact of coping strategies preferred by individuals from Black ethnic backgrounds. Africultural ritual-centred coping involving rituals such as lighting candles was correlated with increased PTS (Henry et al.,

2024). A proposed mechanism or reason for this correlation was unclear. However perhaps greater reliance on ritual-centred coping may indicate greater reliance on external causal attributions, relating this finding back to potential cognitive risk factors. This study was the only study including those from the Christiansen (2017) review that investigated culturally relevant coping strategies, highlighting the need for further research in this area.

Psychosocial Resilience Factors

Four studies found that social support was associated with decreased PTS scores with a medium to strong effect size (Gold et al., 2016; Henry et al., 2024; Kuhlmann et al., 2023; Kukulskienė & Žemaitienė, 2022). One study by Sun et al., found that this finding also applied to women who experienced medical terminations due to foetal abnormalities (Sun et al., 2020). Only one study found that perceived social support did not significantly impact PTS (Levy & Avitsur, 2022). The COVID19 pandemic increased the risk of developing PTS in those who relied more on social support as a coping strategy (Henry et al., 2024) with pandemic specific stressors increasing feelings of isolation and stress (Fernandez-Pineda et al., 2024). This highlights the importance of considering contextual and historical factors.

Two studies found that religiosity was inversely correlated to PTS (Alipanahpour et al., 2023; Horesh et al., 2018). These studies were conducted in Iran and Israel where religion holds significant cultural influence. Perhaps in such religious communities, religiosity is associated with higher levels of support which may partly explain this protective effect (Henry et al., 2024). In the Iranian study, this effect was only found for medical terminations due to causes other than foetal abnormalities (i.e. blighted ovum), and not for medical terminations due to foetal abnormalities or miscarriages (Alipanahpour et al., 2023). An earlier study by Alipanahpour et al. on women who experienced stillbirth found a positive

correlation between religiosity and PTS with a moderate effect size (Alipanahpour et al., 2021). These studies were of poor quality so results should be interpreted with caution. Further research should unpick these nuances further to examine whether religiosity impacts PTS differently due to interactions between types of loss and locus of control or social support.

Table 3

Data Extraction Table

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
1.00	**Chung & Reed, 2017 (UK)**	**Risk**	Post-natal depression (r = 0.66**,f^2 = 0.75**) Other psychiatric morbidity (r=0.57**)	Posttraumatic cognitions (f^2 = 0.14*, r=0.56**)	-	-	-
		Resilience	-	-	-	-	-
		ns	-	Locus of control	Age, marital status, education, income	Seeing/holding infant	Keeping mementos, attending funeral
0.95	**Fernandez-Pineda et al, 2024 (USA)**	**Risk**	Previous trauma (OR 6.74**)	Personal significance (OR1.12**)	-	-	-
		Resilience	-	-	-	Having a baby post loss (OR 0.12**)	-
		ns	-	-	-	-	-
0.91	**Freedle & Kim, 2025 (USA)**	**Risk**	Past trauma ($\eta 2_p$ = 0.025**)	-	-	-	-
		Resilience	-	-	-	Time ($\eta 2$= .17***)	-
		ns	PTG	-	-	-	-
0.95	**Gold et al., 2016 (USA)**	**Risk**	Prior depression or bipolar	-		-	IPV (OR 2.12*)

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
			disorder (OR 3.72***) Prior PTSD (OR 2.96**)		Public insurance (OR 2.01**)		
		Resilience	-	-	-	Pregnant post-loss vs non-pregnant (27% vs 41%*)	Social support (OR < 0.88**)
		ns	-	-	Age, education, race	Time since loss, type of loss, prior loss	-
0.91	**Farren et al., 2020 (England)**	**Risk**	-	-	-	History of any EPL (OR 5.13*) Further loss during follow-up period of study (OR 14.7*)	-
		Resilience	-	-	-	Time (OR 0.8 per month*)	-
		ns	-	-	-	Type of loss, age, IVF	-
0.86	**Henry et al., 2023 (USA)**	**Risk**	Previous trauma (r=.32**), (β=.23*) Depression and anxiety (r=0.75-0.80**) Substance use (r=0.34**)	SBW belief (r= .44***), (β=.28**) Distraction/minimising (r=0.34**)	-	-	Ritual centred coping (r=0.23*) Collective coping (β=.34***)
		Resilience	-	-	Age (r= −.48**), (β=-.24*)	-	Social support (r= −.35**), (β=-.32**)

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
		ns	-	-	Education	-	Spiritual centred coping
0.91	**Levy & Avitsur 2022 (Israel)**	**Risk**	-	Attribution to chance (B=5.5*) *only for miscarriage*	-	-	-
		Resilience	-	-	-	-	-
		ns	-	-	-	Type of loss	Social support
0.91	**Sun et al., 2019 (China)**	**Risk**	-	-	-	-	-
		Resilience	-	-	-	-	Family support (r=0.236***)
		ns	-	-	-	-	-
0.89	**Druguet et al., 2018 (Spain)**	**Risk**	grief (r=0.374*)	-	-	-	-
		Resilience	-	-	-	-	-
		ns	-	-	-	-	-
0.89	**Farren et al., 2022 (England)**	**Risk**	Past or current psychiatric disorder (AUC 0.61, R^2= .076***)	-	-	Past losses (AUC 0.57, R^2= .027**) Time to conceive (AUC 0.58, R^2= .036**)	-
		Resilience	-	-	-	-	-
		ns	-	-	Ethnicity, age, education, previous children	Type of loss, loss management strategy, seen foetal heart on ultrasound, overnight admission, previous termination, IVF conception, duration of time	-

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
						to diagnosis from first scan, gestational age	
0.86	**Krosch and Shakespeare-Finch, 2016 (Australia)**	**Risk**	-	Step 2: core belief disruption (R^2= 0.21, ΔR^2=0.04***), (r=0.27***) Severity of trauma (r=0.21***)	-	Step 1: Loss context (R^2= 0.17***) Time since loss (r=-0.23***)	Step 3: Grief (R^2= 0.54, ΔR^2=0.33***), (r=0.71***)
		Resilience	-	-	-	Having children after (r=0.71***)	-
		ns				Personhood of foetus, previous losses, having children before	
0.82	**Borrell et al., 2025 (Spain)**	**Risk**	-	-	-	-	-
		Resilience	-	-	-	Time since loss (CD)	-
		ns	-	-	-	Knowing genetic cause of loss	-
0.82	**Horesh et al., 2018 (Israel)**	**Risk**	MDD (CD***)	-	-	Gestational age (β = 0.26**)	-
		Resilience	-	-	Age (β = -0.35**)	Time since loss (β = -0.24*)	Religiosity (β = -0.31**)
		ns	-	-	-	Type of loss, having children, previous pregnancy losses	-
0.73	**Kukulskiene & Žemaitiene, 2022 (Lithuania)**	**Risk**	-	-	-	Not having children (OR 2.45*) Number of miscarriages (OR 1.17*) Emotional wellbeing post loss (OR 1.39*)	Impaired relationship with body (OR 2.00*) Insufficient social support (OR 1.13*)

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
		Resilience	-	-	-	Physical wellbeing post loss (OR 0.92*)	-
		ns	-	-	Education	Type of loss	-
0.73	**Wesselmann and Paris 2022 (USA)**	**Risk**	-	-	-	-	Perceived ostracism (r=0.54**), (β =0.41***, ΔR^2=0.12***) Grief reality factor (r=0.19†, β=0.15*)
		Resilience	-	-	-	Time since last miscarriage (β = - 0.28***)	Grief confrontation factor (r=-0.26)** Grief congruence factor (r= -0.54***), (β = -0.30**)
		ns	-	-	-	-	-
0.72	**Abiola et al., 2022 (France)**	**Risk**	T2: PTSD score at 1 month after loss (CD***)	T1: peritraumatic dissociation at time of delivery (CD*)	-	T1: holding foetal corpse in delivery room (CD*) T1 & T2: seeing foetal corpse post-partum (CD*), organisation of a funeral (CD*)	-
		Resilience	-	-	-		-
		ns	-	T2: peritraumatic dissociation at time of delivery	-	T1: Term of pregnancy, planned/unplanned/ assisted reproduction, cause of foetal demise, seeing foetal corpse	-

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
						in delivery room, loss declared to civil registry	
0.68	**Mendes et al 2023 (Portugal)**	**Risk**	-	-		-	-
		Resilience	-	-		Time since loss (***ϕ***=0.13*), (η2 = 0.03***)	-
		ns	-	-		-	-
0.59	**Kuhlmann et al., 2022 (Germany)**	**Risk**	Depression (β=0.424***) Anxiety (β=0.495***)	Depressive coping (r=0.72**) Active and problem-orientated coping (r=0.30**) Distraction and self-enhancement (r=0.20**) Trivialisation and wishful thinking (r=0.61**),(β=0.606***)	-	Number of curettages (CD*)	Partner's trivialization and wishful thinking (β=0.218*) Partner's avoidance (β=0.224*)
		Resilience	-	-	Age (CD*) *(only for intrusion subscale)*	-	Social support (β=-0.385***)
		ns	-	-	-	Number of losses, having children	Partner's depression and anxiety, partner's perceived social support
0.59		**Risk**	-	-	-	-	-

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
	Ravaldi et al., 2023 (Italy)	**Resilience**	**-**	**-**	**-**	Adherence to stillbirth checklist guidelines (OR 0.21*), (R^2=0.098***) Subsequent pregnancy post-loss (OR 0.30*)	**-**
		ns	**-**	**-**	**-**	**-**	**-**
0.55	**Baransel & Ucar, 2018 (Turkey)**	**Risk**	-	-	-	-	-
		Resilience	**-**	-	employed (CD**)	Time of loss between 30 and 37 weeks (CD*)	-
		ns	-	-	age, educational level, income, smoking, alcohol	Parity, number of living children, previous losses, regular pregnancy patterns, partner participation in pregnancy follow up, knowing baby's sex, determining baby's name, mode of delivery, type of loss, number of days newborn lived, desire for pregnancy, planning for future pregnancy, seeing foetus on ultrasound, feeling/observing movements of the baby, seeing baby after birth, how the baby was seen after birth (covered, naked), touching baby after birth, how baby was touched after birth (covered, naked), taking a picture of baby after birth,	Spousal communication, spousal support, health professional support. sharing loss with friends, having info about counselling resources

Quality Score	Authors (country)	Factor	Psychiatric	Cognitive	Demographic	Obstetric	Psychosocial
						how the picture was taken (covered, naked), funeral for baby	
0.45	**Alipanahpour et al., 2023 (Iran)**	**Risk**	-	-	-	-	-
		Resilience	**-**	-	-	-	Religious attitude (r=-0.26*) *only for induced abortion*
		ns	**-**	-	-	Time since loss	
0.36	**Alipanahpour et al. 2021 (Iran)**	**Risk**	-	-	-	-	Religious attitude (r=0.37*)
		Resilience	**-**	**-**	**-**	**-**	-
		ns	**-**	**-**	**-**	**-**	-

Note. ns = not significant, OR = odds ratio, r = Pearson's r, CD = could not be determined. *p<0.05, **p<0.01, ***p<0.001, †p<0.07

Discussion

This review aimed to summarise the evidence for prevalence estimates and the risk and resilience factors related to PTS/PTSD following an incident of reproductive loss. The search of the most recent review on this topic was conducted in 2015 and focussed on mothers, fathers, and infant losses up to one year after birth (Christiansen, 2017). This review included 22 studies and focussed only on mothers and reproductive losses up to 28 days after birth. Results revealed risk and resilience factors which were allocated to categories including psychiatric, cognitive, demographic, obstetric, and psychosocial factors.

Summary of Findings and Directions for Future Research

Prevalence rates were very wide and were not reliable due to sampling of studies being opportunistic without representative samples. The more time had passed since the incident of loss the more estimates decreased. Trauma symptoms decreasing over time is consistent with some of the literature (Kearns et al., 2012). However, in many cases symptoms persisted years and even decades after the loss. This signifies the long-lasting impact of reproductive loss and continued need for identifying those most at risk of developing enduring PTSD symptoms.

Of the psychiatric risk factors, there was evidence that prior trauma, perinatal grief, and symptoms of depression played important roles in predicting PTSD and their effects were strong enough to persist in the context of other associations. Prior trauma and grief were novel risk factors not identified in the Christiansen review (2017). In the wider PTSD literature, grief and depression symptoms are likely to overlap significantly with the construct of PTSD, specifically through the cognitive process of rumination (Duffy & Wild, 2023; Roley et al., 2015). Though symptoms of grief can overshadow symptoms of PTS, the two constructs are independent and it is important to distinguish between the two presentations

(Bennett et al., 2008; Christiansen, 2017). A history of multiple traumas is usually related to increased risk of PTSD (Green et al., 2000; Scott, 2007). However, replicating Christiansen's review, findings were inconclusive regarding whether having a history of reproductive losses was a risk factor for PTSD. Assessing the severity of subjective trauma ratings for previous reproductive loss experiences rather than history of reproductive loss may shed some light on the inconsistencies found. Bereaved mothers presenting with severe levels of grief, depression, or trauma histories – particularly trauma unrelated to experiences of reproductive loss - should be screened for PTSD.

In this review, some cognitive processes were identified as risk and resilience factors. Core belief disruption and appraisals related to the trauma of the reproductive loss were related to increased PTS. This was in line with the findings of the Christiansen review (2017) and the cognitive model of PTSD where the disorder develops as a consequence of persistent negative appraisals of the incident (Ehlers & Clark, 2000). Assessing cognitive processes may therefore help identify women who are at high risk of developing PTSD. Consistent with the Christiansen review (2017), avoidance and distraction were not effective coping mechanisms and were related to increased PTS. However, the studies measuring this construct may have been measuring the avoidant symptomatology characteristic of PTSD rather than a risk factor.

While PTG did not predict PTSD, PTSD predicted PTG particularly in the earlier months following reproductive loss. Future studies could aim to discern which groups of women with PTSD develop PTG and why. This understanding may help early intervention by increasing resilience through PTG which is related to finding an increased sense of meaning and purpose (Triplett et al., 2012).

In line with the Christiansen review (2017), most demographic factors such as income, level of education, and ethnicity did not significantly predict PTS. However, there

was some evidence that older age may be a protective factor. This is consistent with the wider literature on PTSD where older age has been found to be related to lower levels of distress and steeper declines in PTS symptoms over time (Fontana & Rosenheck, 1994; Mosher & Danoff-Burg, 2005; Scott et al., 2013).

Finally, the psychosocial resilience factors mainly involved experiences of social support, which are strong protective factors for mental distress (Fasihi Harandi et al., 2017). Overall, the findings in this review were more focussed on the risk factors. Future research could be directed towards investigating more resilience factors for a richer understanding of what may protect women from developing PTSD.

Methodological Issues

Ten years after the Christiansen review, it remains true that almost no research is conducted on parents under the age of 18, LGBTQ+ couples, on multiple simultaneous losses or losses where one or more infants from the same pregnancy survived. Only one study from the latter category was found (Druguet et al., 2018) indicating the need for further research in these areas. Consistent with the Christiansen review, the majority of studies in this review included samples where most women were of white ethnicity. Even in studies where ethnicity was controlled for in the analysis, the variance in the samples may not have been high enough to detect a meaningful difference in the results. No studies included people from the LGBTQ+ community, and this is an important limitation as this group may face unique risk factors related to psychological distress (Meyer, 2003).

Compared to the Christiansen study (2017), there were more studies conducted in non-Western countries such as China, Israel, Iran, and Turkey. The findings highlight important differences in societal expectations, social support, and belief systems which vary widely between countries and cultures. For example, religiosity may have a different effect in

countries like Israel or Iran compared to the UK. Further research on the effects of culturally relevant coping strategies or beliefs is warranted.

Consistent with reviews in the wider perinatal mental health literature, there was significant heterogeneity in definitions of types of reproductive loss (Lee et al., 2017; Mergl et al., 2022). This limited the ability to synthesise results according to type of loss. This could be addressed by future studies using globally standardised classifications for types of loss such as those outlined in the World Health Organisation (WHO) application of the International Classification of Diseases and Related Health Problems (ICD-10) to perinatal deaths (Allanson et al., 2016). This approach categorises losses based on time of loss in the antepartum (before labour), intrapartum (during labour but before delivery), or neonatal period (up to 7 days after delivery). Risk and resilience factors specific to each type of loss can then be identified more easily.

Similar to the previous review, one major methodological limitation was that all studies recruited women *after* they experienced the loss. This limits the generalisability of these findings, particularly considering some studies took place decades after the loss. This introduces a recall bias which may be especially pertinent in bereaved samples (Christiansen, 2017). However, the advantage of the wide range of time since loss is that it captures those with chronic PTSD and those with acute PTSD. Future studies could perhaps distinguish between the risk factors for these.

The sampling method used in all studies was opportunistic and as such samples were not representative. Future studies could aim to recruit bereaved mothers from non-help seeking settings. Moreover, most studies were cross-sectional in design limiting conclusions about the predictive validity of the risk and resilience factors identified in this review. Christiansen (2017) drew similar conclusions in their review, calling for future prospective

studies. These studies can recruit pregnant women prior to any incidents of loss and follow up with them across several time points. This will allow for meaningful comparisons between those who experience loss versus those who experience live births. These studies are resource intensive and may have high attrition rates, however, would yield valuable results. To this author's knowledge no studies with this design have yet been conducted.

Limitations

This review conducted searches only across three databases. Some valuable findings from other databases such as Web of Science or Scopus may have been missed. While focussing this review on mothers helped pinpoint the risk and resilience factors specific to this group, it would be useful to replicate this review for bereaved fathers as well.

Conclusion

It is clear that good quality research is being conducted on this topic, considering the number of papers identified in the 10 years since the Christiansen review. However, more research is needed to examine the risk and resilience factors related to reproductive loss in mothers. In line with the Christiansen review, though such studies are more resource intensive, longitudinal studies including multivariate analyses will help further consolidate some of the findings. This will help identify women who are at higher risk of developing PTSD following incidents of reproductive loss which will aid in prevention.

References

Abiola, L., Legendre, G., Spiers, A., Parot-Schinkel, E., Hamel, J.-F., Duverger, P., Bouet, P.-E., Descamps, P., Quelen, C., Gillard, P., & Riquin, E. (2022). Late fetal demise, a risk factor for post-traumatic stress disorder. Scientific Reports, 12(1), 12364. https://doi.org/10.1038/s41598-022-16683-5

Alipanahpour, S., Zarshenas, M., & Akbarzadeh, M. (2021). Promotion of posttraumatic stress disorder following traumatic birth experiences and the influence of maternity religious Attitude: A correlational study. Journal of Education and Health Promotion, 10(1), 385. https://doi.org/10.4103/jehp.jehp_924_20

Alipanahpour, S., Zarshenas, M., Taheri, M., & Akbarzadeh, M. (2023). A Cross-sectional Study of Psychosocial Problems Following Therapeutic Abortion With the Mother's Spiritual Experiences. International Journal of Women's Health and Reproduction Sciences, 11(2), 65–72. https://doi.org/10.15296/ijwhr.2023.12

Allanson, E., Tunçalp, Ö., Gardosi, J., Pattinson, R. C., Erwich, J. J. H., Flenady, V. J., Frøen, J. F., Neilson, J., Chou, D., Mathai, M., Say, L., & Gülmezoglu, M. (2016). Classifying the causes of perinatal death. Bulletin of the World Health Organization, 94(2), 79-79A. https://doi.org/10.2471/BLT.15.168047

American Psychiatric Association (Ed.). (2013). Diagnostic and statistical manual of mental disorders: DSM-5 (5th ed). American Psychiatric Association.

Andrade, C. (2021). The Inconvenient Truth About Convenience and Purposive Samples. Indian Journal of Psychological Medicine, 43(1), 86–88. https://doi.org/10.1177/0253717620977000

Antoniou, E., Stamoulou, P., Tzanoulinou, M.-D., & Orovou, E. (2021). Perinatal Mental Health; The Role and the Effect of the Partner: A Systematic Review. Healthcare, 9(11), 1572. https://doi.org/10.3390/healthcare9111572

Armstrong, D. S. (2004). Impact of Prior Perinatal Loss on Subsequent Pregnancies. Journal of Obstetric, Gynecologic & Neonatal Nursing, 33(6), 765–773. https://doi.org/10.1177/0884217504270714

Baransel, E. S., & Uçar, T. (2020). Posttraumatic stress and affecting factors in couples after perinatal loss: A Turkish sample. Perspectives in Psychiatric Care, 56(1), 112–120. https://doi.org/10.1111/ppc.12390

Bennett, S. M., Litz, B. T., Lee, B. S., & Maguen, S. (2005). The Scope and Impact of Perinatal Loss: Current Status and Future Directions. Professional Psychology: Research and Practice, 36(2), 180–187. https://doi.org/10.1037/0735-7028.36.2.180

Bennett, S. M., Litz, B. T., Maguen, S., & Ehrenreich, J. T. (2008). An Exploratory Study of the Psychological Impact and Clinical Care of Perinatal Loss. Journal of Loss and Trauma, 13(6), 485–510. https://doi.org/10.1080/15325020802171268

Berry, S. N. (2022). The Trauma of Perinatal Loss: A Scoping Review. Trauma Care, 2(3), 392–407. https://doi.org/10.3390/traumacare2030032

Borrell, M., Pauta, M., Mallorquí, A., Ardiles-Ruesjas, V., Borobio, V., Illanes, C., Matas, I., & Borrell, A. (2025). Psychological Impact in Early Pregnancy Loss. The Effects of Disclosing the Causative Chromosomal Anomaly. Fetal Diagnosis and Therapy, 1–22. https://doi.org/10.1159/000543684

Carter, D., Misri, S., & Tomfohr, L. (2007). Psychologic Aspects of Early Pregnancy Loss: Clinical Obstetrics and Gynecology, 50(1), 154–165. https://doi.org/10.1097/GRF.0b013e31802f1d28

Charrois, E. M., Bright, K. S., Wajid, A., Mughal, M. K., Hayden, K. A., & Kingston, D. (2020). Effectiveness of psychotherapeutic interventions on psychological distress in women who have experienced perinatal loss: A systematic review protocol. Systematic Reviews, 9(1), 125. https://doi.org/10.1186/s13643-020-01387-6

Christiansen, D. M. (2017). Posttraumatic stress disorder in parents following infant death: A systematic review. Clinical Psychology Review, 51, 60–74. https://doi.org/10.1016/j.cpr.2016.10.007

Chung, M. C., & Reed, J. (2017). Posttraumatic Stress Disorder Following Stillbirth: Trauma Characteristics, Locus of Control, Posttraumatic Cognitions. Psychiatric Quarterly, 88(2), 307–321. https://doi.org/10.1007/s11126-016-9446-y

Çorbacıoğlu, Ş. K., & Aksel, G. (2023). Receiver operating characteristic curve analysis in diagnostic accuracy studies: A guide to interpreting the area under the curve value. Turkish Journal of Emergency Medicine, 23(4), 195–198. https://doi.org/10.4103/tjem.tjem_182_23

Druguet, M., Nuño, L., Rodó, C., Arévalo, S., Carreras, E., & Gómez-Benito, J. (2018). Emotional Effect of the Loss of One or Both Fetuses in a Monochorionic Twin Pregnancy. Journal of Obstetric, Gynecologic & Neonatal Nursing, 47(2), 137–145. https://doi.org/10.1016/j.jogn.2018.01.004

Druguet, M., Nuno, L., Rodo, C., Arevalo, S., Carreras, E., & Gomez-Benito, J. (2018). Emotional Effect of the Loss of One or Both Fetuses in a Monochorionic Twin

Pregnancy. Journal of Obstetric, Gynecologic, and Neonatal Nursing : JOGNN, 47(2), 137–145. Ovid MEDLINE(R) <2018>. https://doi.org/10.1016/j.jogn.2018.01.004

Duffy, M., & Wild, J. (2023). Living with loss: A cognitive approach to prolonged grief disorder – incorporating complicated, enduring and traumatic grief. Behavioural and Cognitive Psychotherapy, 51(6), 645–658. https://doi.org/10.1017/S1352465822000674

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. Behaviour Research and Therapy, 38(4), 319–345. https://doi.org/10.1016/S0005-7967(99)00123-0

Farren, J., Jalmbrant, M., Falconieri, N., Mitchell-Jones, N., Bobdiwala, S., Al-Memar, M., Parker, N., Van Calster, B., Timmerman, D., & Bourne, T. (2022). Prognostic factors for post-traumatic stress, anxiety and depression in women after early pregnancy loss: A multi-centre prospective cohort study. BMJ Open, 12(3), e054490. https://doi.org/10.1136/bmjopen-2021-054490

Farren, J., Jalmbrant, M., Falconieri, N., Mitchell-Jones, N., Bobdiwala, S., Al-Memar, M., Tapp, S., Van Calster, B., Wynants, L., Timmerman, D., & Bourne, T. (2020). Posttraumatic stress, anxiety and depression following miscarriage and ectopic pregnancy: A multicenter, prospective, cohort study. American Journal of Obstetrics and Gynecology, 222(4), 367.e1-367.e22. https://doi.org/10.1016/j.ajog.2019.10.102

Fasihi Harandi, T., Mohammad Taghinasab, M., & Dehghan Nayeri, T. (2017). The correlation of social support with mental health: A meta-analysis. Electronic Physician, 9(9), 5212–5222. https://doi.org/10.19082/5212

Fernandez-Pineda, M., Swift, A., Dolbier, C., & Banasiewicz, K. G. (2024). Compounding stress: A mixed-methods study on the psychological experience of miscarriage amid the COVID-19 pandemic. BMC Pregnancy and Childbirth, 24(1), 426. https://doi.org/10.1186/s12884-024-06610-z

Fontana, A., & Rosenheck, R. (1994). Traumatic war stressors and psychiatric symptoms among World War II, Korean, and Vietnam War veterans. Psychology and Aging, 9(1), 27–33. https://doi.org/10.1037/0882-7974.9.1.27

Freedle, A., & Kim, S. R. (2025). Longitudinal associations of posttraumatic outcomes in perinatally bereaved women. Traumatology. https://doi.org/10.1037/trm0000553

Garner, P., Hopewell, S., Chandler, J., MacLehose, H., Schünemann, H. J., Akl, E. A., Beyene, J., Chang, S., Churchill, R., Dearness, K., Guyatt, G., Lefebvre, C., Liles, B., Marshall, R., Martínez García, L., Mavergames, C., Nasser, M., Qaseem, A., Sampson, M., … Panel for updating guidance for systematic reviews (PUGs). (2016). When and how to update systematic reviews: Consensus and checklist. BMJ, i3507. https://doi.org/10.1136/bmj.i3507

Gold, K. J., Leon, I., Boggs, M. E., & Sen, A. (2016). Depression and Posttraumatic Stress Symptoms After Perinatal Loss in a Population-Based Sample. Journal of Women's Health, 25(3), 263–269. https://doi.org/10.1089/jwh.2015.5284

Goodarzi, M. A. (2003). Evaluating validity and reliability of Mississippi Post Traumatic stress disorder scale. Journal of Psychology, 7(2).

Green, B. L., Goodman, L. A., Krupnick, J. L., Corcoran, C. B., Petty, R. M., Stockton, P., & Stern, N. M. (2000). Outcomes of single versus multiple trauma exposure in a

screening sample. Journal of Traumatic Stress, 13(2), 271–286. https://doi.org/10.1023/A:1007758711939

Hamama, L., Rauch, S. A. M., Sperlich, M., Defever, E., & Seng, J. S. (2010). Previous experience of spontaneous or elective abortion and risk for posttraumatic stress and depression during subsequent pregnancy. Depression and Anxiety, 27(8), 699–707. APA PsycInfo <2010>. https://doi.org/10.1002/da.20714

Henry, C. J., Kelly, U., Dunlop, A. L., Paul, S., Chandler, R. D., Christiansen-Lindquist, L., & Song, M. (2024). Relationships Between Strong Black Woman Belief, Coping Behaviors, Perceived Social Support, and Psychological Distress Symptoms for Black Mothers After Stillbirth. Journal of Midwifery & Women's Health, 69(2), 249–257. https://doi.org/10.1111/jmwh.13576

Herbert, D., Young, K., Pietrusińska, M., & MacBeth, A. (2022). The mental health impact of perinatal loss: A systematic review and meta-analysis. Journal of Affective Disorders, 297, 118–129. https://doi.org/10.1016/j.jad.2021.10.026

Hiller, R. M., Meiser-Stedman, R., Fearon, P., Lobo, S., McKinnon, A., Fraser, A., & Halligan, S. L. (2016). Research Review: Changes in the prevalence and symptom severity of child post-traumatic stress disorder in the year following trauma – a meta-analytic study. Journal of Child Psychology and Psychiatry, 57(8), 884–898. https://doi.org/10.1111/jcpp.12566

Horesh, D., Nukrian, M., & Bialik, Y. (2018). To lose an unborn child: Post-traumatic stress disorder and major depressive disorder following pregnancy loss among Israeli women. General Hospital Psychiatry, 53, 95–100. https://doi.org/10.1016/j.genhosppsych.2018.02.003

Howard, L. M., & Khalifeh, H. (2020). Perinatal mental health: A review of progress and challenges. World Psychiatry, 19(3), 313–327. https://doi.org/10.1002/wps.20769

Jind, L. (2003). Parents' adjustment to late abortion, stillbirth or infant death: The role of causal attributions. Scandinavian Journal of Psychology, 44(4), 383–394. https://doi.org/10.1111/1467-9450.00358

Keane, T. M., Caddell, J. M., & Taylor, K. L. (1988). Mississippi Scale for Combat-Related Posttraumatic Stress Disorder: Three studies in reliability and validity. Journal of Consulting and Clinical Psychology, 56(1), 85–90. https://doi.org/10.1037/0022-006X.56.1.85

Kearns, M. C., Ressler, K. J., Zatzick, D., & Rothbaum, B. O. (2012). EARLY INTERVENTIONS FOR PTSD: A REVIEW: Review: Early Intervention. Depression and Anxiety, 29(10), 833–842. https://doi.org/10.1002/da.21997

Kmet, L. M., Lee, R. C., & Cook, L. S. (2004). Standard quality assessment criteria for evaluating primary research papers from a variety of fields. Alberta Heritage Foundation for Medical Research.

Krosch, D. J., & Shakespeare-Finch, J. (2017). Grief, traumatic stress, and posttraumatic growth in women who have experienced pregnancy loss. Psychological Trauma: Theory, Research, Practice, and Policy, 9(4), 425–433. https://doi.org/10.1037/tra0000183

Kuhlmann, E., Scharli, P., Schick, M., Ditzen, B., Langer, L., Strowitzki, T., Wischmann, T., & Kuon, R.-J. (2023). The Posttraumatic Impact of Recurrent Pregnancy Loss in Both Women and Men. Geburtshilfe und Frauenheilkunde, 83(01), 88–96. https://doi.org/10.1055/a-1916-9180

Kukulskienė, M., & Žemaitienė, N. (2022). Postnatal Depression and Post-Traumatic Stress Risk Following Miscarriage. International Journal of Environmental Research and Public Health, 19(11), 6515. https://doi.org/10.3390/ijerph19116515

Lauterbach, D., Vrana, S., King, D. W., & King, L. A. (1997). Psychometric properties of the Civilian version of the Mississippi PTSD Scale. Journal of Traumatic Stress, 10(3), 499–513. https://doi.org/10.1023/A:1024801607043

Lee, C., & Slade, P. (1996). Miscarriage as a traumatic event: A review of the literature and new implications for intervention. Journal of Psychosomatic Research, 40(3), 235–244. https://doi.org/10.1016/0022-3999(95)00579-X

Lee, L., McKenzie-McHarg, K., & Horsch, A. (2017). The impact of miscarriage and stillbirth on maternal–fetal relationships: An integrative review. Journal of Reproductive and Infant Psychology, 35(1), 32–52. https://doi.org/10.1080/02646838.2016.1239249

Lee, S. Y., Fisher, J., Wand, A. P. F., Milisen, K., Detroyer, E., Sockalingam, S., Agar, M., Hosie, A., & Teodorczuk, A. (2020). Developing delirium best practice: A systematic review of education interventions for healthcare professionals working in inpatient settings. European Geriatric Medicine, 11(1), 1–32. https://doi.org/10.1007/s41999-019-00278-x

Levy, S., & Avitsur, R. (2022). Gender Differences in the Development of Posttraumatic Stress Symptoms Following Pregnancy Loss: Social Support and Causal Attributes. Psychological Studies, 67(4), 524–536. https://doi.org/10.1007/s12646-022-00691-6

Limbo, R., & Kobler, K. (2010). The Tie That Binds: Relationships In Perinatal Bereavement. MCN: The American Journal of Maternal/Child Nursing, 35(6), 316–321. https://doi.org/10.1097/NMC.0b013e3181f0eef8

Mendes, D. C. G., Fonseca, A., & Cameirão, M. S. (2023). The psychological impact of Early Pregnancy Loss in Portugal: Incidence and the effect on psychological morbidity. Frontiers in Public Health, 11, 1188060. https://doi.org/10.3389/fpubh.2023.1188060

Mergl, R., Quaatz, S. M., Edeler, L.-M., & Allgaier, A.-K. (2022). Grief in women with previous miscarriage or stillbirth: A systematic review of cross-sectional and longitudinal prospective studies. European Journal of Psychotraumatology, 13(2), 2108578. https://doi.org/10.1080/20008066.2022.2108578

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. Psychological Bulletin, 129(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Mosher, C. E., & Danoff-Burg, S. (2005). A Review of Age Differences in Psychological Adjustment to Breast Cancer. Journal of Psychosocial Oncology, 23(2–3), 101–114. https://doi.org/10.1300/J077v23n02_07

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ, n71. https://doi.org/10.1136/bmj.n71

Ravaldi, C., Roper, F., Mosconi, L., & Vannacci, A. (2023). CLASS - CiaoLApo Stillbirth Support checklist: Adherence to stillbirth guidelines and women's psychological well-being. https://doi.org/10.1101/2023.06.07.23291084

Reichenheim, M. E., & Coutinho, E. S. (2010). Measures and models for causal inference in cross-sectional studies: Arguments for the appropriateness of the prevalence odds ratio and related logistic regression. BMC Medical Research Methodology, 10(1), 66. https://doi.org/10.1186/1471-2288-10-66

Roley, M. E., Claycomb, M. A., Contractor, A. A., Dranger, P., Armour, C., & Elhai, J. D. (2015). The relationship between rumination, PTSD, and depression symptoms. Journal of Affective Disorders, 180, 116–121. https://doi.org/10.1016/j.jad.2015.04.006

Salvesen, K. Å., Øyen, L., Schmidt, N., Malt, U. F., & Eik-Nes, S. H. (1997). Comparison of long-term psychological responses of women after pregnancy termination due to fetal anomalies and after perinatal loss. Ultrasound in Obstetrics & Gynecology, 9(2), 80–85. https://doi.org/10.1046/j.1469-0705.1997.09020080.x

Scott, S. B., Poulin, M. J., & Silver, R. C. (2013). A lifespan perspective on terrorism: Age differences in trajectories of response to 9/11. Developmental Psychology, 49(5), 986–998. https://doi.org/10.1037/a0028916

Scott, S. T. (2007). Multiple Traumatic Experiences and the Development of Posttraumatic Stress Disorder. Journal of Interpersonal Violence, 22(7), 932–938. https://doi.org/10.1177/0886260507301226

Sun, S., Yang, M., Zhang, J., Zhou, X., Jia, G., & Yu, X. (2020). Family support for pregnant women with foetal abnormality requiring pregnancy termination in China. Health & Social Care in the Community, 28(3), 1020–1029. https://doi.org/10.1111/hsc.12935

Teixeira-Machado, L., Arida, R. M., & De Jesus Mari, J. (2019). Dance for neuroplasticity: A descriptive systematic review. Neuroscience & Biobehavioral Reviews, 96, 232–240. https://doi.org/10.1016/j.neubiorev.2018.12.010

Triplett, K. N., Tedeschi, R. G., Cann, A., Calhoun, L. G., & Reeve, C. L. (2012). Posttraumatic growth, meaning in life, and life satisfaction in response to trauma. Psychological Trauma: Theory, Research, Practice, and Policy, 4(4), 400–410. https://doi.org/10.1037/a0024204

Walker, T. M., & Davidson, K. M. (2001). A preliminary investigation of psychological distress following surgical management of early pregnancy loss detected at initial ultrasound scanning: A trauma perspective. Journal of Reproductive and Infant Psychology, 19(1), 7–16. APA PsycInfo <1987 to 2001>. https://doi.org/10.1080/02646830020032365

Wesselmann, E. D., & Parris, L. (2022). Miscarriage, Perceived Ostracism, and Trauma: A Preliminary Investigation. Frontiers in Psychology, 12, 747860. https://doi.org/10.3389/fpsyg.2021.747860

Youngblut, J. M., Brooten, D., Cantwell, G. P., Del Moral, T., & Totapally, B. (2013). Parent Health and Functioning 13 Months After Infant or Child NICU/PICU Death. Pediatrics, 132(5), e1295–e1301. https://doi.org/10.1542/peds.2013-1194

Service Improvement Project

Title: Improving LGBTQ+ Individuals' Experiences of Berkshire Talking Therapies

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Abstract

This project aimed to explore LGBTQ+ individuals' experiences of Berkshire Talking Therapies to identify what changes can be implemented to improve the service offering for this specific group. This was explored from both clinician and client perspectives. Qualitative interviews were run with 10 clients who were in therapy with the service at the time. A quantitative survey was emailed to clinicians with items intended to assess their confidence and competence meeting this group's needs. Thematic analysis was used to analyse interview data, and descriptive statistics were used to present data from the clinician survey. Five themes and four subthemes were identified from the interviews that highlighted ideas around creating safety, avoiding assumptions and maintaining curiosity. The clinician survey evidenced that most clinicians felt confident meeting the needs of LGBTQ+ individuals though there was variation within this. Disparity between data sets highlighted that clinicians were perhaps making assumptions about individuals' LGBTQ+ identities and the relevance of this to their presenting problems. Both clinicians and clients expressed that the service could do more to create a safe space for this community. Based on this data, recommendations for the service were drafted along with a dissemination plan.

Keywords: LGBTQ+, minority stress, service improvement, Talking Therapies, mixed methods

Improving LGBTQ+ Individuals' Experiences of Berkshire Talking Therapies

Introduction

According to the 2021 census, in England and Wales approximately 3.2% of the population above the age of 16 identify as lesbian, gay, bisexual, transgender and/or queer/questioning (LGBTQ+; (Office for National Statistics, 2023). This census was the first to ask respondents whether they identified as LGBTQ+. While acceptance and inclusion of different sexual orientations and genders are on the rise, this has changed drastically over the past few decades. Prior to the 1960s, homosexuality was classified as a mental illness, and individuals who identified as gay were forced to undergo unethical "treatment" procedures (Smith et al., 2004). The legacy of anti-gay stances and homophobia continue to permeate societal structures and systems including healthcare (Ayhan et al., 2020; Westwood, 2022).

The impact of this can be understood through the Minority Stress Framework which views minority specific stressors, like stigma and discrimination, as external and objectively stressful conditions (Meyer, 2003). These exist due to stable underlying social and cultural structures that are unrelated to the biological, genetic, or other nonsocial characteristics of the group in question (Meyer, 2003). Examples of these stressors include hate crimes such as online abuse, physical assault, and being insulted, intimidated, or harassed in public spaces (Bachmann & Gooch, 2017). These stressors lead to an anticipation of rejection and internalised stigma which lead to negative cognitions and poor self-regard which increase the risk of mental health difficulties (Meyer, 2003).

The prevalence of mental health difficulties is higher in LGBTQ+ people than in the general population (Government Equailities Office, 2018b). This includes higher rates of depression, self-harm, substance use, and low self-esteem (Amos et al., 2020; Semlyen et al., 2016). This is further evidenced in service use as the number of GP appointments made for

mental health purposes is higher for LGBTQ+ individuals than for heterosexual individuals (Chakraborty et al., 2011).

LGBTQ+ people are also more likely to report negative experiences of the healthcare system and to have worse outcomes (Elliott et al., 2015). This is reflected in Talking Therapies (TT) services, where final scores for depression, anxiety, and functional impairment were higher for lesbian and bisexual women than for heterosexual women (Rimes et al., 2019). In one study examining LGBTQ+ people's experiences of TT, 58% were not asked if their presenting problem might be related to their experiences as an LGBTQ+ individual, less than half discussed their sexual orientation during treatment, and 87.5% reported that their therapists should undergo LGBTQ+ specific training (Foy et al., 2019). These findings are echoed in other studies where the majority of LGBTQ+ individuals felt that mental health services were not well equipped to respond to their needs (Semlyen et al., 2016; Zeeman et al., 2019). Overall, this creates a lack of confidence in the healthcare system in this population (Elliott et al., 2015).

The UK government has recognised that LGBTQ+ individuals experience unique barriers to accessing healthcare and measures have been implemented to address this (Government Equalities Office, 2018a). Some National Health Service (NHS) staff undergo LGBTQ+ equality training and major organisations such as the British Association for Behavioural and Cognitive Psychotherapies have publicly condemned conversion therapy (Foy et al., 2019). However, the literature has not yet been updated to reflect any changes in LGBTQ+ health outcomes and experiences. Further research is needed to better understand the landscape of LGBTQ+ healthcare – including mental healthcare - in the NHS today. This service improvement project focusses on LGBTQ+ clients' experience of mental healthcare

in Berkshire TT, with the hope that the recommendations informed by the data gathered through this project create meaningful change.

Scoping

The Berkshire TT service reviewed the recovery rates of LGBTQ+ individuals and found they were lower than for heterosexual individuals. A preliminary analysis revealed that between January and December 2022:

- 341/741 of LGBTQ+ clients achieved recovery (46%)
- 3664/6843 of heterosexual clients achieved recovery (54%)

A Chi Square test was run with the alpha level set to .05 and the difference was significant. X^2 (1, N= 7584) = 15.19, $p < .001$.

Furthermore, UK national statistics report that 3% of the population identify as LGBTQ+, however 10% of those referring to the service identify as LGBTQ+ (Office for National Statistics, 2022). This supports the literature that indicates LGBTQ+ individuals are more likely to be referred for mental-health support than heterosexual individuals (Chakraborty et al., 2011).

Service Improvement

The LGBTQ+ community was not one of the marginalised groups afforded special consideration within the Berkshire Healthcare TT service. Senior locality clinicians met with the lead researcher to discuss whether this may be a gap in their service offering and commissioned this project to explore this in a systematic way. The aim was for the findings of this project to lead to an overall improvement in outcomes for the service contingent upon the recommendations being taken forward to an implementation phase.

Questions

- What are LGBTQ+ individuals' experiences of receiving therapy in Berkshire TT?
- What are Berkshire TT clinicians' perspectives of working with this client group, and how do they perceive their own competence and confidence in meeting their needs?
- What specific changes in the service could improve LGBTQ+ clients' experiences?

Materials and Methods

Project Design

A mixed methods cross-sectional design was used.

Public Patient Involvement

Public Patient Involvement (PPI) was sought to increase the quality and relevance of this research. This helped ensure that this project was addressing what mattered most to the stakeholders, particularly the clients, and that it was accessible.

Clients

Clients who identified as LGBTQ+, were in therapy with TT at the time of this study, and consented to be contacted for research were emailed by the administration team inviting them to give feedback on the project plan and materials. Two clients responded and met with the lead researcher via Teams. This did not preclude them from taking part in the interviews, however, neither did.

Clinicians

All clinicians were emailed by the administration team inviting them to give feedback on the project plan and materials. Four clinicians attended separate 30-minute meetings with the lead researcher via Teams. This did not preclude them from participating in the survey. Proposed changes from both client and clinician involvement were discussed with the project

supervisors and implemented. This included slight changes in wording for the interview and survey questions, and aesthetic changes to the recruitment poster.

Data Collection

Client Interviews

Clients were emailed by the administration team describing the project and its aims. Clients who identified as LGBTQ+, were receiving therapy with the service at the time of this study, and had consented to be contacted for research were eligible to take part. Interested participants contacted the lead researcher via email and attended semi-structured 1:1 interviews via Teams (see Appendix E for interview schedule).

Clinician Survey

All Berkshire TT clinicians (n=226) were emailed by the administration team describing the project and its aims. The email included a link to a brief 11 item survey (see Appendix F). Each item was rated on a Likert scale from 1-5 (definitely no to definitely yes). Reminders to complete the survey were sent twice, one month apart. The link was also included in the February 2023 staff newsletter.

Data Analysis

Client Interviews

Interviews were transcribed using the automated function on Microsoft Teams. Transcripts were reviewed by the lead researcher to ensure accuracy of the transcription and then anonymised. Data was analysed using the contextual method in thematic analysis (Braun & Clarke, 2006).

An inductive approach was taken to coding the data in the six phases suggested by Braun and Clarke (Braun & Clarke, 2006). Themes were sent to the internal research supervisor ER along with two coded transcripts for checking. Although inter-researcher consistency is not considered essential in thematic analysis (Braun & Clarke, 2021), analysis was discussed between researchers to reflect on researcher bias in the development of themes. Subsequently, themes were refined in an iterative and reflexive process.

Researcher Positioning. The lead researcher was a Middle Eastern/British woman in her late 20s who was a trainee on the University of Oxford Doctorate in Clinical Psychology (DClinPsy) course. In a previous role with a start-up focussed on LGBTQ+ sexual healthcare, she conducted qualitative research with LGBTQ+ individuals and worked with a team of LGBTQ+ individuals who continued to form a close part of her social network. The internal research supervisor was a white British woman in her thirties who was a clinical tutor on the DClinPsy course. As a qualified clinical psychologist, she had worked across several NHS CAMHS teams, and routinely worked clinically with LGBTQ+ individuals and their families.

Clinician Survey

The quantitative data was analysed using Microsoft Excel to yield descriptive statistics and frequency percentages for each question.

Results

Ten clients participated in the qualitative interviews and 41 clinicians participated in the clinician survey. The survey and interviews were conducted between December 2023 and February 2024. Interviews lasted between 19 and 45 minutes.

Table 1

Demographic Characteristics of Interviewed Clients

Demographics	Mean (range)
Age	32.7 (18 – 59)
Sessions attended	12.8 (2 - 30)
	n
Sexuality	
Heterosexual	1
Homosexual	3
Bisexual	5
Undecided	1
Gender	
Female	4
Male	2
Non-binary	2
Transgender female	2
Ethnicity	
White	10
Most Recent Primary Diagnosis	
Depressive episode	5
Health anxiety	1
Post-traumatic stress disorder	2
Generalised anxiety disorder	1
Specific phobia	1
Therapy Type	
CBT Step 2	1
CBT Step 3	4
Interpersonal Therapy	2
Guided Self Help	3

Client Interviews

A total of 5 themes and 4 subthemes were identified (Table 2).

Table 2

Themes and Subthemes from Client Interviews

Themes	Subthemes
(1.0) Feeling Understood	(1.1) Within The Wider Context of Being an LGBTQ+ Person

	(1.2) As an Individual/Whole Person
(2.0) Safety	
(3.0) Maintaining Curiosity	
(4.0) Voiced/Unvoiced	(4.1) Burden of the Unvoiced (4.2) Practical Barriers to Voicing
(5.0) Feeling Seen	

1.0 Feeling Understood

1.1 Within the Wider Context of Being an LGBTQ+ Person. Some participants felt that therapists did not grasp the nuances of LGBTQ+ lived experiences, such as being treated differently at work due to their identity or feeling alienated from friends and family.

[Clinicians should have] more like a realistic approach to try to understand this complex thing that is to have a different sexuality, [which is] not necessarily what is accepted traditionally by society… - Participant 6

They felt that clinician being more knowledgeable about these would help them feel better understood.

Maybe having a bit more knowledge on the fact that queer people are more likely to have mental health issues due to the stuff that we experience, that there's a lot of things that do affect us more greatly than cisgender, heterosexual people. – Participant 2

1.2 As an Individual/Whole Person. Participants expressed wanting to be understood as unique and whole individuals.

I think it's just sort of treat people as they are. Obviously we've all got different needs and requirements and at the same time everyone wants to be treated as a person – Participant 5

Some participants' sexual orientation or gender were directly related to their presenting problem, others were indirectly related, and others felt it was not related to their presenting problem at all. Regardless of level of relevance, there was an emphasis on avoiding a "one size fits all" approach. This included consideration for intersectionality and neurodiversity and the importance of tailoring the therapeutic experience to the individual. Clients wanted therapists to be aware of the different experiences and preferences across the community and variations in the relevance of a persons' LGBTQ+ identity to therapy.

I suppose it is an awareness of difference within that is the priority… I think the core thing that the service needs to be aware of is that people are individuals and it's not going to be a one size "this is how you speak to the gays" fits all. – Participant 8

For example, while one individual might prefer clinicians to apologise if they use the wrong pronouns, another might prefer clinicians correct themselves and move on without an apology. Clients highlighted the importance of asking about these preferences.

I know some people prefer the apologies…because I know different people want different things… I prefer more just correction and moving on. – Participant 2

2.0 Safety

Participants expressed apprehension about how safe it would be to discuss their LGBTQ+ identity in therapy. Worries about being treated differently and not being believed about traumatic experiences were shared.

It's just the worry of: will I be accepted? Will I get like the quality of therapy that for example a cis-het person would? And would my experience be different with the therapist because I'm queer? – Participant 2

This seemed to extend beyond the therapy room and stem from previous difficult experiences with prejudice and discrimination.

I think because I'm aware of social biases towards the LGBTQ community, I tend to not share that about myself and I'm quite closed…I'm quite careful when I'm talking about things to not give away my sexuality. – Participant 7

As such, creating safety was paramount. There was a need for the therapeutic space to be explicitly open, accepting, and non-judgemental.

I guess some sort of notice that, at least to say all clinicians… it's safe to talk to them about LGBT issues, that you won't be discriminated against for mentioning it. It won't be something that is used… almost against you or it wouldn't be something that's going to cause an issue between you and your therapist. – Participant 9

Clients noted that more outward signs of inclusivity and acceptance were needed to achieve this.

I think as far as I remember, there was nothing explicit to say "You will be safe talking to your therapist about this sort of thing". – Participant 9

Some suggested a statement on the website or on the initial intake forms, therapists introducing themselves with their pronouns, and pride flags pins or lanyards would help with this. This heightened visibility might help clients feel safer.

I know that myself and other people have found that having the pronouns in the email signature it kind of says to us that this person is potentially a safe person to talk to. - Participant 2

Others suggested ways to create safety within the therapeutic relationship were through the therapist's tone of voice, facial expressions, and explicit verbal communication. Clients appreciated clinicians not over-reacting and normalising disclosures related to sexual orientation or gender identity.

So I think sometimes the more of a big deal that you make of asking a question, the more of a big deal the person on the other end thinks about answering it. – Participant 7

3.0 Maintaining Curiosity

There was a need for clinicians to maintain curiosity and avoid making assumptions. Some clients wanted to explore the impact of their LGBTQ+ identity on their mental health more deeply and wished that clinicians had taken the initiative to invite them to do so.

I think I would have liked to have explored [my experience of gender dysphoria] a bit more. Definitely. And for those questions to have been asked to me as well, if there were concerns raised or like trauma associated with these experiences, it would be good to have open questions and talk about it… – Participant 10

Maintaining curiosity was most important in moments where it was easy to make assumptions. Some participants shared examples of times their therapist incorrectly assumed information about them, with this at times never being clarified.

It should have been brought up even if it was just to say "OK, so you know, I'm assuming that you're straight because you've been married to a man", and I could have just clarified and gone "Oh no actually. Yes, I was married to a man, but I'm pansexual". And it just wasn't. – Participant 7

4.0 Voiced/Unvoiced

All clients generally had positive experiences with their clinicians whether they discussed sexuality and gender or not. Those who did not discuss it believed that if they did voice it their clinician would have reacted positively.

I think if I had brought it up, because she was very lovely, I think if I had brought it up and it was something that I'd actually explained, I think she would have been quite nice about it. And I think she would have been very understanding…. – Participant 3

4.1 Burden of the Unvoiced.

Despite this, most clients feared being treated differently if their LGBTQ+ identity was revealed, and feared correcting clinicians when assumptions were made. This resulted in topics remaining unvoiced, and clients feeling this was a heavy burden.

It's kind of felt like, OK, I don't know if I can go into this territory of being like "OK, this person actually wasn't a guy...". Yeah, just being unsure as to whether I can approach that… – Participant 2

For some clients whose LGBTQ+ identities were directly relevant to their mental health needs, not only was this not actively raised in therapy, but they also made conscious decisions to leave this information out or make ambiguous statements.

The reason I was receiving talking therapies is I was in a same-sex relationship, and I ended up having sort of PTSD from that... I kind of tried not to touch on it as much as I could. I would use "the relationship" and I'd use general pronouns like "they" – Participant 3

One client reported indicating her sexual orientation on a form she filled out prior to therapy, but this not being raised. She doubted that therapists even checked these,

contributing to a sense that even when these demographics are voiced – albeit in written form - the topic would still not be broached.

Because even though on my form I ticked bisexual and I sent it off, at no point anyone went "Oh was this [person you were in a relationship with] a boy or was it a girl?". No one. Everyone kind of made the assumption that it was a boy and I didn't want to correct them. – Participant 3

These active efforts to obscure parts of their identity or refrain from correcting assumptions left clients feeling that the therapeutic experience did not fully meet their needs, and left therapists seemingly unaware of this internal struggle.

4.2 Practical Barriers to Voicing. Clients reported frustration with practical barriers that prevented them from voicing things relevant to sexuality or gender. Telephone appointments and self-guided interventions (such as SilverCloud) felt impersonal and made it difficult to voice such issues.

I just think personally, I don't think it's anything to do with the therapist themselves. I think it is the way SilverCloud is structured and the way [it] is distributed is that it's quite impersonal … the way that they've approached it feels very much like a script – Participant 4

Other practical barriers included long wait times, and struggling with gender identity but knowing that this was outside the remit of TT.

I'm still waiting for therapy [with the gender clinic] … not that you guys necessarily do anything about it, but obviously you can't speed up a process or get seen any sooner or sort that sort side out. – Participant 5

5.0 Feeling Seen

Clients expressed appreciation for the opportunity to participate in this project, especially considering that wider society was experienced as oppressive and not inclusive. This opportunity helped them feel seen and demonstrated that steps were being taken to understand their needs. There was hope for meaningful change and value placed on being invited to contribute to this.

I think that is very good that Talking Therapies is doing these interviews… it's a way to acknowledge people with different sexual orientations and it's a way to have a deeper understanding of us... I always wanted to have a voice in society, because many times we are silent and we suffer in silence – Participant 6

It's good to be included and hopefully It will make a difference – Participant 5

Feeling seen extended to feeling represented within the service. Clients noticed and took comfort in the staff team's diversity. They also noted that knowing some clinicians identified as LGBTQ+ would be helpful.

Even if it was just something in like a statement about the therapists [coming] from a wide range of backgrounds, including, like the LGBTQ+ and trans communities… something like that that just enforces feeling included – Participant 7

This theme also encompassed therapy materials and resources which could be less heteronormative and could include LGBTQ+ specific groups or organisations that clients could be referred to.

…if on the website you have signposting to specific resources for people who've been through the traumas or hate crimes…just specific LGBTQ+ resources that people can go to have conversations if they are in crisis. – Participant 7

Clinician Survey

Forty-one clinicians completed the survey (see Table 3). The majority were CBT therapists (56.1%), and not from the LGBTQ+ community (80%) but were close to someone from the community (63%). Eighty-eight percent felt comfortable asking about their client's sexual orientation, and 71% were confident they could meet the therapeutic needs of LGBTQ+ individuals. Sixty three percent felt they had enough knowledge about the discrimination and prejudices faced by LGBTQ+ individuals. Forty-one percent felt that the service was not doing enough to ensure a safe space for LGBTQ+ individuals, and 20% felt uncertain. It is worth noting that although most clinicians felt confident and competent supporting clients from the LGBTQ+ community, there was overarching variation (see Figure 1).

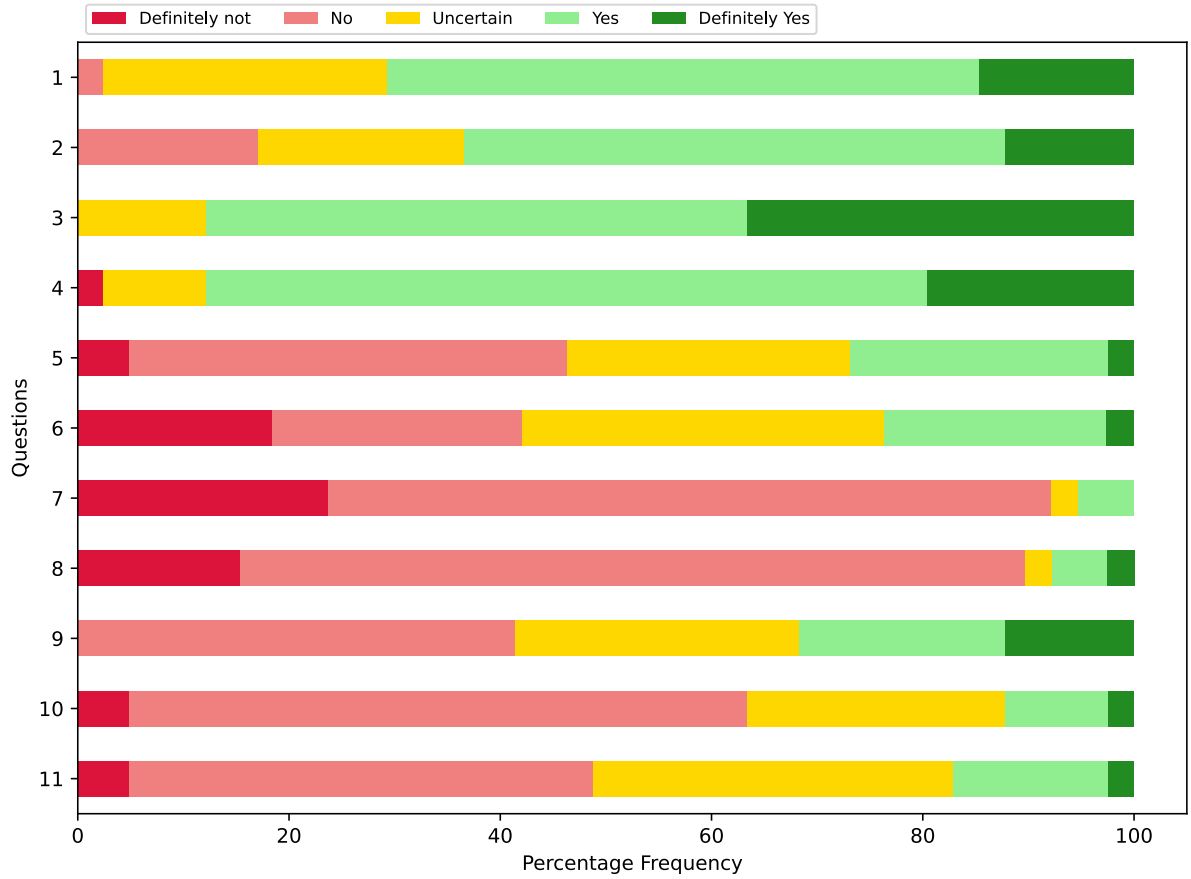
Table 3

Demographics of Clinicians who Participated in the Survey

Job Role	**n (%)**
Trainee CBT therapist	1 (2.4)
CBT Therapist	23 (56.2)
Clinical Psychologist	2 (4.9)
Counselling Therapist	6 (14.6)
PWP	6 (14.6)
Trainee Clinical Psychologist	1 (2.4)
Trainee PWP	2 (4.9)
Part of the LGBTQ+ Community	
Yes	8 (20)
No	33 (80)
Close to someone from the LGBTQ+ community	
Yes	26 (63)
No	15 (37)

Figure 1

Clinician Survey Data



Note. *1) Do you feel confident about meeting the therapeutic needs of LGBTQ+ individuals?*
2) Do you feel you have enough knowledge about the discrimination and prejudices faced by LGBTQ+ individuals?
3) When relevant, do you or would you feel comfortable asking about your client's sexual orientation
4) When relevant, do you or would you feel comfortable asking about your client's gender identity?
5) When relevant, do you feel you bring (or may bring) any unconscious biases into the room when working with LGBTQ+ individuals?
6) In your opinion, has your clients' sexual orientation/gender identity impacted their journey through therapy?
7) Was there ever a time when you felt like you couldn't understand your client because of their sexual orientation?
8) Was there ever a time when you felt like you couldn't understand your client because of their gender identity?
9) Do you think the service does enough to ensure we are providing a safe space for LGBTQ+ individuals?
10) Do you think that sexual orientation exerts a significant impact on the therapeutic relationship?
11) Do you think gender identity exerts a significant impact on the therapeutic relationship?

Discussion

In this exploratory project we aimed to better understand the experiences of LGBTQ+ individuals presenting to Berkshire TT and clinicians' perspectives of working with this client group. All clients generally had positive experiences with their therapists but there were

instances where there were missed opportunities for more meaningful effective interventions, and a lack of identifying this did create some form of distress. We found that some clients did not feel understood within the wider context of being an LGBTQ+ individual, or as an individual/whole person. There was an emphasis on clients shouldering the burden of raising topics related to sexual orientation or gender. To facilitate meaningful conversations about these topics, there was a need for clinicians to create safety, maintain curiosity, and avoid making assumptions. Clients also expressed appreciation for being given a voice through this project and highlighted the importance of continued representation and inclusivity to help their community feel seen and heard.

There was overall variation in the relevance of clients' LGBTQ+ identity to their presenting problem. For some it was irrelevant, for some it was directly relevant, and for others it was not directly relevant but discussing it could have enhanced their therapeutic experience. While most clinicians reported feeling comfortable asking clients about their sexual orientation/gender identity, most clients were not asked about this at all or did not discuss it in sufficient detail. This disparity draws attention to the fact that clinicians may be unaware that this may be an important topic to explore. There may be an assumption that clients would correct or inform them if these topics were relevant, however, this was not the case.

Even if sexuality or gender were topics the client felt were irrelevant, or may not feel ready to explore, the qualitative results evidence that maintaining curiosity about this, and ensuring the client is aware that these topics are welcome to be explored and incorporated into the formulation or treatment is essential. However, this should not come at the expense of the client feeling like a whole person, as their LGBTQ+ identity should not overshadow their overall needs. This should also come with an awareness that clients may not challenge

assumptions made about their identities or experiences, especially the further into therapy this is left.

Though most clinicians felt confident about meeting the therapeutic needs of LGBTQ+ individuals, and felt they had enough knowledge about the prejudice and discrimination faced by them, this did not align with clients' experience. A dominant theme from the interviews was not feeling understood within the wider context of being an LGBTQ+ person. This included a sense that clinicians do not understand experiences specific to this minoritised group including increased drug and alcohol use, trauma, and discrimination. This gap in understanding or knowledge in healthcare professionals can increase minority stress (Meyer, 2003). A good therapeutic experience should help mitigate minority stress, not add to it. It may be that clinicians already have this knowledge but do not know how to communicate this to clients or are missing opportunities to identify when to communicate this. This may be, in part, due to this specific minoritised group having a relatively concealable identity, unlike for example Black individuals who are more easily identifiable (Cook et al., 2011). Therefore, if assumptions have been made that a client is cisgender or heterosexual, then it is less likely that a clinician will consider minority stress as relevant to the therapeutic process.

Many clinicians (41%) did not feel that the service was doing enough to provide a safe space for LGBTQ+ individuals and this was also reflected in the qualitative interviews. There appears to be a need for more outward signs of inclusivity, this included pronouns in email signatures, rainbow lanyards or pins, and statements on the website and/or intake forms.

There are several limitations to this project. All the clients who participated were White, however not all were British. Four clients from minoritised ethnic backgrounds

expressed interest in the project but did not attend the interview. One withdrew due to issues finding an interpreter. Future projects could focus on recruiting a more ethnically diverse sample as their experiences might be different especially within the context of minority stress (Sarno et al., 2021).

The LGBTQ+ community encompasses diverse sub-groups and there may be significant differences between them (Su et al., 2016). Most studies in the literature collapse them into a single group, and while this may be useful for data analysis it may blur issues specific to one sub-group (Zeeman et al., 2019). Half of the clients who participated in this project were bisexual, and bisexual individuals experience more internalised stigma than other members of the LGBTQ+ community (Lee et al., 2022). Those individuals are also arguably at higher risk of being assumed to be heterosexual. Future projects could therefore focus more specifically on sub-group experiences. Another limitation is that all participants were in active therapy. A sample of individuals who dropped out of therapy may have a different perspective to add.

Due to the clinician survey being released prior to the client interviews being completed, it was not possible to explore some of the specific areas for improvement highlighted by clients in more detail. Qualitative interviews were not run with clinicians due to time and resource constraints. The service expressed concern that running clinician interviews would hinder recruitment as clinicians were already stretched thin. A survey was thought to reach a wider range of clinicians including those less invested in the topic. A future project could run qualitative interviews with clinicians targeting the specific areas highlighted by clients. Comparing those findings to this project would offer a clearer picture of why some gaps exist and refine the recommendations further.

Dissemination

The findings and recommendations (see Table 4) were shared with the senior locality lead, service research lead, and communications manager. Recommendations were discussed and refined. They were presented to senior management at a business meeting and as per guidelines, recommendations were formally submitted to Berkshire Healthcare Audit Team after the conclusion of the project. A summary of the findings and list of recommendations were also emailed to clients who participated.

Table 4

Recommendations

Recommendation	Implementation	Relevant Theme
Mandatory LGBTQ+ training workshop for staff. This would cover minority stress, importance of pronouns, different identities under the LGBTQ+ umbrella. *(while this project was being conducted a training was offered in March 2024 to Step 3 clinicians, but this was in person and only 30/144 attended. Most service leads were unable to attend)*	• External facilitator to be invited back to provide the training online to increase attendance. If funding for the training cannot be procured, then in-house training to be organised. • All service leads to attend and encourage staff (including step 2 clinicians) to attend as well • Training to be recorded for those unable to attend • Recording to be shared as part of induction for new staff	1.1
Clinicians to check demographic information prior to initial sessions. If the client indicated identifying as LGBTQ+ then the clinician should ask the client if this is something they would like to discuss and include in their formulation.	• The above training will help with learning why it is important to do this and skills on how to discuss this with clients • Can be added to assessment templates as area to cover • Clinicians to maintain curiosity throughout treatment and check in with the client to ensure that they feel their identity is being explored as little or as much as they were hoping for • This list of recommendations will be sent around to also serve as a reminder for this	3.0; 4.1
Therapy materials to be revised and updated to include less gendered language and be less heteronormative. *(i.e. gendered stick figures for diagrams/figures about relationships, gendered pronouns in texts)*	• LGBTQ+ champion to be appointed and send e-mail to clinicians to gather LGBTQ+ friendly materials • All such materials to be pooled in a Shared Drive Folder and link shared	2.0; 5.0
When service has appointed signposting lead, signposting to be revised and updated to include LGBTQ+ specific groups and organisations that clients can access.	• LGBTQ+ champion to be appointed to support signposting lead with this • E-mail to be sent asking clinicians to share information on LGBTQ+ groups and organisations they may already know about • Proactive research done to identify any relevant signposting resources • All information to be pooled in a Shared Drive Folder and link shared	1.1; 5.0
Staff to be reminded that they can put pronouns in e-mail signatures if they would like to.	• Service lead to e-mail all staff inviting them to add pronouns to their e-mail signatures and highlight the benefits of this, while maintaining that this is optional as per Trust guidelines	2.0
Rainbow lanyards and pins to be distributed to staff who would want to wear these.	• LGBTQ+ Champion to distribute these if and when available, while maintaining that this is optional	2.0

Clinicians to continue to reflect on assumptions they have made and ensure they check if their assumptions are correct.	• In supervision and/or reflective spaces • In clinician's personal reflections • This list of recommendations will be sent around to also serve as a reminder for this	3.0
Clinicians to be understanding of individual preferences and to contract these with the client at the beginning of therapy (first 3 or 4 sessions). *(i.e. with pronouns and how to address if mistakes are made)*	• Can be added to assessment templates as area to cover • This list of recommendations will be sent around to also serve as a reminder for this	1.2
Service to ask those being offered guided self-help if they would like to explore/include their LGBTQ+ identity in their work, and to signpost to LGBTQ+ groups or organisations if they would like to discuss this in more depth. *(All treatments should offer this, but this recommendation point is specific to guided self-help as this may be more challenging to implement due to time and format restrictions. Hence the importance of naming this and signposting)*	• Can be added to guided self-help templates as area to cover • Signposting materials in Shared Drive folder described above • Service to feedback this recommendation to SilverCloud	4.2
A LGBTQ+ specific workstream should be created (similar to the neurodiversity workstream).	• This can be started by raising a QMIS ticket • Clear appointment of a workstream lead • This workstream to focus on implementing the New Positive Practice Guide for LGBTQ+ inclusive practice in NHS Talking Therapies (due for publication Summer 2024) • Consideration given that individuals may not be comfortable sharing their LGBTQ+ identity at point of assessment and will not go into this stream, so all above points will still need to be implemented across streams	1.1; 5.0
Targeted recruitment for LGBTQ+ individuals for the TT Forum.	• Senior Leadership Team to identify LGBTQ+ people as a priority/underserved group with the service (in line with the literature and findings outlined in this project) • Admin team to send email to clients who have completed treatment with information about the forum and what participating entails. Email worded to make clear that service wants to hear specifically from LGBTQ+ individuals • At the end of treatment, clinicians to explain TT Forum and offer to put client in touch with TT Forum leads. • Individuals who express interest to be invited to the quarterly meetings	2.0; 3.0; 5.0

References

Amos, R., Manalastas, E. J., White, R., Bos, H., & Patalay, P. (2020). Mental health, social adversity, and health-related outcomes in sexual minority adolescents: A contemporary national cohort study. *The Lancet Child & Adolescent Health*, *4*(1), 36–45. https://doi.org/10.1016/S2352-4642(19)30339-6

Ayhan, C. H. B., Bilgin, H., Uluman, O. T., Sukut, O., Yilmaz, S., & Buzlu, S. (2020). A Systematic Review of the Discrimination Against Sexual and Gender Minority in Health Care Settings. *International Journal of Health Services*, *50*(1), 44–61. https://doi.org/10.1177/0020731419885093

Bachmann, C., & Gooch, B. (2017). *LGBT in Britain: Hate Crime and Discrimination*. Stonewall. https://www.stonewall.org.uk/system/files/lgbt_in_britain_hate_crime.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, *18*(3), 328–352. https://doi.org/10.1080/14780887.2020.1769238

Chakraborty, A., McManus, S., Brugha, T. S., Bebbington, P., & King, M. (2011). Mental health of the non-heterosexual population of England. *British Journal of Psychiatry*, *198*(2), 143–148. https://doi.org/10.1192/bjp.bp.110.082271

Cook, J. E., Arrow, H., & Malle, B. F. (2011). The Effect of Feeling Stereotyped on Social Power and Inhibition. *Personality and Social Psychology Bulletin*, *37*(2), 165–180. https://doi.org/10.1177/0146167210390389

Elliott, M. N., Kanouse, D. E., Burkhart, Q., Abel, G. A., Lyratzopoulos, G., Beckett, M. K., Schuster, M. A., & Roland, M. (2015). Sexual Minorities in England Have Poorer

Health and Worse Health Care Experiences: A National Survey. *Journal of General Internal Medicine*, *30*(1), 9–16. https://doi.org/10.1007/s11606-014-2905-y

Foy, A. A. J., Morris, D., Fernandes, V., & Rimes, K. A. (2019). LGBQ+ adults' experiences of Improving Access to Psychological Therapies and primary care counselling services: Informing clinical practice and service delivery. *The Cognitive Behaviour Therapist*, *12*, e42. https://doi.org/10.1017/S1754470X19000291

Government Equalities Office. (2018a). *National LGBT Action Plan*. Government Equalities Office. https://assets.publishing.service.gov.uk/media/5b39e91ee5274a0bbef01fd5/GEO-LGBT-Action-Plan.pdf

Government Equalities Office. (2018b). *National LGBT Survey Summary Report*. Government Equalities Office. https://assets.publishing.service.gov.uk/media/5b3cb6b6ed915d39fd5f14df/GEO-LGBT-Survey-Report.pdf

Lee, J.-I., Chang, Y.-P., Tsai, C.-S., & Yen, C.-F. (2022). Internalized Sexual Stigma among Lesbian, Gay, and Bisexual Individuals in Taiwan: Its Related Factors and Association with Mental Health Problems. *International Journal of Environmental Research and Public Health*, *19*(4), 2427. https://doi.org/10.3390/ijerph19042427

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, *129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Office for National Statistics. (2022). *Statistical Bulletin: Sexual Orientation, UK: 2020*. Office for National Statistics. https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/bulletins/sexualidentityuk/2020

Office for National Statistics. (2023). *Census 2021*. Office for National Statistics.

Rimes, K. A., Ion, D., Wingrove, J., & Carter, B. (2019). Sexual orientation differences in psychological treatment outcomes for depression and anxiety: National cohort study. *Journal of Consulting and Clinical Psychology*, *87*(7), 577–589. https://doi.org/10.1037/ccp0000416

Sarno, E. L., Swann, G., Newcomb, M. E., & Whitton, S. W. (2021). Intersectional minority stress and identity conflict among sexual and gender minority people of color assigned female at birth. *Cultural Diversity and Ethnic Minority Psychology*, *27*(3), 408–417. https://doi.org/10.1037/cdp0000412

Semlyen, J., King, M., Varney, J., & Hagger-Johnson, G. (2016). Sexual orientation and symptoms of common mental disorder or low wellbeing: Combined meta-analysis of 12 UK population health surveys. *BMC Psychiatry*, *16*(1), 67. https://doi.org/10.1186/s12888-016-0767-z

Smith, G., Bartlett, A., & King, M. (2004). Treatments of homosexuality in Britain since the 1950s--an oral history: The experience of patients. *BMJ*, *328*(7437), 427–0. https://doi.org/10.1136/bmj.37984.442419.EE

Su, D., Irwin, J. A., Fisher, C., Ramos, A., Kelley, M., Mendoza, D. A. R., & Coleman, J. D. (2016). Mental Health Disparities Within the LGBT Population: A Comparison Between Transgender and Nontransgender Individuals. *Transgender Health*, *1*(1), 12–20. https://doi.org/10.1089/trgh.2015.0001

Westwood, S. (2022). Religious-based negative attitudes towards LGBTQ people among healthcare, social care and social work students and professionals: A review of the international literature. *Health & Social Care in the Community*, *30*(5). https://doi.org/10.1111/hsc.13812

Zeeman, L., Sherriff, N., Browne, K., McGlynn, N., Mirandola, M., Gios, L., Davis, R., Sanchez-Lambert, J., Aujean, S., Pinto, N., Farinella, F., Donisi, V., Niedźwiedzka-Stadnik, M., Rosińska, M., Pierson, A., Amaddeo, F., Health4LGBTI Network, Taibjee, R., Toskin, I., … De Sutter, P. (2019). A review of lesbian, gay, bisexual, trans and intersex (LGBTI) health and healthcare inequalities. *European Journal of Public Health*, *29*(5), 974–980. https://doi.org/10.1093/eurpub/cky226

Theoretically Driven Research Project

Title: Exploring the Link Between Imagery, Fear of Childbirth, and Maternal-Foetal Bonding

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Abstract

Aims/Background: Imagery plays an important role in maintaining mental disorders such as PTSD and bipolar disorder. Expectant mothers with a fear of childbirth (FoC) experience negative imagery related to the upcoming birth. Maternal-foetal attachment also has an imagery component as mothers imagine what it might be like to hold their baby after birth. These images may be competing for capacity. The present study explored the links between these variables. It was hypothesised that women highly impacted by birth-related imagery and FoC would have lower antenatal attachment, and that high FoC would be linked to a higher tendency to use imagery in everyday life.

Design/methods: Pregnant women (n=133) were recruited mainly through social media. They were invited to complete a self-report survey measuring sociodemographic factors, FoC, antenatal attachment, intrusive birth-related imagery, mood, anxiety, and stress, and the general tendency to use mental imagery in everyday life.

Results: Intrusive birth-related imagery was associated both with higher levels of FoC and antenatal attachment. FoC was not associated with lower levels of attachment. The general tendency to use imagery in everyday life predicted more variance in attachment than other factors and was not significantly associated with FoC.

Conclusion: Birth-related imagery could be positive and negative and therefore linked to increased antenatal attachment and FoC respectively. Intrusive imagery may have a stronger effect on distress than the general capacity to visualise, highlighting its potential as a target for FoC interventions. Limitations with the FoC measure may have impacted the results. Clinical implications are discussed.

Keywords: maternal-foetal attachment, fear of childbirth, intrusive imagery, perinatal mental health, pregnancy

Exploring the Link Between Imagery, Fear of Childbirth, and Maternal-Foetal Bonding

Introduction

Expectant mothers may experience high levels of fear surrounding the upcoming birth of their child, a phenomenon known as tokophobia, or fear of childbirth (FoC; e.g. Nilsson et al., 2018). FoC has not yet clearly been defined in the literature and this may be due to multiple factors including lack of robust standardised measures of the construct and normative cut-off scores (Badaoui et al., 2019; Slade et al., 2022). Nevertheless, FoC is an important factor to consider in pregnant women as it can significantly impact the birth experience and postnatal outcomes (Badaoui et al., 2019; Dencker et al., 2018). Women with high levels of FoC are more likely to opt for caesareans, experience prolonged labour, endure traumatic births, and require post-natal psychiatric care (Dencker et al., 2018). FoC also affects the parent-child relationship with increased levels of FoC predicting impaired perinatal bonding (Challacombe et al., 2021; Seefeld et al., 2022). Therefore, FoC has implications during and beyond the perinatal period, making it an important target for perinatal interventions.

Understanding the relevant maintaining factors of FoC will allow these interventions to be designed more effectively. A potential maintaining factor of FoC is increased negative imagery about the upcoming birth (Favrod et al., 2018). This study by Favrod and colleagues was the first to investigate this and add to the literature on the important role of imagery in other mental disorders such as bipolar disorder, suicidality, PTSD, and social anxiety (Hirsch & Holmes, 2007; Holmes et al., 2011, 2007). Imagery is a key maintaining factor in these disorders and generally invokes more powerful emotional responses than verbal thoughts (Holmes & Mathews, 2010). The role of intrusive imagery in mental disorders has been distinguished from the general tendency to use imagery-based thinking in everyday life (Deeprose et al., 2011). Modifying mental imagery related to specific events can influence

outcomes by reducing specific behaviours or altering individuals' self-perception (Çili & Stopa, 2015; Vassilopoulos, 2005). For example, in PTSD, imagery rescripting has been found to decrease externalisation of anger and feelings of hostility and guilt (Arntz et al., 2007).

Women with FoC report experiencing involuntary images related to the upcoming birth (Favrod et al., 2018). The content may include physical issues with the baby such as the baby being unable to breathe, labour-related pain, or blood and tearing (Favrod et al., 2018). These images are rich in detail, multi-sensory, and impact maternal behaviour such as triggering reassurance seeking from a partner (Favrod et al., 2018). These mental images are preoccupying, they draw on cognitive and emotional resources, thereby potentially impacting on the occurrence of attachment imagery. Pregnant women also can experience positive future imagery related to birth, such as meeting the baby for the first time and experiencing happiness and connection (Favrod et al., 2018). This is related to maternal-foetal attachment, another process that occurs during pregnancy that is linked to imagery-based processes.

Research shows that a mother's ability to develop a relationship or attachment to her unborn child is associated with her ability to mentalise or imagine her baby and their needs (Condon & Corkindale, 1997; Cranley, 1981b). This involves processes such as imagining what the baby will look like and what it will feel like to interact with them (Cranley, 1981a). Feelings of maternal-foetal attachment increase after having a scan where the mother can see the baby (Boukydis et al., 2006; Heidrich & Cranley, 1989), this effect is amplified when viewing a 3D scan of the foetus versus a 2D scan (Edwards et al., 2010). These results are further supported by the positive findings of a study investigating the effect of virtual reality imaging on maternal-foetal attachment (Lee et al., 2023). In this study, foetal images in virtual reality significantly increased maternal interaction with the foetus. Imagery-based interventions such as guided imagery focused on the maternal role and connecting with the

unborn child, have been shown to improve maternal-foetal attachment (Kordi et al., 2016). These findings highlight the role of imagery-based cognitive processes in the perinatal period. Further research is needed to understand whether imagery plays a mechanistic role in the impact of FoC on maternal-foetal attachment.

Low mood also interferes with processes relevant to attachment, with antenatal depression being linked to impaired maternal-foetal attachment (Alhusen et al., 2012; McFarland et al., 2011; Misri & Kendrick, 2008). Antenatal depression can also affect the postpartum mother-infant relationship by disrupting the development of a maternal response to infant emotions (Pearson et al., 2010).

Impaired antenatal attachment has important implications. It negatively impacts positive health practices during pregnancy such as abstaining from alcohol and eating well (Lindgren, 2001), as well as increasing the risk of adverse neonatal outcomes such as low birth weight (Alhusen et al., 2012). These adverse effects extend post birth, as women with lower maternal-foetal attachment are more likely to have children who demonstrate early developmental delays (Alhusen et al., 2013). Even after controlling for perinatal depression, sociodemographic factors, and lifetime psychiatric diagnoses, maternal-foetal attachment has been found to independently predict the quality of maternal-infant bonding and postpartum depression and anxiety (Petri et al., 2018).

In summary, imagery plays a key role in maintaining psychopathology and may also play a key role in antenatal attachment processes. Disruption to antenatal attachment is linked to poorer post-natal outcomes and mother-infant bonding. Women with FoC have reported experiencing intrusive images related to the upcoming birth (Favrod et al., 2018), and FoC has been associated with impaired post-natal bonding (Challacombe et al., 2021; Seefeld et al., 2022). What is not known is whether FoC impacts antenatal bonding and if imagery plays a role in this disruption. Intrusive images can be highly disruptive and emotionally

distressing, and so imagery related to the upcoming birth may be competing with imagery related to antenatal attachment, ultimately hindering the attachment process.

The aim of this study was to investigate the relationship between FoC, imagery, and antenatal attachment.

The following hypotheses were tested:

(1) Individuals highly impacted by intrusive imagery related to the upcoming birth and with high FoC will have weaker antenatal attachment
(2) Individuals with high FoC will have less strong antenatal attachment
(3) Individuals with high FoC will
    a. Have a higher tendency to use mental imagery in everyday life
    b. Be more impacted by the imagery related to the upcoming birth

Materials and Methods

Participants and Procedure

Ethical approval was obtained from the University of Oxford's Medical Sciences interdivision Research Ethics Committee (R90353). Two women who had recently given birth contributed to the design of this study. One had experienced FoC, and the other had experienced a traumatic birth. They were recruited through AM's personal and professional network. They were emailed the plans for the study and all relevant materials including the poster, questionnaires, consent forms. They then each met with the main researcher AB via Teams for one hour to discuss their feedback. Changes to the poster, wording of the participant information sheet, and survey instructions were made to be more inclusive and non-blaming.

To be included in the study, participants had to be over 18 years old, live in the UK, be more than 20 weeks pregnant, not have a high-risk pregnancy, and not have a serious

mental disorder (bipolar disorder, psychosis). A G*Power a priori analysis for an ANCOVA yielded a target sample size of 128. Recruitment took place between April and October 2024. The recruitment information was posted on social media (Instagram and Facebook), and in various locations around Oxford. The study was also advertised by contacting relevant charities, organisations, and individuals within the researcher's personal and professional network. The poster included a QR code linked to a Qualtrics page with the participant information sheet, consent form, and full set of questionnaires. These took between 10 – 15 minutes to complete. All responses were anonymous. The questionnaires were completed online and at the end of the survey participants were signposted to relevant services. A total of 133 expectant mothers completed the study.

Measures

Demographics

The following sample characteristics were recorded: age, education, ethnicity, pregnancy characteristics (gestation period, gravidity, whether the pregnancy was planned or not, history of miscarriage).

Questionnaires

Fear of Childbirth Questionnaire (FCQ). This scale was used to measure FoC. It was developed in the UK and based on research focused on the key elements of FoC reported by an English-speaking UK population (Slade et al., 2022). It consisted of 20 items rated on a scale from 0 (strongly disagree) to 3 (strongly agree). The items focused on feelings about labour and birth over the past 2 weeks. This scale was developed recently, and though it demonstrated good reliability and validity (Sanjari et al., 2022), cut-off scores were yet to be defined. In light of this, the current study used a median split to categorise participants as high or low in FoC for dichotomised analyses.

Depression Anxiety and Stress Scale (DASS-21). This scale was used to measure depression and anxiety. It had good reliability and validity (Antony et al., 1998). It consisted of 21 items rated on a Likert scale from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). This scale had been used with the perinatal population and had the advantage of separating depression, anxiety, and stress and excluding somatic factors (Meades & Ayers, 2011).

Impact of Future Events Scale (IFES). This scale is a useful tool for exploring the impact of prospective mental imagery in the context of anxiety-based psychological disorders (Deeprose & Holmes, 2010). Participants are usually asked to think of three future events, categorise them as positive or negative, then rate how they feel about each of them using 24 items on a scale from 0 (not at all) to 4 (extremely). Items include statements such as "I believed my thoughts about the future would definitely happen and would become real", "I thought about the future when I didn't mean to", "Pictures about the future popped into my mind" (Deeprose & Holmes, 2010). This measure was adapted by asking participants to consider only one specific future event (see Kroener et al., 2019). In this study the event was specified as the upcoming birth.

Spontaneous Use of Imagery Scale (SUIS). This questionnaire was used to measure the general tendency to experience mental imagery in everyday life (Reisberg et al., 2003). It included 12 statements such as "When I first hear a friend's voice, a visual image of him or her almost always springs to mind". These statements were rated on a scale of 1 (never appropriate) to 5 (always completely appropriate) for the degree to which the statement was appropriate to them. This resulted in a score ranging from 12 to 60 with higher scores indicating more use of mental imagery in daily life.

Maternal-Foetal Attachment Scale (MFAS). This scale comprised of 24 items representing different aspects of maternal-foetal attachment such as differentiation of self

from the foetus, interaction with the foetus, and attribution of characteristics and intentions to the foetus. Some of the items were imagery based such as “I picture myself feeding the baby” or “I imagine what the baby will look like” (Cranley, 1981a). The statements were rated on a Likert scale from 1 to 5 with higher scores indicating higher attachment. The measure demonstrated good reliability and validity (Slade et al., 2022)

Statistical Analyses

Analysis was conducted using SPSS (Version 29, IBM Corp., 2022). There was 0.25% of data missing at random from items on the DASS21, and >0.01% from the SUIS. This was managed by completing mean imputation for these variables (Jamshidian & Mata, 2007).

Descriptive statistics were calculated for the low (n=69) and high (n=64) FCQ groups, as well as across the sample (N = 133). Pearson’s correlation coefficients were calculated to determine the strength and direction of the relationships between the measured variables.

Hypothesis 1. To determine whether individuals with both high FoC and high intrusive imagery had less strong antenatal attachment an ANCOVA was run with MFAS as the dependent variable, the FCQ and the IFES as the independent variables, and the DASS-21 and SUIS as co-variates. Depression, anxiety, and stress were controlled for as they have been shown to negatively impact antenatal attachment (Yarcheski et al., 2009; Srivastava & Bhatnagar, 2019). The general capacity to think in images versus verbal thoughts was controlled for to isolate the effect of intrusive birth-related imagery (see Deeprose et al., 2011). The clinical cut-off score of 23 was used to split IFES scores into two groups (high vs low) (Kroener et al., 2019). There were no cut-off scores for the FCQ, therefore a median split was used to split participants into high and low FCQ groups.

Hypothesis 2. To determine whether high FoC was related to impaired antenatal attachment, an independent t-test was run between the MFAS scores in the high and low FCQ groups.

Hypothesis 3. To determine whether high FoC was related to increased susceptibility to imagery and higher impact of birth-related imagery, a MANOVA was planned with SUIS and IFES scores as dependent variables and FCQ score as the independent variable. However, SUIS and IFES scores were not highly correlated ($r = 0.06$). In order to run a MANOVA this correlation should have ideally been approximately 0.6 (Tabachnick & Fidell, 2019). Furthermore, the assumption of homogeneity of variances was violated as assessed by Levene's test ($p<0.05$), and data transformation was not deemed appropriate. Hence, two separate ANOVAs were run instead of a MANOVA (Tabachnick & Fidell, 2019).

Secondary Analysis

A hierarchical regression was run to assess which variables significantly predicted MFAS scores. The variables added to the model included maternal age, gestational age, miscarriage history, gravidity, as the literature identifies these sociodemographic characteristics as predictors of maternal-foetal attachment (Yarcheski et al., 2009). Depression, stress, and anxiety were added next as these factors also impact maternal-foetal attachment (Yarcheski et al., 2009). Spontaneous use of imagery was added to control for its effect on attachment. This was to understand whether intrusive imagery about the upcoming birth was predictive of maternal-foetal attachment in the model over and beyond one's general tendency to use mental imagery instead of verbal imagery (see Deeprose et al., 2011). Finally, the impact of intrusive imagery about the future birth and FoC were added to understand how much extra variance these factors accounted for.

Results

Descriptive statistics for demographics and variable scores are presented in Table 1 and 2.

Table 1

Demographic Characteristics of Sample

Demographics	Low FCQ (%)	High FCQ (%)	Total (%)

	n = 69	n = 64	N = 133
Age			
18 – 24	1 (1.4)	2 (3.1)	3 (2.3)
25 – 34	47 (68.1)	46 (71.9)	93 (69.9)
35 - 44	21 (30.4)	16 (25.0)	37 (27.8)
Planned Pregnancy			
Yes	62 (89.9)	56 (87.5)	118 (88.7)
No	7 (10.1)	8 (12.5)	15 (11.3)
Gravidity			
Never gave birth	40 (58.0)	44 (68.8)	84 (63.2)
Given birth before	29 (42.0)	20 (31.3)	49 (36.8)
Gestational Age			
Trimester 2	29 (42.0)	31 (48.4)	60 (45.1)
Trimester 3	40 (58.0)	33 (51.6)	73 (54.9)
Marital Status			
Single	1 (1.4)	0 (0.0)	1 (0.8)
Living with partner	18 (26.1)	16 (25.0)	97 (72.9)
Married	49 (71.0)	48 (75.0)	34 (25.6)
Other	1 (1.4)	0 (0.0)	1 (0.8)
Education Level			
Secondary	1 (1.4)	1 (1.6)	2 (1.5)
A-levels or equivalent	5 (7.2)	3 (4.7)	8 (6.0)
Post-secondary vocational/technical	0 (0.0)	4 (6.3)	4 (3.0)
University (1st degree)			
Postgraduate (2nd or further degree)	25 (36.2)	24 (37.5)	49 (36.8)
	38 (55.1)	32 (50.0)	70 (52.6)
Ethnicity			
White	63 (91.3)	51 (79.7)	114 (85.7)
Mixed	3 (4.3)	6 (9.4)	9 (6.8)
Asian or Asian British	1 (1.4)	4 (6.3)	5 (3.8)
Black, Black British, Caribbean or African	2 (2.9)	0 (0.0)	2 (1.5)
Other	0 (1.6)	1 (1.6)	1 (0.8)
Prefer not to say	0 (0.0)	2 (1.5)	2 (1.5)

Table 2

Descriptive Statistics for Questionnaire Scores

Variables	Low FCQ mean (SD) n = 69	High FCQ mean (SD) n = 64	Total Mean (SD) N = 133	Min - Max	Range
DASS21	12.65 (8.30)	26.09 (22.75)	19.12 (18.1)	0 – 106	0 – 126
Depression	2.73 (2.99)	7.00 (8.60)	4.78 (6.67)	0 – 38	0 – 42
Anxiety	1.35 (1.40)	3.47 (3.80)	2.37 (3.00)	0 – 16	0 – 42
Stress	3.61 (2.61)	6.07 (4.59)	4.80 (3.89)	0 - 21	0 - 42
SUIS	37.78 (8.72)	36.37 (7.71)	37.10 (8.25)	14 - 55	12 - 60
IFES	16.61 (7.89)	27.19 (17.19)	21.70 (14.19)	0 - 76	0 - 96

MFAS	88.25 (9.18)	86.38 (10.30)	87.35 (9.75)	64 - 111	24 - 120
FCQ	18.42 (6.05)	35.22 (7.17)	26.50 (10.70)	4 - 57	0 - 60

Note. DASS21 = Depression, Anxiety, and Stress Scale. SUIS = Spontaneous Use of Imagery Scale. IFES = Impact of Future Events Scale. MFAS = Maternal-Foetal Attachment Scale. FCQ = Fear of Childbirth Questionnaire.

The mean DASS21 score was in the mild range across the whole sample. In the low FCQ group this score was in the normal range 12.65 (SD = 8.30), and for the high FCQ group in the severe range 26.09 (SD = 22.75). Scores were in line with previous research in perinatal populations (Miller et al., 2006). SUIS, IFES, and MFAS mean scores and standard deviations fell in line with previous research in non-clinical groups (Deeprose et al., 2011; Doan et al., 2003; Nelis et al., 2014). Pearson's correlation coefficients for relationships between the measured variables are presented in Table 3. Assumptions for statistical tests were assessed and met (details in Appendix C).

Table 3

Bivariate Correlations Between Variables

		1.	2.	3.	4.	5.
1.	**DASS21**	-				
2.	**SUIS**	0.06	-			
3.	**IFES**	0.60**	0.06	-		
4.	**FCQ**	0.49**	-0.09	0.47**	-	
5.	**MFAS**	-0.07	0.26**	0.09	-0.11	-

Note. N= 133. DASS21 = Depression, Anxiety, and Stress Scale. SUIS = Spontaneous Use of Imagery Scale. IFES = Impact of Future Events Scale. FCQ = Fear of Childbirth Questionnaire. MFAS = Maternal-Foetal Attachment Scale. **p<0.001

Hypothesis 1

Means, adjusted means, standard deviations and standard errors are presented in Table 4.

No interaction was observed between intrusive imagery and FoC on maternal-foetal attachment after controlling for spontaneous use of imagery and depression, anxiety, and stress, $F(1, 127) = 1.83$, $p = .178$, partial $\eta 2 = .014$. Therefore, an analysis of the main effects of intrusive imagery and FoC was performed.

There was a main effect of intrusive imagery (low versus high) on maternal-foetal attachment after controlling for spontaneous use of imagery, and depression, anxiety, and stress. Those in the high intrusive imagery group showed significantly higher maternal-foetal attachment than those in the low intrusive imagery group F(127) = 4.240, 95% CI [0.139, 8.341], p = .043.

No main effect of FoC (low versus high) on maternal-foetal attachment was observed after controlling for spontaneous use of imagery, and depression, anxiety, and stress F(127) = 3.085, 95% CI [-1.074 , 7.245], p = .145.

Table 4

Means for ANCOVA with DASS21 and SUIS as Covariates

	Low FCQ		High FCQ	
MFAS	**Low IFES**	**High IFES**	**Low IFES**	**High IFES**
M (SD)	87.00 (8.75)	94.82 (8.99)	86.09 (9.33)	86.70 (11.46)
M_{adj} (SE)	86.59 (1.29)	93.59 (2.86)	86.27 (1.63)	87.74 (2.04)

Note. N= 133. IFES = Impact of Future Events Scale. FCQ = Fear of Childbirth Questionnaire. MFAS = Maternal-Foetal Attachment Scale.

Secondary Analysis: Hierarchical Regression

The addition of spontaneous use of imagery to the prediction of MFAS (see Model 2 in Table 5) led to a statistically significant increase in R^2 of .061, $F(1, 127) = 8.69$, $p < .05$.

The full model of age, gestational age, miscarriage history, gravidity, spontaneous use of imagery, DASS21, intrusive imagery about the future birth, and fear of childbirth to predict MFAS (Model 5) was statistically significant, $R^2 = .145$, $F(8, 124) = 2.631$, $p = 0.01$, adjusted $R^2 = .09$.

Table 5

Hierarchical Regression

	MFAS									
	Model 1		Model 2		Model 3		Model 4		Model 5	
Variable	B	β	B	β	B	β	B	β	B	β
Constant	84.66**		72.76**		73.42**		72.42**		75.79**	
Given birth before	-3.69*	-0.18	-3.03	-0.15	-2.96	-0.15	-2.72	-0.14	-2.98	-0.15
Miscarriage history	-0.23	-0.01	-0.78	-0.04	-0.64	-0.03	-0.86	-0.04	-.41	-0.02
Trimester	2.60	0.13	2.92	0.15	3.13	0.16	3.02	0.16	2.74	0.14
Age	0.04	0.002	0.17	0.009	0.04	0.002	-0.08	-0.004	-0.19	-0.01
SUIS			0.30*	0.25	0.30*	0.26	0.30*	0.25	0.28*	0.24
DASS21					-0.05	-0.10	-0.11	-0.20	-0.09	-0.17
IFES							0.12	0.18	0.14	0.21
FCQ									-0.10	-0.11
R^2	0.05		0.11		0.12		0.14		0.15	
F	1.56		3.06*		2.79*		2.84*		2.61*	
ΔR^2	0.05		0.06		0.01		0.02		0.01	
ΔF	1.56		8.69*		1.38		2.89		1.16	

Note. N=133. SUIS = Spontaneous Use of Imagery Scale. DASS21 = Depression, Anxiety, and Stress Scale. IFES = Impact of Future Events Scale. FCQ = Fear of Childbirth Questionnaire. MFAS = Maternal-Foetal Attachment Scale. B = unstandardised coefficient. β = standardised coefficient **p<0.001. * p<0.05

Hypothesis 2

The MFAS scores were lower for the high FCQ group (M= 86.38, SD = 10.30) than for the low FCQ group (M=88.24, SD=9.18) but this difference was not statistically significant M=1.87, 95% CI [-1.47 to 5.21], t (131) = 1.107, p = .270.

Hypothesis 3

Analysis of Variance: Fear of Childbirth and Spontaneous Use of Imagery

SUIS scores were not significantly different between low and high FCQ groups F(1, 131) = 0.97, p = 0.33.

Analysis of Variance: Fear of Childbirth and Intrusive Future Events

The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances ($p<0.001$). Therefore, Welch's test was used.

The intrusive imagery score was higher for those in the high FCQ (n = 64, M = 27.18, SD = 17.19), compared to those in the low FCQ group (n = 69, M = 16.61, SD = 7.88), and this difference was statistically significant Welch's $F(1, 86.92) = 20.28$, $p < .001$.

Discussion

This study aimed to explore whether pregnant women high in both intrusive birth-related imagery and FoC would have lower maternal-foetal attachment, women with higher levels of FoC would have lower maternal-foetal attachment, and women with higher levels of FoC would be more susceptible to spontaneous imagery and more impacted by intrusive imagery related to the upcoming birth.

Previous literature highlights the power of mental imagery and the mechanistic role it plays in various psychopathologies (Holmes & Mathews, 2010). Recovery from mental disorders can be achieved when other neutral or more positive images or representations compete effectively with dominant negative imagery or representations (Brewin et al., 2010; Iyadurai et al., 2020, 2023). It was expected that those higher in FoC would experience higher negative intrusive birth-related imagery which would ultimately hinder maternal-foetal attachment through competing with positive imagery related to the baby. Unexpectedly, the findings indicated that intrusive imagery and FoC did not interact in influencing maternal-foetal attachment, suggesting that these factors may operate independently in their impact on attachment.

Contrary to our hypothesis, more intrusive imagery related to the upcoming birth was associated with higher levels of maternal-foetal attachment. This finding may be attributed to the valence of the intrusive imagery about the upcoming birth. The standard IFES instructions

ask participants to think about three upcoming future events and label them as positive or negative before scoring the items. In this study, this was adapted to ask participants to think of only one event; the upcoming birth. They were not asked to label this event as a positive or negative event as it was, perhaps wrongly, assumed that this would be a negative event. This was a limitation of this study as it is possible that intrusive images related to the upcoming birth were related to higher maternal-foetal attachment as expecting mothers were interacting more with positive birth-related imagery such as the baby emerging and being placed on the mother's chest for the first time (Favrod et al., 2018). This would be consistent with studies where imagery based interventions, such as using virtual reality to help mothers interact with their future babies, increased maternal-foetal attachment (Lee et al., 2023).

It might be that lower levels of any intrusive imagery are indicative of avoidance, which then leads to lower attachment. Therefore, women who actively avoid imagining the birth at all – whether positively or negatively – are most at risk of the adverse outcomes related to low maternal-foetal attachment. Future studies could explore the role avoidance plays in the interactions between these factors.

No support was found for the hypothesis that women with higher FoC would have lower levels of maternal-foetal attachment. This contradicts previous research where FoC was found to be related to impaired perinatal bonding (Challacombe et al., 2021; Kaya & Altuntu, 2023). This may be due to the median split used for the FoC questionnaire which was recently published, therefore, no cut-off scores were yet reported in the literature (Slade et al., 2022). This was another limitation of this study as standardised cut-off scores will help distinguish those with a clinical level of fear more reliably than using a median split.

To mitigate this limitation, our hierarchical regression model further investigated the impact of FoC and intrusive imagery on maternal-foetal attachment using FoC as a continuous measure. The addition of the general capacity to use imagery in everyday life

explained an additional 6% of variance in the model, predicting the most amount of variance compared to other factors. Intrusive imagery about the upcoming birth did not significantly add to the model. This reaffirmed the decision to control for the general capacity to visualise in the ANCOVA. These results suggest that the general capacity to visualise may explain the link between imagery and maternal foetal attachment beyond intrusive birth-related imagery.

Though the addition of the DASS-21 did not significantly add to the model, controlling for mood (including depression, anxiety, and stress) was a strength of this study. Extant evidence in the perinatal literature points towards mood being among the main variables that impact attachment processes (Alhusen et al., 2012; McFarland et al., 2011; Srivastava & Bhatnagar, 2019; Udry-Jørgensen et al., 2015).

Higher levels of FoC were associated with increased intrusive imagery about the upcoming birth. This mirrors Favrod et al.'s (2018) finding of negative birth-related imagery playing a role in FoC. Future studies could explore whether interventions focussed on imagery modification are effective in decreasing FoC.

Higher levels of FoC were not significantly associated with the general capacity to use imagery in everyday life. Along with the findings from Hypothesis 1, this suggests that this general capacity may play a role in maternal-foetal attachment but not in FoC, and that imagery specific to the upcoming birth may be playing a role in both. Intrusive imagery about an upcoming birth of a child is unique in that the anticipated event is in the future and is relatively unavoidable (Goutaudier et al., 2018; Söderquist et al., 2004). Prospective intrusive imagery may have a stronger effect on distress and anxiety than the general capacity to visualise as it is specific to a feared upcoming event (Holmes & Mathews, 2010), rather than a general trait.

Limitations

In addition to the limitations mentioned above, participants were mainly recruited through social media which likely contributed to the reduced representativeness of the sample. The majority of participants were White British and had post-graduate qualifications. Future studies should aim to include more diverse samples, with the potential of focussing on nulliparous women as they tend to have higher levels of FoC (Rouhe et al., 2009), or a population of women with clinical levels of FoC.

Furthermore, this study was cross-sectional in design, limiting the conclusions that can be drawn from the results regarding the direction of effects. Longitudinal studies examining the relationships between the variables studied here would help in drawing firmer conclusions about the impact of FoC on maternal-foetal attachment and the potential mediating role of imagery or avoidance.

Clinical Implications

Only preliminary conclusions can be drawn about the clinical implications of these findings as further research is needed. Women more severely impacted by intrusive imagery related to the upcoming birth need to be further assessed regarding the valence of these images. Women with high levels of FoC may benefit from imagery-based interventions. Expecting mothers with high levels of FoC may not be at increased risk of low maternal-foetal attachment. Other adverse outcomes related to high levels of FoC may be more pertinent to this population. The tendency to use imagery in everyday life may be a protective factor that promotes maternal-foetal attachment. Perhaps identifying mothers with a lower tendency of this thinking style may help identify those who may need more support to develop higher levels of maternal-foetal attachment.

References

Alhusen, J. L., Gross, D., Hayat, M. J., Nancy Woods, A. B., & Sharps, P. W. (2012). The influence of maternal-fetal attachment and health practices on neonatal outcomes in low-income, urban women. *Research in Nursing & Health*, *35*(2), 112–120. https://doi.org/10.1002/nur.21464

Alhusen, J. L., Hayat, M. J., & Gross, D. (2013). A longitudinal study of maternal attachment and infant developmental outcomes. *Archives of Women's Mental Health*, *16*(6), 521–529. https://doi.org/10.1007/s00737-013-0357-8

Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*, *10*(2), 176–181. https://doi.org/10.1037/1040-3590.10.2.176

Arntz, A., Tiesema, M., & Kindt, M. (2007). Treatment of PTSD: A comparison of imaginal exposure with and without imagery rescripting. *Journal of Behavior Therapy and Experimental Psychiatry*, *38*(4), 345–370. https://doi.org/10.1016/j.jbtep.2007.10.006

Badaoui, A., Kassm, S. A., & Naja, W. (2019). Fear and Anxiety Disorders Related to Childbirth: Epidemiological and Therapeutic Issues. *Current Psychiatry Reports*, *21*(4), 27. https://doi.org/10.1007/s11920-019-1010-7

Boukydis, C. F. Z., Treadwell, M. C., Delaney-Black, V., Boyes, K., King, M., Robinson, T., & Sokol, R. (2006). Women's Responses to Ultrasound Examinations During Routine Screens in an Obstetric Clinic. *Journal of Ultrasound in Medicine*, *25*(6), 721–728. https://doi.org/10.7863/jum.2006.25.6.721

Brewin, C. R., Gregory, J. D., Lipton, M., & Burgess, N. (2010). Intrusive images in psychological disorders: Characteristics, neural mechanisms, and treatment

implications. *Psychological Review*, *117*(1), 210–232. https://doi.org/10.1037/a0018113

Challacombe, F. L., Nath, S., Trevillion, K., Pawlby, S., & Howard, L. M. (2021). Fear of childbirth during pregnancy: Associations with observed mother-infant interactions and perceived bonding. *Archives of Women's Mental Health*, *24*(3), 483–492. https://doi.org/10.1007/s00737-020-01098-w

Çili, S., & Stopa, L. (2015). Intrusive Mental Imagery in Psychological Disorders: Is the Self the Key to Understanding Maintenance? *Frontiers in Psychiatry*, *6*. https://doi.org/10.3389/fpsyt.2015.00103

Condon, J. T., & Corkindale, C. (1997). The correlates of antenatal attachment in pregnant women. *British Journal of Medical Psychology*, *70*(4), 359–372. https://doi.org/10.1111/j.2044-8341.1997.tb01912.x

Cranley, M. S. (1981a). Development of a tool for the measurement of maternal attachment during pregnancy. *Nursing Research*, *30*(5), 281–284.

Cranley, M. S. (1981b). Roots of attachment: The relationship of parents with their unborn. *Birth Defects Original Article Series*, *17*(6), 59–83.

Deeprose, C., & Holmes, E. A. (2010). An Exploration of Prospective Imagery: The Impact of Future Events Scale. *Behavioural and Cognitive Psychotherapy*, *38*(2), 201–209. https://doi.org/10.1017/S1352465809990671

Deeprose, C., Malik, A., & Holmes, E. A. (2011). Measuring Intrusive Prospective Imagery using the Impact of Future Events Scale: Psychometric Properties and Relation to Risk for Bipolar Disorder. *International Journal of Cognitive Therapy*, *4*(2), 187–196. https://doi.org/10.1521/ijct.2011.4.2.187

Dencker, A., Nilsson, C., Begley, C., Jangsten, E., Mollberg, M., Patel, H., Wigert, H., Hessman, E., Sjöblom, H., & Sparud-Lundin, C. (2018). Causes and outcomes in

studies of fear of childbirth: A systematic review. *Women and Birth: Journal of the Australian College of Midwives*. https://doi.org/10.1016/j.wombi.2018.07.004

Doan, H. M., Cox, N. L., & A Zimerman. (2003). The Maternal Fetal Attachment Scale: Some Methodological Ponderings. *Journal of Prenatal & Perinatal Psychology & Health*, *18*(2), 167–188.

Edwards, M. M., Wang, F., Tejura, T., Patel, A., Majewski, S., & Donnenfeld, A. E. (2010). Maternal reactions to two-dimensional compared to three-dimensional foetal ultrasonography. *Journal of Psychosomatic Obstetrics & Gynecology*, *31*(2), 53–59. https://doi.org/10.3109/01674821003793038

Favrod, C., Holmes, E. A., Vial, Y., Morisod Harari, M., & Horsch, A. (2018). Spontaneous childbirth-related mental images among pregnant women: A mixed-method study. *Journal of Reproductive and Infant Psychology*, *36*(4), 393–405. https://doi.org/10.1080/02646838.2018.1472749

Goutaudier, N., Bertoli, C., Séjourné, N., & Chabrol, H. (2018). Childbirth as a forthcoming traumatic event: Pretraumatic stress disorder during pregnancy and its psychological correlates. *Journal of Reproductive and Infant Psychology*, 1–12. https://doi.org/10.1080/02646838.2018.1504284

Heidrich, S. M., & Cranley, M. S. (1989). Effect of Fetal Movement, Ultrasound Scans, and Amniocentesis On Maternal-Fetal Attachment: *Nursing Research*, *38*(2), 81???84. https://doi.org/10.1097/00006199-198903000-00008

Hirsch, C. R., & Holmes, E. A. (2007). Mental imagery in anxiety disorders. *Psychiatry*, *6*(4), 161–165. https://doi.org/10.1016/j.mppsy.2007.01.005

Holmes, E. A., Deeprose, C., Fairburn, C. G., Wallace-Hadrill, S. M. A., Bonsall, M. B., Geddes, J. R., & Goodwin, G. M. (2011). Mood stability versus mood instability in

bipolar disorder: A possible role for emotional mental imagery. *Behaviour Research and Therapy*, *49*(10), 707–713. https://doi.org/10.1016/j.brat.2011.06.008

Holmes, E. A., & Mathews, A. (2010). Mental imagery in emotion and emotional disorders. *Clinical Psychology Review*, *30*(3), 349–362. https://doi.org/10.1016/j.cpr.2010.01.001

Holmes, Emily. A., Crane, C., Fennell, M. J. V., & Williams, J. M. G. (2007). Imagery about suicide in depression—"Flash-forwards"? *Journal of Behavior Therapy and Experimental Psychiatry*, *38*(4), 423–434. https://doi.org/10.1016/j.jbtep.2007.10.004

Huber, P. J. (1981). *Robust Statistics* (1st ed.). Wiley. https://doi.org/10.1002/0471725250

Iyadurai, L., Hales, S. A., Blackwell, S. E., Young, K., & Holmes, E. A. (2020). Targeting intrusive imagery using a competing task technique: A case study. *Behavioural and Cognitive Psychotherapy*, *48*(6), 739–744. https://doi.org/10.1017/S1352465820000296

Iyadurai, L., Highfield, J., Kanstrup, M., Markham, A., Ramineni, V., Guo, B., Jaki, T., Kingslake, J., Goodwin, G. M., Summers, C., Bonsall, M. B., & Holmes, E. A. (2023). Reducing intrusive memories after trauma via an imagery-competing task intervention in COVID-19 intensive care staff: A randomised controlled trial. *Translational Psychiatry*, *13*(1), 290. https://doi.org/10.1038/s41398-023-02578-0

Jamshidian, M., & Mata, M. (2007). Advances in Analysis of Mean and Covariance Structure when Data are Incomplete. In *Handbook of Computing and Statistics with Applications* (Vol. 1, pp. 21–44). Elsevier. https://doi.org/10.1016/S1871-0301(06)01002-X

Kordi, M., Fasanghari, M., Asgharipour, N., & Esmaily, H. (2016). Effect of Guided Imagery on Maternal Fetal Attachment in Nulliparous Women with Unplanned Pregnancy. *Journal of Midwifery and Reproductive Health*, *4*(4). https://doi.org/10.22038/jmrh.2016.7554

Kroener, J., Schaitz, C., Maier, A., Connemann, B., & Sosic-Vasic, Z. (2019). The German Impact of Future Events Scale (IFES-S): Adaption and Validation for Clinical Samples. *Frontiers in Psychiatry*, *10*, 813. https://doi.org/10.3389/fpsyt.2019.00813

Lee, K.-N., Kim, H. J., Choe, K., Cho, A., Kim, B., Seo, J., Myung, W., Park, J. Y., & Oh, K. J. (2023). Effects of Fetal Images Produced in Virtual Reality on Maternal-Fetal Attachment: Randomized Controlled Trial. *Journal of Medical Internet Research*, *25*, e43634. https://doi.org/10.2196/43634

Lindgren, K. (2001). Relationships among maternal-fetal attachment, prenatal depression, and health practices in pregnancy. *Research in Nursing & Health*, *24*(3), 203–217. https://doi.org/10.1002/nur.1023

McFarland, J., Salisbury, A. L., Battle, C. L., Hawes, K., Halloran, K., & Lester, B. M. (2011). Major depressive disorder during pregnancy and emotional attachment to the fetus. *Archives of Women's Mental Health*, *14*(5), 425–434. https://doi.org/10.1007/s00737-011-0237-z

Meades, R., & Ayers, S. (2011). Anxiety measures validated in perinatal populations: A systematic review. *Journal of Affective Disorders*, *133*(1–2), 1–15. https://doi.org/10.1016/j.jad.2010.10.009

Miller, R. L., Pallant, J. F., & Negri, L. M. (2006). Anxiety and stress in the postpartum: Is there more to postnatal distress than depression? *BMC Psychiatry*, *6*(1), 12. https://doi.org/10.1186/1471-244X-6-12

Misri, S., & Kendrick, K. (2008). Perinatal Depression, Fetal Bonding, and Mother-Child Attachment: A Review of the Literature. *Current Pediatric Reviews*, *4*(2), 66–70. https://doi.org/10.2174/157339608784462043

Nelis, S., Holmes, E. A., Griffith, J. W., & Raes, F. (2014). Mental imagery during daily life: Psychometric evaluation of the Spontaneous Use of Imagery Scale (SUIS). *Psychologica Belgica*, *54*(1), 19–32. https://doi.org/10.5334/pb.ag

Nilsson, C., Hessman, E., Sjöblom, H., Dencker, A., Jangsten, E., Mollberg, M., Patel, H., Sparud-Lundin, C., Wigert, H., & Begley, C. (2018). Definitions, measurements and prevalence of fear of childbirth: A systematic review. *BMC Pregnancy and Childbirth*, *18*(1), 28. https://doi.org/10.1186/s12884-018-1659-7

Pearson, R., Cooper, R., Penton-Voak, I. S., Lightman, S. L., & Evans, J. (2010). Depressive symptoms in early pregnancy disrupt attentional processing of infant emotion. *Psychological Medicine*, *40*(4), 621–631. https://doi.org/10.1017/S0033291709990961

Petri, E., Palagini, L., Bacci, O., Borri, C., Teristi, V., Corezzi, C., Faraoni, S., Antonelli, P., Cargioli, C., Banti, S., Perugi, G., & Mauri, M. (2018). Maternal–foetal attachment independently predicts the quality of maternal–infant bonding and post-partum psychopathology. *The Journal of Maternal-Fetal & Neonatal Medicine*, *31*(23), 3153–3159. https://doi.org/10.1080/14767058.2017.1365130

Reisberg, D., Pearson, D. G., & Kosslyn, S. M. (2003). Intuitions and introspections about imagery: The role of imagery experience in shaping an investigator's theoretical views. *Applied Cognitive Psychology*, *17*(2), 147–160. https://doi.org/10.1002/acp.858

Rouhe, H., Salmela-Aro, K., Halmesmäki, E., & Saisto, T. (2009). Fear of childbirth according to parity, gestational age, and obstetric history. *BJOG: An International Journal of Obstetrics and Gynaecology*, *116*(1), 67–73. https://doi.org/10.1111/j.1471-0528.2008.02002.x

Sanjari, S., Amir Fakhraei, A., Mohammidi Soleimani, M. R., & Alidousti, K. (2022). Validation of the Slade Fear of Childbirth Scale for Pregnancy in a Sample of Iranian

Women: A Crosssectional Study. *Crescent Journal of Medical and Biological Sciences*, *9*(3), 138–146. https://doi.org/10.34172/cjmb.2022.24

Seefeld, L., Weise, V., Kopp, M., Knappe, S., & Garthus-Niegel, S. (2022). Birth Experience Mediates the Association Between Fear of Childbirth and Mother-Child-Bonding Up to 14 Months Postpartum: Findings From the Prospective Cohort Study DREAM. *Frontiers in Psychiatry*, *12*, 776922. https://doi.org/10.3389/fpsyt.2021.776922

Slade, P., Balling, K., Houghton, G., & Sheen, K. (2022). A new scale for fear of childbirth: The Fear of Childbirth Questionnaire (FCQ). *Journal of Reproductive and Infant Psychology*, *40*(6), 602–612. https://doi.org/10.1080/02646838.2021.1928615

Söderquist, J., Wijma, K., & Wijma, B. (2004). Traumatic stress in late pregnancy. *Journal of Anxiety Disorders*, *18*(2), 127–142. https://doi.org/10.1016/S0887-6185(02)00242-6

Srivastava, A., & Bhatnagar, P. (2019). Maternal foetal attachment and perceived stress during pregnancy. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, *8*(9), 3750. https://doi.org/10.18203/2320-1770.ijrcog20193810

Tabachnick, B. G., & Fidell, L. S. (2019). In *Using Multivariate Statistics* (Seventh edition, pp. 270–271). Pearson.

Udry-Jørgensen, L., Darwiche, J., Germond, M., Wunder, D., & Vial, Y. (2015). Anxiety, depression, and attachment before and after the first-trimester screening for Down syndrome: Comparing couples who undergo ART with those who conceive spontaneously: Prenatal testing and emotional states in early pregnancy. *Prenatal Diagnosis*, *35*(13), 1287–1293. https://doi.org/10.1002/pd.4688

Vassilopoulos, S. (2005). Social Anxiety and the Effects of Engaging in Mental Imagery1. *Cognitive Therapy and Research*, *29*(3), 261–277. https://doi.org/10.1007/s10608-005-2993-4

Yarcheski, A., Mahon, N. E., Yarcheski, T. J., Hanks, M. M., & Cannella, B. L. (2009). A meta-analytic study of predictors of maternal-fetal attachment. *International Journal of Nursing Studies*, *46*(5), 708–715. https://doi.org/10.1016/j.ijnurstu.2008.10.013

Executive Summary

Study title: Exploring the Link Between Imagery, Fear of Childbirth, and Maternal-Foetal Attachment

Who carried out the research: A trainee on the Oxford Doctorate in Clinical Psychology course (Alexandra El Badaoui) with the support of her supervisors (Dr Fiona Challacombe, Dr Libby Barnardo, and Dr Aimee McKinnon)

What public involvement was there in the study: Two women who had recently given birth contributed to the design of this study. One had experienced tokophobia, and the other had experienced a traumatic birth. They looked over the plans for the study and all relevant materials (i.e. the poster, questionnaires, consent forms) and provided valuable feedback. For example, they proposed changes to wording in the participant information sheet and survey to be more validating and non-blaming.

Where and when the study took place: In the UK between March 2024 and December 2024.

Background

Some pregnant women experience clinically significant levels of fear of childbirth (FoC). Women with high levels of FoC may experience involuntary negative mental images related to the upcoming birth which are distressing. Another process that involves imagery during pregnancy is the maternal-foetal relationship. This relationship is centred around pregnant women being able to think about their baby as a person and imagine what it would be like to interact with them. This process leads to increased feelings of attachment and bonding to the unborn child. This key process is linked to better physical and mental health for the mother and child even after birth.

Aim of the study and what we expected to find

This study aimed to explore the relationship between FoC, images related to the upcoming birth, and attachment to the unborn baby. The idea was that the negative intrusive images about the upcoming birth might interfere with the imagery processes required for strong maternal-foetal attachment. Therefore, the study expected to find that women with higher levels of FoC and high levels of intrusive birth-related imagery would have lower levels of maternal-foetal attachment.

What did we do?

To answer this question, we recruited 133 women from the general public and asked them to complete a series of self-report questionnaires online. Recruitment posters were posted on social media and in several locations throughout Oxford. Participants were included if they were above 18 years old, more than 20 weeks pregnant, and not experiencing a high-risk pregnancy. The recruitment poster was also sent via email to charities and organisations.

What did we find?

We were surprised to find that high levels of intrusive birth-related imagery were linked to both higher levels of FoC and higher levels of maternal-foetal attachment. It is possible that birth-related imagery could be both positive (imagining the baby emerging and holding the baby for the first time) and negative (umbilical cord wrapped around the baby, or blood). We also found that the individuals' general capacity to use mental imagery in daily life, rather than imagery specifically linked to a future event, was a key variable for predicting level of maternal-foetal attachment. The higher the tendency to use this type of imagery-based thinking, the higher maternal-foetal attachment scores were.

Furthermore, high levels of FoC were not linked to lower levels of maternal-foetal attachment. This could be because the questionnaire used to measure FoC was recently created, and no research yet exists that specifies cut-off scores for what counts as "high" or

"low" FoC. Therefore, there is no way of knowing if the women recruited in this study were generally on the lower end of FoC. This limits the reliability of our results.

How has this study helped patients and researchers?

This study highlighted these areas for future research which will help researchers and clinicians achieve a better understanding of the role of imagery during pregnancy. This will help us design interventions that target specific types of imagery which can help improve pregnancy outcomes for patients.

This study was the first to investigate the link between imagery, FoC, and maternal-foetal attachment. The results showed us that birth-related imagery is linked to both high FoC and high maternal-foetal attachment. This has helped researchers know that future studies could investigate the content of birth-related images to better understand what type of content is contributing to increased FoC, and what content is contributing to increased maternal-foetal attachment.

FoC is perhaps so distressing that it can generate intrusive imagery even in women who do not have the general tendency to use imagery in their daily life. This would explain why the general capacity to visualise is related to maternal-foetal attachment and not to FoC. This study has helped patients by contributing to the evidence that intrusive birth-related imagery is related to FoC severity. Clinicians therefore have more evidence for offer imagery-based interventions to women struggling with this. Furthermore, expecting mothers with a lower tendency to use visual imagery in everyday life may struggle more with developing maternal-foetal attachment. Clinicians can use this information to identify help identify those who may need more support with this.

Connecting Narrative

I have learned through my experience on this course that both research and clinical work are truly iterative processes. My interest in imagery began during my masters degree following a lecture on the role of imagery in bipolar disorder. I wrote my dissertation at the time on intrusive imagery, and I realised that understanding mechanisms allows us to understand and explain complex psychological processes and identify linchpins of mental disorders. This helps improve our predictions and design more targeted interventions.

I also had previous research experience as a research assistant investigating fear and anxiety disorders related to childbirth. In that role, I grew to admire the power of motherhood, and all the changes women experience to bear children. I found the idea of giving birth frightening, yet I knew I would one day endure it because I do want to have children. This inspired my thought process for my Theory Driven Research Project (TDRP) as I combined my interests and experience of researching these two topics. I wondered what the role of intrusive imagery in the perinatal period was, specifically in relation to fear of childbirth. This also led to the consideration behind the topic for my systematic review which originally was investigating the role of intrusive imagery in maternal foetal attachment. However, there were not enough studies on this topic to warrant writing a systematic review. While searching the literature in this area and following conversations with my research supervisors, a gap in the knowledge around PTSD following reproductive loss became evident. I found the process for preparing my research proposal for the systematic review more challenging than the other two projects. Perhaps because it was difficult to identify a gap in the research relevant to my interests and to ensure that the search would return enough papers to meet course requirements.

Interestingly, upon reflection, of the three projects it was easiest to choose the topic for my SIP. I have always championed the rights of LGBTQ+ individuals, especially considering close relatives and friends of mine have struggled with stigma and discrimination due to their LGBTQ+ identities. I was struck by the findings that fear of stigma was one of the factors that prevented clients from sharing their identities with their clinicians. This theme was also relevant to the other two populations I researched. The women with lived experience who gave me feedback on my TDRP study materials and design highlighted that it was not unusual for women to be criticised for different aspects of motherhood and fear that their child may be taken away from them if they were deemed unfit to parent. They encouraged and supported me with changing the wording in my participant information sheet and survey to be more validating and with using non-blaming language. Time and effort went into explaining the questionnaires participants were filling out, particularly that measuring maternal-foetal attachment and emphasising that low scores were not an indication of their fitness to parent. It is unsurprising that this theme was also relevant to findings in my SRL where lack of social support was associated with increased PTSD severity. It is well-established in the perinatal literature that social support is a strong protective factor, and women experiencing reproductive loss may not reach out for support out of fear of being blamed or shamed for the loss. This predominant theme from my research made me reflect on this further in my clinical work. I often think about what remains unsaid in therapy sessions and wonder what clients might be holding back out of fear of being judged or shamed. This is why I place the utmost importance on building a therapeutic alliance and normalising topics that clients may feel hesitant to discuss.

I believe that my multicultural background lays a good foundation for this approach. I feel able to relate to a myriad of different experiences and cultures which perhaps makes it easier for me to empathise or connect with clients from diverse cultural backgrounds. I have

reflected on my identity extensively throughout these past three years, particularly through the systemic intermediate training. I have also set goals for myself through my personal reflection and my annual appraisals to continue to be mindful of issues of diversity and inclusion. I have developed this across the years and bring this topic up in individual and group supervision on placement, with the hope of setting a standard of regularly discussing this. Reflecting on these issues is a continuous process and there remains much to learn and much to do. This point is emphasised by the fact that one of the limitations of my research – and most research – is the representativeness of the samples included.

I believe the way to address this is through more intensive public patient involvement with individuals from diverse backgrounds. In my future research, I would like to do more about this by involving individuals from the conception of the project, continuously meeting with them as research progresses, and reporting back on how their input has been used and what impact it has made. On my current placement, individuals with lived experience are employed as Lived Experience Practitioners. They are an integral part of the team and join clinicians for consultations and delivering trainings to other professionals. I aspire to one day deliver training or teaching to future trainees and to also disseminate findings of my research both with someone with lived experience. I want to advocate for this model to be used in any clinical or research setting I join. This will also help break the stigma around different identities and different mental disorders as it dissolves the divide between clinicians/researchers and our clients.

Acknowledgements

My journey through this doctorate would not have been possible without all the people who contributed to supporting and guiding me through it.

I would like to express my gratitude for Dr Aimee McKinnon whose knowledge, patience, calm demeanour, and compassion helped me manage my anxiety and navigate some of the most stressful days. Thank you for reading through my drafts, thinking through my projects with me, and for making time for things - sometimes at very short notice.

I am also grateful to Dr Fiona Challacombe for her knowledge, kindness, and generosity with her time and support with my TDRP, particularly through what was a personally challenging period for me. To Dr Libby Barnardo who also thoughtfully checked in on me during this time and provided helpful feedback on my TDRP. To Dr Emily Reeves, who supervised me with my SIP and for her humour and encouragement. To Dr Grace Jell for her enthusiasm, energy, and tolerance for multiple meetings at short notice!

I would like to extend a special thank you to Dr Matthew Knight who supported me throughout my journey, helped me stay organised, and consistently encouraged me to be reflective, thoughtful, and rise to challenges.

To all my clinical supervisors who were always understanding and kind. A special thanks to Dr Jessica Conrad-Czaja who quickly became not only a supervisor but a mentor and safe space. I could not have done this without you.

To Dr James Bisby for also being a mentor and friend, thank you for your time and encouragement.

To all the clients who contributed to these projects – I owe you my deepest gratitude and am so thankful for your willingness to participate. To all the clinicians and services who were involved as well – thank you!

Aleksandra - thank you for always being there for me. You have been a sounding board for all my worries and have held space for all my feelings.

Carys, Nicola, and Candelaria – thank you for being my chosen family. I would not have been able to do this without you. *(Special thanks also to Tallulah).*

To my Omar – You have cheered me on through the toughest of days and celebrated every milestone of this journey with me. You are my bestest friend, and I could not have asked for a better partner. Words cannot capture how eternally grateful I am for your unwavering love and support.

To my grandparents; Teta Dianne and Jeddo Nader – thank you for all your practical and emotional support, and for the countless phone calls that saw me through long drives to placement and back.

تيتا جوجو مرسي كتير لدعمكِ و لكل الشيش برك !

And finally, to my parents Caroline and Georges. Thank you for always believing in me. You instilled in me the values of compassion, hard-work, and authenticity which got me through this journey. I love you deeply and would not be where I am today without you. I stand on your shoulders, today and always.

Appendix A: Instructions to Authors for Nominated Journals

The Journal of Reproductive and Infant Psychology Submission Guide

This journal was selected for both the TDRP and SRL as it publishes papers on psychological aspects of the perinatal period.

About the Journal

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Medical topics focus on obstetrics and gynaecology, paediatrics and psychiatry. The growing work in relevant aspects of medical communication and medical sociology are also covered.

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The required structure of the abstract is:

Aims/Background, Design/Methods, Results, Conclusion

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Appendix B: SRL Search Strategies

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Set	Search Statement
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2.	"trauma and stressor related disorders"/ or adjustment disorders/ or prolonged grief disorder/ or stress disorders, traumatic/ or psychological trauma/ or stress disorders, post-traumatic/ or stress disorders, traumatic, acute/
3.	1 or 2
4.	("fetal death" or "foetal death" or "fetal loss" or "foetal loss" or miscarriage or "spontaneous abortion" or "unwanted abortion" or "prenatal death" or "pre-natal death" or "prenatal loss" or "pre-natal loss" or "prenatal bereavement" or "pre-natal bereavement" or "intra-uterine death" or "intrauterine death" or "Intra-uterine loss" or "intrauterine loss" or "pregnancy loss" or "reproductive loss" or "perinatal death" or "peri-natal death" or "perinatal loss" or "peri-natal loss" or "perinatal bereavement" or "peri-natal bereavement" or stillbirth or "infant death" or "infant loss" or "infant bereavement" or "neonatal death" or "neonatal loss" or "neonatal bereavement" or "sudden infant death syndrome" or "SIDS" or "neonatal care unit" or "NICU death").ab,kf,ti.
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7.	4 or 5 or 6
8.	3 and 7
9.	limit 8 to (english language and yr="2015 -Current")

Embase Search Strategy

Set	Search Statement	A
1.	(Trauma or PTSD or PTS or "posttraumatic stress disorder" or "post-traumatic stress disorder" or "posttraumatic stress" or "post-traumatic stress" or "post-traumatic" or posttraumatic or "traumatic stress").ab,kf,ti.	
2.	posttraumatic stress disorder/	
3.	1 or 2	
4.	("fetal death" or "foetal death" or "fetal loss" or "foetal loss" or miscarriage or "spontaneous abortion" or "unwanted abortion" or "prenatal death" or "pre-natal death" or "prenatal loss" or "pre-natal loss" or "prenatal bereavement" or "pre-natal bereavement" or "intra-uterine death" or "intrauterine death" or "Intra-uterine loss" or "intrauterine loss" or "pregnancy loss" or "reproductive loss" or "perinatal death" or "peri-natal death" or "perinatal loss" or "peri-natal loss" or "perinatal bereavement" or "peri-natal bereavement" or stillbirth or "infant death" or "infant loss" or "infant bereavement" or "neonatal death" or "neonatal loss" or "neonatal bereavement" or "sudden infant death syndrome" or "SIDS" or "neonatal care unit" or "NICU death").ab,kf,ti.	
5.	pregnancy termination/ or induced abortion/	
6.	bereavement/	
7.	stillbirth/ or fetus death/	
8.	fetus death/	
9.	newborn death/ or perinatal death/	
10.	4 or 5 or 6 or 7 or 8 or 9	
11.	3 and 10	
12.	limit 11 to (english language and yr="2015 -Current")	

PsycINFO Search Strategy

Set	Search Statement
1.	(Trauma or PTSD or PTS or "posttraumatic stress disorder" or "post-traumatic stress disorder" or "posttraumatic stress" or "post-traumatic stress" or "post-traumatic" or posttraumatic or "traumatic stress").ab,id,ti.
2.	trauma/ or birth trauma/ or posttraumatic stress/ or trauma reactions/ or traumatic experiences/ or traumatic loss/ or posttraumatic stress disorder/ or "stress and trauma related disorders"/
3.	1 or 2
4.	("fetal death" or "foetal death" or "fetal loss" or "foetal loss" or miscarriage or "spontaneous abortion" or "unwanted abortion" or "pre-natal death" or "prenatal loss" or "pre-natal loss" or "prenatal bereavement" or "pre-natal bereavement" or "intra-uterine death" or "intrauterine death" or "Intra-uterine loss" or "intrauterine loss" or "pregnancy loss" or "reproductive loss" or "perinatal death" or "peri-natal death" or "perinatal loss" or "peri-natal loss" or "perinatal bereavement" or "peri-natal bereavement" or stillbirth or "infant death" or "infant loss" or "infant bereavement" or "neonatal death" or "neonatal loss" or "neonatal bereavement" or "sudden infant death syndrome" or "SIDS" or "neonatal care unit" or "NICU death").ab,id,ti.
5.	bereavement/
6.	sudden infant death/
7.	spontaneous abortion/
8.	"death and dying"/ or child death/
9.	4 or 5 or 6 or 7 or 8
10.	3 and 9
11.	limit 10 to (english language and yr="2015 -Current")

Appendix C: TDRP Assumptions Testing

Assumptions Testing for Hypothesis 1

Analysis of Covariance

There was a linear relationship between spontaneous use of imagery, and the measure of depression, anxiety, and stress and maternal-foetal attachment for each intervention group, as assessed by visual inspection of a scatterplot.

There was homogeneity of regression slopes as determined by a comparison between the two-way ANCOVA model with and without interaction terms for spontaneous use of imagery and depression, anxiety, and stress, $F(3, 121) = 0.32$, $p = .810$, and $F(3, 121) = 2.05$, $p = .111$, respectively.

There was homoscedasticity within each combination of groups of the two independent variables, as assessed by visual inspection of the studentized residuals plotted against the predicted values for each group. There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ($p = .764$). There were no outliers in the data, as assessed by no cases with studentized residuals greater than ±3 standard deviations. There were no leverage or influential points, as assessed by leverage values and Cook's distance, respectively. Studentized residuals were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$).

Secondary Analysis: Hierarchical Regression

There was linearity as assessed by partial regression plots and a plot of studentized residuals against the predicted values. There was homoscedasticity, as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. There was no evidence of multicollinearity, as assessed by tolerance values greater than 0.1. There

were no studentized deleted residuals greater than ±3 standard deviations, however there were three leverage values over 0.2 (0.24, 0.22, 0.20). Though leverage values between 0.2 and 0.5 are considered “risky” (Huber, 1981), these points did not lead to high influence as there were no Cook’s distance values above 1. Hence, the decision was made to keep them in the analysis. The assumption of normality was met, as assessed by a Q-Q Plot.

Assumptions Testing for Hypothesis 2

T-test

There were outliers in the data as assessed by inspection of a boxplot, hence a sensitivity analysis was run by running the test with and without the outliers, and the result remained insignificant as reported below. MFAS scores for each level of FCQ were normally distributed as assessed by Shapiro-Wilk's test ($p > .05$), and there was homogeneity of variances, as assessed by Levene's test for equality of variances (p=0.290).

Assumptions Testing for Hypothesis 3

Analysis of Variance: Fear of Childbirth and Spontaneous Use of Imagery

Data was normally distributed as assessed by visual inspection of q-q plots. There was homogeneity of variance as assessed by Levene’s test for equality of variances ($p = .325$). There were three outliers as assessed by a boxplot. Hence, the test was run with and without the outliers and the result remained insignificant. The results reported include the outliers.

Analysis of Variance: Fear of Childbirth and Intrusive Future Events

The assumption of homogeneity of variances was violated, as assessed by Levene’s test for equality of variances (p<0.001). Therefore, Welch’s test was used. There were two outliers in the data as identified by a boxplot, however results remained significant even after

removing these. Results reported include the outliers. Data was normally distributed for each group as assessed by visual inspection of q-q plots.

Appendix D: TDRP Copies of Measures

Maternal-Foetal Attachment Scale (MFAS; Cranley, 1981a)

Fear of Childbirth Questionnaire (FCQ; Slade at al., 2022)

Impact of Future Events Scale (IFES; Deeprose & Holmes, 2010)

Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995)

Spontaneous Use of Imagery Scale (SUIS; Reisberg et al., 2003)

Further information available upon request

Appendix E: SIP Client Semi-Structured Interview Schedule

(1) In what way has your LGBTQ+ identity impacted your journey through therapy?
(2) How was the topic of your LGBTQ+ identity raised during therapy (if at all)?
(3) Was there ever a time when you felt like your therapist didn't understand you because of your LGBTQ+ identity? Can you tell me what happened?
(4) What parts of your therapist's approach to your LGBTQ+ identity did you find helpful? Are there other things you think it would be helpful for therapists to consider going forward?
(5) What parts of your therapist's approach to your LGBTQ+ identity did you find unhelpful?
(6) What parts of the service's environment/approach to LGBTQ+ identities did you find helpful?
(7) What parts of the service's environment/approach to LGBTQ+ identities did you find unhelpful?
(8) Is there anything else about this topic you would like to raise that I may not have asked about?
(9) Is there anything the service can do to improve care for LGBTQ+ people that I might not have asked about?

Appendix F: SIP Clinician Survey

Please think of any work you have done with clients who identify as LGBTQ+ when answering the following questions. Rate these on a scale of 1 (definitely not) to 5 (definitely yes)

1. Do you feel confident about meeting the therapeutic needs of LGBTQ+ individuals?
2. Do you feel you have enough knowledge about the discrimination and prejudices faced by LGBTQ+ individuals?
3. Do you feel comfortable asking about your client's sexual orientation?
4. Do you feel comfortable asking about your client's gender identity?
5. In your opinion, has your clients' sexuality/gender impacted their journey through therapy?
6. Was there ever a time when you felt like you couldn't understand your client because of their sexuality?
7. Was there ever a time when you felt like you couldn't understand your client because of their gender?
8. Do you think the service does enough to ensure we are providing a safe space for LGBTQ+ individuals?
9. Do you think that sexual orientation exerts a significant impact on the therapeutic relationship?
10. Do you think that gender identity exerts a significant impact on the therapeutic relationship?

Appendix G: SIP Lay Summary for Clients

Thank you for your participation last year in the research project exploring LGBTQ+ individuals' experiences of Berkshire Talking Therapies. Please see a summary of the project and its findings below. Your participation was extremely valuable in shaping these recommendations so thank you for your time and for sharing your thoughts and experiences.

The aim of this project was to identify what changes can be implemented to improve the service offering for individuals identifying as LGBTQ+. This was explored from both clinicians' and clients' perspectives. Interviews were run with a total of 10 clients who at the time of interview were in therapy with the service. A survey was also emailed to clinicians that included questions about their confidence and competence in meeting LGBTQ+ individuals' therapeutic needs. Forty-one clinicians completed the survey.

The client interviews were transcribed and anonymised. The lead researcher then read through the transcripts and identified patterns and themes that were found across the interviews. The main themes were about the need for clinicians to create safety, maintain curiosity, and avoid making assumptions. Clients wanted to feel represented, included, and understood within the context of being an LGBTQ+ person, as well as an individual/whole person.

Some clients did not feel able to discuss their LGBTQ+ identities in therapy. This meant that they did not correct their therapist if assumptions were made about their sexual orientation or gender identity. Beyond this, some clients shared that they actively tried to hide this from their therapists for example by using ambiguous pronouns to refer to previous partners. This was due to fear about what the therapist's reactions might be. Even if they had a good relationship and felt that the therapist would respond well, previous experiences of stigma and discrimination related to identifying as LGBTQ+ overpowered this. Some clients

expressed feelings of frustration regarding the burden of holding the responsibility to challenge assumptions. There was a shared sense that clinicians could express more curiosity and hold the responsibility of exploring whether the client would like to discuss this topic and if it was relevant to their therapy.

It is important to note that this did not apply to all clients, and some felt that their identity was not relevant to therapy at all and did not feel that this topic needed to be discussed. However, all clients expressed appreciation for being given the opportunity to participate in this project and have their voice and perspective heard.

The clinician survey results indicated that most clinicians felt confident meeting the needs of LGBTQ+ individuals. This inconsistency between clients and clinicians' perspectives highlighted the fact that clinicians were perhaps making assumptions about individuals' LGBTQ+ identities and the relevance of this to their presenting problems. This may have led to a false sense of confidence as clinicians "don't know what they don't know". Both clinicians and clients expressed that the service could do more to create a safe space for this community.

Based on this data, the following recommendations were made:

- Mandatory LGBTQ+ training workshop for clinicians. This would cover specific stressors faced by LGBTQ+ individuals, the importance of pronouns, and the different gender identities and sexual orientations under the LGBTQ+ umbrella.
- Clinicians asked to check demographic information prior to initial sessions. If the client has indicated they identify as LGBTQ+, then the clinician should ask the client if this is something they would like to discuss.

- Therapy materials to be revised and updated to include less gendered language and be less heteronormative *(i.e. gendered stick figures for diagrams/figures about relationships, gendered pronouns in texts).*
- Signposting materials to be revised and updated to include LGBTQ+ specific groups and organisations that clients can access.
- All clinicians to be invited to put pronouns in e-mail signatures.
- Rainbow lanyards and pins to be distributed to staff.
- Clinicians should continue to reflect on assumptions they have made about client's identities and ensure they check if their assumptions are correct.
- Clinicians to be understanding of individual preferences (i.e. with pronouns and how to address if mistakes are made) and to contract these with the client at the beginning of therapy (first 3 or 4 sessions).
- Service to ask those being offered guided self-help if they would like to explore/include their LGBTQ+ identity in their work, and to signpost to LGBTQ+ groups or organisations if they would like to discuss this in more depth.
- The service to start a LGBTQ+ specific workstream. There are specific workstreams for other groups such as a neurodiversity. The purpose of these workstreams is to focus on meeting the needs of specific groups. A working group of clinicians meet once a month to discuss how to meet the needs of a particular client group and improve access to the service for this group.
- Targeted recruitment for LGBTQ+ individuals to join the Talking Therapies Forum. This is a meeting which takes place four times a year to get feedback from clients about service needs and developments. All clients who complete therapy are welcome to join, but an email will be sent specifically to LGBTQ+ individuals to make sure they are represented.