

**Thesis submitted in partial fulfilment of the degree of Doctor of Clinical
Psychology (DClinPsych)**

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Abstracts

Systematic Review of the Literature

Introduction: Postnatal depression is experienced by 10-15% of new mothers and can have long-term consequences for their wellbeing and the development of their baby. Cognitive Behavioural Therapy (CBT) has been shown to reduce symptoms of postnatal depression by targeting unhelpful cognitive appraisals and behaviours. Dropout rates vary widely between cognitive behavioural interventions for postnatal depression, and higher dropout rates are associated with poorer therapy outcomes. Understanding the reasons for dropout could help improve the delivery of CBT interventions for postnatal depression. **Methods:** The dropout rates in quantitative studies of CBT interventions for postnatal depression, and the factors accompanying dropout, were systematically reviewed. Three databases were searched, resulting in twenty-two papers meeting inclusion for the review. One of these papers included two CBT intervention arms so a total of twenty-three interventions were reviewed. **Results:** There was a wide range of dropout rates across the included studies. Dropout rates were lower for in-person interventions compared to remotely provided interventions. The interventions with the lowest dropout rate were those delivered as home-visits. The papers employed different clinical thresholds for identifying PND and five studies found no difference in baseline PND severity when comparing dropouts to completers. **Conclusion:** Given the heterogeneity of the studies reviewed, recommendations were made regarding the reporting and analysis of dropout, and the inclusion of a wider demographic of participants in future interventions.

Key words: Cognitive Behavioural Therapy, CBT, Dropout, Attrition, Postnatal depression

Service Improvement Project

Introduction: There is growing acknowledgement of the value of creating partnerships between those delivering and those accessing health services. Less is known about Expert by Experience (EbE) involvement in the context of clinical psychology doctoral training programmes. This study explored the models of involvement of EbEs in teaching on a DClinPsych course in England; the impact of EbE involvement, both for EbEs and trainee clinical psychologists and whether improvements were required to better meet their needs.

Methods: The level of current involvement was explored by review of course records. A qualitative design was employed in which EbEs and trainees completed one of two survey questionnaires designed around commonly used frameworks of participation and reflective learning were completed by EbEs and trainees. Thematic Analysis was used to evaluate the written feedback from the surveys. **Results:** Records of current EbE involvement were found to be lacking in detail and sometimes missing. Ten EbEs and nineteen trainees completed the survey questionnaires. Key themes extrapolated from the surveys highlighted the importance of EbE involvement in supporting the wellbeing of EbEs and the learning experiences of trainees. **Conclusions:** Recommendations are given regarding the processes for future EbE involvement in teaching.

Key words: Experts by Experience, Trainee Clinical Psychologist, Participation, Involvement, Doctorate of Clinical Psychology, Teaching

Theoretically Driven Research Project

Introduction: Parenting self-efficacy (PSE) encompasses the set of beliefs a parent holds about their capability to care for their child. Admission to a Neonatal Care Unit (NCU) can disrupt the development of PSE, because parents are less able to provide active care for their newborn. Reduced PSE can interfere with the bonding process and is associated with negative physical and mental health outcomes. Greater perceived levels of social support have been found to play a role in promoting parenting confidence, but this relationship has not yet been studied within a UK neonatal population. The aim of this study was to investigate whether greater perceived levels of social support predicted greater PSE in parents of infants admitted to an NCU following birth. **Methods:** A longitudinal, within-group design was employed in which participants completed self-report questionnaires about their perceptions of social support and PSE at three time-points; 69 completed time 1 measures, 52 completed time 2 measures and 56 completed time 3 measures. Hierarchical Multiple Regression, a repeated-measures ANOVA and partial correlations were used to investigate the change in PSE over time and the relationship between perceived social support and PSE. **Results:** A strong positive correlation was found between perceived social support and PSE. PSE was also found to increase significantly over time. Perceived social support at admission to the unit was found to predict PSE one month after discharge. Perceived social support was not found to predict social support at discharge. **Conclusion:** The implications with regard to staff support and training are explored, as well as the strengths and limitations of the research.

Key words: Parenting Self-Efficacy, Social Support, Neonatal Care Unit, NICU

Systematic Review of the Literature

Factors accompanying dropout in CBT interventions for postnatal depression: a systematic review of quantitative studies

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Intended journal and rationale: *Journal of Reproductive and Infant Psychology*. This is a peer-reviewed journal that welcomes reviews on psychological, behavioural, medical and social aspects of human reproduction, pregnancy and infancy.

Abstract

Introduction: Postnatal depression is experienced by 10-15% of new mothers and can have long-term consequences for their wellbeing and the development of their baby. Cognitive Behavioural Therapy (CBT) has been shown to reduce symptoms of postnatal depression by targeting unhelpful cognitive appraisals and behaviours. Dropout rates vary widely between cognitive behavioural interventions for postnatal depression, and higher dropout rates are associated with poorer therapy outcomes. Understanding the reasons for dropout could help improve the delivery of CBT interventions for postnatal depression. **Methods:** The dropout rates in quantitative studies of CBT interventions for postnatal depression, and the factors accompanying dropout, were systematically reviewed. Three databases were searched, resulting in twenty-two papers meeting inclusion for the review. One of these papers included two CBT intervention arms so a total of twenty-three interventions were reviewed. **Results:** There was a wide range of dropout rates across the included studies. Dropout rates were lower for in-person interventions compared to remotely provided interventions. The interventions with the lowest dropout rate were those delivered as home-visits. The papers employed different clinical thresholds for identifying PND and five studies found no difference in baseline PND severity when comparing dropouts to completers. **Conclusion:** Given the heterogeneity of the studies reviewed, recommendations were made regarding the reporting and analysis of dropout, and the inclusion of a wider demographic of participants in future interventions.

Key words: Cognitive Behavioural Therapy, CBT, Dropout, Attrition, Postnatal depression

Introduction

Postnatal depression (PND) affects 10-15% of women worldwide and therefore constitutes a major public health risk (Warner et al., 1996; Woody et al., 2017). PND is characterised by symptoms of low mood, tiredness, insomnia and irritability in new mothers in the first year post-birth (Robertson et al., 2004). PND can be associated with a range of negative outcomes including breastfeeding and attachment issues, impaired physical and cognitive development of the child (Bell et al., 2008; Tietz et al., 2014) and socioeconomic costs (Leight et al., 2010).

Cognitive behavioural therapy for PND

Cognitive Behavioural Therapy (CBT) and/or psychotropic medication is recommended to treat moderate to severe PND (NICE, 2014). While medications can improve PND symptoms, they may pose a risk to the infant (Guille et al., 2013; Berle & Spigset, 2011) and some women choose to avoid medication, even without a clear indication of risk (Lyerly et al., 2009). The CBT model of treatment reduces the symptoms of depression by targeting distorted cognitions that negatively impact emotions and behaviour (Huang et al., 2018). CBT has been recommended as the treatment of choice for PND due to its building evidence base (Branquinho et al., 2021; Swedish Agency for Health Technology Assessment and Assessment of Social Services, 2022). Both group and individual CBT have been shown to significantly improve PND symptoms compared to treatment as usual (TAU) such as medication and other forms of therapies (Huang et al., 2018; Scope et al., 2013; Sockol, 2015; Stevenson et al., 2010). A systematic review found that CBT improved symptoms of PND in women with formal diagnoses of PND as well as those scoring above clinical threshold on a self-report measure of PND and therefore deemed ‘at risk’ of PND

(Huang et al. 2018). Their meta-analysis further showed that these improvements were sustained three months later and they concluded that CBT reduces postnatal depression symptoms.

Studies also indicate that CBT is acceptable to patients with PND across a range of delivery formats, including individual CBT (Highet & Drummond, 2004; Darius et al., 2018), groups (Scope et al., 2012), web-based interventions (Danaher et al., 2013) and blended formats (Branquinho et al., 2022). CBT has been found to be as acceptable as medication (Highet & Drummond, 2004), however, there is some evidence to suggest that patients prefer individual CBT over group formats (Highet & Drummond, 2004). Acceptability was measured differently across these papers; one study used a validated measure called the Sharp Consumer Satisfaction questionnaire (Tanner & Stacy, 1985; Highet & Drummond, 2004) whilst others asked Likert scale questions about helpfulness and satisfaction (Darius et al., 2018; Danaher et al., 2013) or collected interview feedback (Scope et al., 2012; Branquinho et al., 2022). A qualitative synthesis of feedback about group CBT also found that some women struggle with unhelpful social comparisons in group settings, or do not feel able to speak openly (Scope et al., 2012). This study indicated that some women may be more suited to individual CBT approaches, and that further research should explore ways of adapting CBT for PND to encourage engagement.

Barriers to treatment for mothers with PND

Mothers experiencing PND face a unique set of biopsychosocial and practical challenges compared to other populations (Yim et al., 2015). The stress-vulnerability model highlights the additive effects of biological and hormonal changes as well as a range of environmental stressors specific to new mothers (O'Hara et al., 1991), such as childcare, transportation and financial difficulties (Rosen et al., 2004). Shifts in identity, lack of social

support and relationship issues may further obstruct a mother's readiness or ability to seek help (Choi et al., 2015; Liberto, 2012). The impact of these factors on motivation for therapy may also be interpreted through the lens of the Theory of Planned Behaviour (TPB; Ajzen, 1991) which demonstrates the impact of structural barriers to behaviour change (i.e. childcare or employment commitments) or subjective norms or attitudes (i.e. a preference for medication over therapy).

Mothers with PND are thought to experience a conflict between what they think they *should* feel and what they *do* feel as new mothers (Yim et al., 2015). Therefore they are particularly vulnerable to experiences of shame and guilt associated with the failure to fulfil idealised expectations of motherhood; emotions which may make mothers less inclined to seek help for PND (Beck, 2002). Beliefs and attitudes about motherhood are culturally and societally informed (Abrams et al., 2009), with some cultures upholding the importance of 'strong womanhood', which may imply an element of weakness in help-seeking (Amankwaa, 2003). Similarly, beliefs about the intrinsically difficult nature of motherhood may deter women from voicing their emotional distress for fear they are overreacting to a natural response (Dennis et al., 1999). Family members may also play a role in perpetuating negative beliefs about mental health services for women with PND (Chan et al., 2002).

Dropout in CBT for PND

'Dropout' is commonly defined as the decision made exclusively by the patient without mutual agreement with a therapist, to terminate treatment after starting and prior to completion (Semmlinger et al., 2012). Dropout from CBT is associated with poorer therapy outcomes and an inefficient use of resources (Lutz et al., 2014; Reis & Brown, 1999; Schindler et al., 2013; Zieve et al., 2019). A systematic review suggested rates between 0% and 78% across trials of CBT for perinatal depression (Sockol, 2015), but this review did not

explore the reasons for the wide range in dropout rates or focus specifically on postnatal mothers.

While research in the area of therapy dropout is largely atheoretical (Christensen et al., 2009), the World Health Organisation (WHO) adopts a framework for understanding adherence and within that, dropout, in health interventions (Sabaté, 2003). It identifies five dimensions associated with adherence: health system factors, socioeconomic factors, therapy-related factors, condition-related factors, and patient-related factors. Further to this, a meta-analysis identified participant characteristics (e.g. age, socioeconomic status), therapist characteristics (e.g. age and experience), and treatment characteristics (e.g. format and setting) as predictors of dropout in adult psychotherapy as a whole (Swift & Greenberg, 2012). The quality of the therapeutic alliance as a whole has also been found to play a role in retention in studies with perinatal populations (Foulon et al., 2015).

Interviews with mothers with PND highlight population-specific barriers to help-seeking and service use in therapy that occur at the individual-, community- and provider-level (Abrams et al., 2009). It is possible that these same factors influence engagement and dropout from therapy, however this has not yet been systematically reviewed.

This systematic review was the first to synthesise the information regarding dropout rate as well as the factors present at different dropout rates in CBT interventions for PND. As CBT for PND has received increasing clinical and research interest, this review provided an important and timely contribution to the evidence-base regarding dropout in CBT for PND.

Research questions

- (1) What were the dropout rates in CBT interventions for PND?
- (2) What factors accompany dropout in CBT interventions for PND?

Methods

The protocol was pre-registered on Prospero:

https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=290193

Trial Registration: PROSPERO CRD42021290193

Date of registration: 10/11/2021

Search strategy

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines (PRISMA; Moher et al. 2015) were utilised for this study (Figure 1). The databases PsycINFO, Embase and Medline, were searched on 24th November 2021 and the search was repeated in January 2023 to ensure that any further eligible studies were captured in the final review. Search terms included ‘postnatal depression’ and related terms, combined with ‘cognitive behavioural therapy’, ‘behavioural activation’ and ‘problem-solving therapy’ (see Appendix A for full search terms). No date restrictions were applied during the searches.

Inclusion criteria

Participants:

The participants were women who either met the formal diagnostic criteria for PND, as assessed by a structured clinical interview using the Diagnostic and Statistical Manual of Mental Disorders (DSM; APA, 2013), or who scored above the clinical threshold on a standardised measure of depression in the postnatal period. Other systematic reviews of CBT interventions for PND have adopted the approach of including participants with a formal diagnosis or symptom as identified by standardised measures (Huang et al., 2018; Sockol, 2015; Scope et al., 2013). Including those without a formal diagnosis was necessary due to

the limited number of studies employing a full DSM clinical interview. Equally, this current review was interested in drawing conclusions about dropout in clinical settings where screening measures are more commonly used than full diagnostic interviews. Finally, while depression screening measures are not diagnostic tools, they have been found to be sensitive and specific enough to identify symptoms of depression (Hitchon et al., 2020).

Intervention:

The intervention was required to be CBT which included interventions such as behavioural activation, mindfulness-based cognitive therapy, problem-solving therapy, or therapies ‘based on CBT’. The interventions were required to involve two or more sessions and begin postnatally when the child is <12 months old. CBT interventions that were provided in tandem with other therapies or medication were also included. CBT interventions in a range of formats (in-person, online, individual, group) were included in this review to allow for a synthesis of ‘therapy-related factors’ against dropout rate, in line with the WHO framework (Sabaté, 2003). This approach mirrors that of previous systematic reviews of CBT for PND (Huang et al., 2018; Sockol, 2015) that also highlighted the large range in dropout rates across these interventions (Sockol, 2015). By including an array of CBT formats in the current review, comparisons could be made between different types of intervention and their dropout rates in order to reach a fuller understanding of the therapy factors that might play a role in dropout.

Design:

Quantitative CBT intervention studies where dropout rate was reported or could be calculated, were included. Studies were also required to use a standardised measure of depression or PND.

Exclusion criteria

Studies were excluded from the review if they were qualitative, if they were not peer reviewed (i.e., posters, abstracts, presentations, dissertations), if they were published in a language other than English, if they included secondary analyses, or if neither a PND measure nor clinical judgement was used to assess PND.

The identified papers were uploaded to Rayyan (Ouzzani et al., 2016) to allow two reviewers (EK and FW) to screen the titles and abstracts for eligibility using the inclusion and exclusion criteria above. At each stage of the review process, disagreements between the two reviewers were resolved through discussion. A third reviewer (NL) was consulted if a disagreement between EK and FW could not be resolved through discussion. Duplicates were removed before EK and FW independently screened 20% of the abstracts and titles on Rayyan. Following this, the first reviewer (EK) completed the screening for the remaining 80% of papers. The full texts of the included papers were then screened and the results recorded in Microsoft Excel. EK and FW independently screened the first 25% of full texts before EK completed the remaining 75%. This process was determined by Cochrane guidelines.

Data extraction and quality assessment

Data was extracted from the eligible papers and recorded in a Microsoft Excel table. The information extracted included participant and therapist characteristics, characteristics of the intervention and conditions under study, in line with research looking at potential predictors of dropout in psychological interventions (Sabaté, 2003; Swift & Greenberg, 2012). Details of sample size, dropout rate and reasons for attendance and dropout were also extracted to

allow comparisons to be made across studies. EK and FW independently extracted data for the first 50% of papers before EK completed extraction for the remaining 50%.

The methodological quality of the included studies was assessed using the Standard Quality Assessment Criteria (Kmet et al., 2004; Appendix B). This tool was chosen due to its utility in assessing both qualitative and quantitative studies of a range of designs simultaneously. This quality rating checklist is scored according to a range of areas of design and methodology (14 items for quantitative studies and 10 items for qualitative studies). Items on the checklist were rated on a 3-point scale (0=no, 1=partial, 2=yes) for each paper. A summary score between 0 and 1 was calculated for each paper by summing the total score obtained across relevant items and dividing by the total possible score, in line with scoring guidance (Kmet et al., 2004). Kmet et al. (2004) suggest that scores over 0.55 are acceptable for inclusion in systematic reviews. As published studies adopt a range of methods for interpreting the scores produced (Baines et al., 2018; Ceretti et al., 2022; Chapman, Halldorsson, & Creswell, 2020), a decision was made to report and interpret the continuous summary scores produced by the tool, with higher scores indicating higher quality papers. No further anchor points were adopted. EK and FW independently completed the quality assessment for the first 30% of papers, before EK completed the quality assessment for the remaining 70%.

Data synthesis

The first reviewer conducted a narrative synthesis of the papers to determine themes relating to study characteristics and the factors accompanying dropout. In line with the WHO framework for understanding adherence and dropout (Sabaté, 2003), the papers were then compared on therapy-related factors (i.e. CBT format), health system factors (i.e. therapist

characteristics), condition-related factors and patient-related factors (i.e. parent and infant demographics). Where pooled means were reported, these were weighted by sample size.

Results

The database search initially yielded 1,027 papers, 392 of which were duplicates (Figure 1). Of the remaining 635, 127 (20%) titles and abstracts were randomly selected to be double screened, with the two reviewers reaching 92% agreement ($\kappa=0.82$). All disagreements were resolved through discussion. Overall, 479 papers were excluded during title and abstract screening, and 156 papers advanced to the full text screening stage. Of the 156 papers undergoing a full-text screen, 39 (25%) were randomly selected to be double-screened. The two reviewers reached 92% agreement ($\kappa=0.79$) and disagreed on the outcome of three of the 39 papers. Following discussion, one of the three papers was included in the final review. On completion of full-text screening, 20 papers were included in the final systematic review (Figure 1). EK also carried out a hand-search of Google Scholar and the reference lists of the 20 included papers, however this did not yield any further eligible papers.

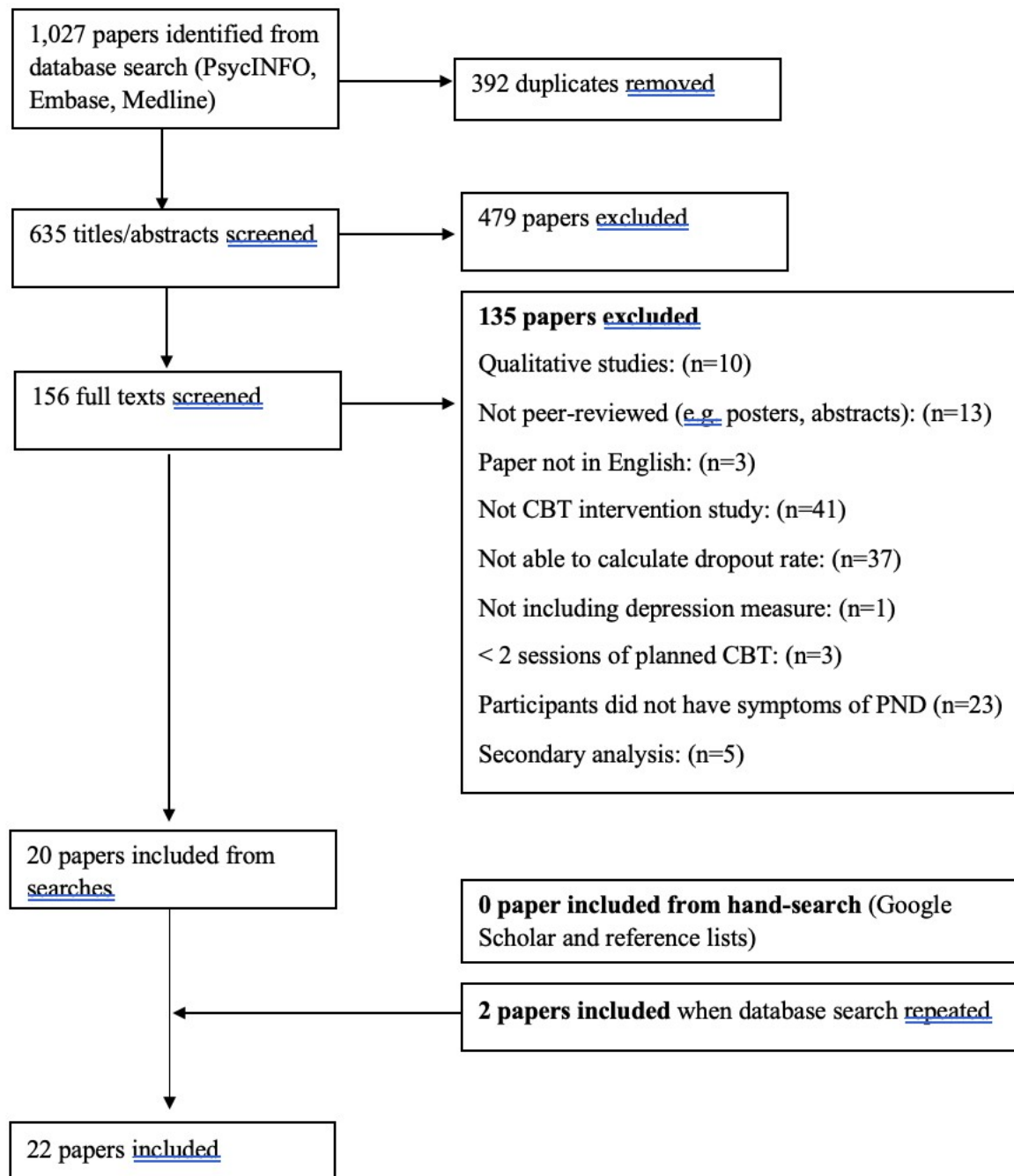


Figure 1. Flow Diagram for Study Selection

The reviewers reached 88% agreement for data extraction, and 82% agreement for the quality appraisal. All disagreements were resolved through discussion.

When the database searches were repeated in January 2023, two additional recently published papers were identified as meeting the eligibility criteria for this systematic review (Milgrom et al., 2021; Van Horne et al., 2022). These were therefore included in the narrative synthesis making up the 22 papers in the final review (See Figure 1). One of the 22 papers (Milgrom et al., 2021) included two CBT intervention arms; an in-person CBT intervention, and a web-based CBT intervention. Therefore, a total of 23 interventions were reviewed. Tables 1 and 3 organise the 22 papers (23 interventions) in order of dropout rate, from the lowest to the highest. Table 1 examines dropout rate alongside therapy-related factors. A range of therapy formats (in-person, online, individual, group) are described in this table to allow for comparisons between intervention types and a synthesis of ‘therapy-related factors’ against dropout rate. Table 3 examines dropout rate alongside health system factors, condition-related factors and patient-related factors. The data shown in the tables were selected in accordance with the WHO framework for understanding adherence in health interventions (Sabaté, 2003).

Table 1. Dropout and therapy-related factors

Paper (Country)	Design	Dropout rate (%)	N at baseline	CBT manual (if applicable)	CBT 'pure' or combined with other modality	Content of CBT	Session format No. of sessions Freq. of sessions Dur. of sessions	Individual or group	In-person (location) or remote (platform)
Chabrol et al., 2002 (France)	RCT	0	18	Authors own creation	CBT and psychodynamic therapy	Cognitive skills in detection, evaluation and modification of dysfunctional thoughts, self-reinforcement and positive coping statements, problem-solving, social- skills, role-playing exercises	5-8 (M: 6.1 sessions) Weekly 1 hour	One-to-one	In-person (Home visits)
Prendergast & Austin, 2001 (Australia)	RCT	0	17	NR	Pure	CBT strategies such as cognitive challenging	6 sessions Weekly 1 hour	One-to-one	In-person (home visits)
Cooper et al., 2003 (UK)	RCT	2	42	NR	Pure	Directed at problems in the management of infant and the quality of the mother–infant interaction, problem- solving, patterns of thinking, modelling and reinforcement to alter interactional style.	10 sessions Weekly NR	One-to-one	In-person (Home visits)
Leung et al., 2016 (China)	RCT	5	82	NR	Pure	ABC model, recognition of automatic thoughts, cognitive restructuring, scheduling of pleasurable activities, coping skills and relaxation	6 Weekly 2 hours	Group (no. of therapists NR)	NR
Pinheiro et al., 2014 (Brazil)	Randomiz ed Clinical Trial (without control)	6	32	CBT manual (Gonçalves, 1994).	Pure	Each session followed a script to determine mood of the patient, agenda, review homework, establishment of household tasks, final review and feedback.	7 sessions NR NR	One-to-one	In-person (psychological clinic)
Amani et al., 2021 (Canada)	RCT	7	27	Based on validated program (Van Lieshout et al., 2017)	Pure	Core CBT skills on topics relating to PND (E.g., sleep, supports), cognitive restructuring, behavioural activation, relaxation, goal setting.	9 Weekly 2-hour	Group (2 therapists)	In-person (centrally located community centre)
Ngai et al., 2015 (China)	RCT	8	186	Adapted from CBT manual (Wright et al., 2017)	Pure	Methods to identify and modify negative thoughts, increase pleasant activities, enhance problem-solving, practical issues of childcare and neonatal problems, communication skills to manage interpersonal difficulties.	5 sessions Weekly 20-30 mins	One-to-one	Remote (telephone-based)
Liu & Yang, 2021 (China)	RCT	9	130	NR	Pure	Cognitive restructuring, self-activity plan, soothing music to adjust mothers' emotions., increased social support for the mother	6 Weekly 1 hour	One-to-one	NR
Chibanda et	RCT	10	30	Modelled on a 7-step management plan for	Pure	Group PST involving information giving about symptoms and causes of depression, assessment of risk,	6 Twice Weekly	Group (3 therapists)	In-person (2 urban primary care clinics, in a private

al., 2014 (Zimbabwe)				depression (Abas et al., 1994).		involvement of family members in problem solving, exploring community resources and support systems.	1 hour		setting in the antenatal clinic)
Sampson et al., 2021 (USA)	Repeated measures design	10	41	PST manual (Sampson et al., 2016)	Pure	PST and psycho-educational; workbook with pictures and text to help participants increase awareness of their problem-solving style, 7-step process to problem solving each session.	5 sessions Weekly 1 hour	One-to-one	In-person (A women's residential treatment facility)
Misri et al., 2004 (Canada)	RCT	11	19	Authors own creation from CBT manuals for depression, anxiety and eating disorders	CBT and Paroxetine	Education about interrelationships between thoughts, affect, behaviour, physical reactions, and environment; strategies to target change	12 sessions Weekly 1 hour	One-to-one	In-person (clinic-based)
Hou et al., 2014 (China)	RCT	14	121	Based on the programme in Milgrom et al. (1999)	CBT and family therapy	CBT including work with beliefs, assumptions, homework and response prevention	13 Weekly 1 hour	One-to-one	NR
Milgrom et al., 2016 (Australia)	RCT	14	21	Based on the programme in Milgrom et al. (1999)	Pure	BA, monitoring, pleasant activities, info giving about CBT and PND, stress/anxiety, relaxation, goals, balance, scheduling. Each session begins with video introducing session goals and content. Nontherapeutic telephone support	6 online sessions. One session per week is encouraged. Maximum of 30mins per week with 'coach'	One-to-one	Remote (Web-based with telephone support)
Marrs, 2013 (Scotland)	Repeated measures design	23	47	Based on the programme in Milgrom et al. (1999)	Pure	Psychoeducation about PND, pregnancy timeline and feelings, assertiveness, self-esteem, unrealistic expectations (CBT model, thinking styles, group discussion and flipcharts). Hand-outs/thought diaries for homework.	12 Weekly 2 hours	Group (2 therapists)	NR
Milgrom et al., 2021¹	RCT	28	39	MumMoodBooster (MMB; Milgrom et al 2016).	Pure	The online group; tailored, interactive activities used with support from telephone coach to encourage women to use and complete the program.	6 One session per week is encouraged. Maximum of 30mins per week with 'coach'	One-to-one	Remote (Web-based with telephone support)
Van Lieshout et al., 2020 (Canada)	Repeated measures design	29	7	NR	Pure	Core CBT content and skills, psychoeducation and discussion of topics relevant to women with PND	9 sessions Weekly 2 hours	Group (2 therapists)	In-person (community settings where free childcare was provided during sessions)
Appleby et al., 1997 (UK)	RCT	33	42	NR	CBT and Fluoxetine or Placebo	Counselling based on CBT, designed to be delivered by non-specialists in mental health, structured sessions with reassurance and practical advice.	6 Week 1, 2, 3, 5, 7, 11 1 st session 1 hour, 30mins for the rest.	One-to-one	NR

Milgrom et al., 2005 (Australia)	RCT	39	46	Based on the ‘Coping with Depression’ Course (Lewinsohn et al., 1989).	Pure	CBT focused on life events, maternal mood, practical issues, BA, relaxation.	12 sessions Weekly 90 minutes	Group (No. of therapists NR)	In-person (clinic-based)
Pugh et al., 2016 (Canada)	RCT	40	25	Based on the programme in Milgrom et al. (1999)	Pure	TAICBT program adapted for mothers of young infants. Check-in questions focusing on module content, homework exercises at the end of each module.	7 modules Encouraged to progress at a pace of one per week	One-to-one	Remote (web-based TAICBT with weekly email support)
Van Horne et al., 2022 (USA)	RCT	46	72	Based on a home visitation model from a pilot study (Sampson et al., 2016)	Pure	Motivational interviewing, psychoeducation, self-care, goal setting, seven steps of problem-solving using PST4PPD workbook, discuss a problem, set goals, created action plans.	5 sessions Weekly 30min-1hr	One-to-one	In-person (in the home or at a location convenient to the participant)
Milgrom et al., 2021¹	RCT	54	39	Based on the programme in Milgrom et al. (1999)	Pure	Behavioral activation, cognitive strategies, self-esteem, relaxation, getting support, partner issues. One additional session involving both participants and partners.	9 Weekly Duration NR	One-to-one	In-person (location not stated)
Fonseca et al., 2020 (Portugal)	RCT	58	98	Authors own creation	Pure	CBT principles incorporating third-wave CBT approaches (e.g., self-compassion, acceptance and commitment therapy) applied to the perinatal context.	5 modules Encouraged to progress at a pace of one module per week	One-to-one	Remote (Web-based, GSH, no therapist)
O'Mahen et al., 2014 (UK)	RCT	88	40	Based on previous trial (O'Mahen et al., 2013)	Pure	Core BA module, relapse prevention, all modules followed the BA functional analytical Framework, interactive exercises and worked examples.	5 internet sessions Designed to be completed at a pace of one session per week but participants could complete in their own time	One-to-one	Remote (web-based TAICBT with weekly telephone support)

¹This study is reported twice in the table as it involved two treatment arms; one in-person CBT and the other remote CBT, NR=Not reported, GSH=Guided self-help, NR=not reported, Therapist-Assisted Internet-delivered Cognitive Behaviour Therapy (TAICBT), PST= Problem-solving therapy

Overview of study characteristics

A total of 1214 mothers (mean age 29) were included across the 22 papers. The number of mothers allocated to CBT interventions ranged from 7 to 186 per study (Table 1). The majority of studies (18/22) were RCTs, three were repeated measures designs, and one was a randomised trial without a control group (Table 1). The studies were conducted across nine different countries, the majority of which were high- and middle-income countries such as Australia (N=4), UK (N=3), China (N=4) and Canada (N=4). Most participants were recruited in-person in health clinics or wards. Five studies used online or remote methods to recruit, such as social media platforms, posters and advertisements. Eight provided analysis of the characteristics of those who dropped out compared to those who did not, and eight collected and reported reasons for dropout (Table 3).

Quality appraisal

The Standard Quality Assessment criteria (Kmet et al., 2004) was utilised for all 22 studies (Table 2). The total summary scores ranged from 0.6-0.95. The average quality score was 0.75 and one paper scored considerably lower than this, at 0.56 (Marrs, 2013), which was just above the 0.55 level of acceptability suggested by Kmet et al. (2004). Compared to other papers, Marrs (2013) provided limited descriptions of the study design, methodology or subject characteristics. They also did not report about any attempts to control for confounding in their study.

For many of the studies (17/22), it was not possible to blind participants to their intervention allocation. The majority scored highly on the first four items of the criteria indicating strengths in the quality of the methodological aspects of the design such as the description of the research question, recruitment strategy and subject characteristics. All

studies defined appropriate and validated outcome measures of depression or postnatal depression (Table 2).

Most papers (14/22) did not report whether the investigators were blinded to treatment allocation, or provide adequate information with regard to how randomisation was carried out. Studies varied regarding the quality of reporting on sample size and a score of 1 was most frequently assigned due to there being limited evidence of a priori power calculations. Papers were most likely to lose points on item 11 which required papers to provide estimates of variance in relation to the results. This was due to absent or inappropriate variance estimates, for example in studies examining change over time, they scored 1 (partially achieved) rather than 2 (fully achieved) when they did not report variance of the 'change in scores over time'.

Table 2: Quality appraisal item scores

Paper	Dropout Rate (%)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	Summary Score
Chabrol et al., 2002	0	2	2	2	2	1	0	n/a	2	1	2	1	1	2	2	20	0.73
Prendergast & Austin, 2001	0	1	1	2	2	1	0	n/a	2	1	2	1	1	2	2	18	0.65
Cooper et al., 2003	2	2	2	2	2	1	0	n/a	2	0	2	2	2	2	2	21	0.76
Leung et al., 2016	5	2	2	2	2	1	0	0	2	2	1	1	2	2	1	20	0.71
Pinheiro et al., 2014	6	2	2	1	2	1	0	0	2	2	2	1	2	2	2	21	0.75
Amani et al., 2021	7	2	2	2	2	1	0	0	2	2	2	1	2	2	2	22	0.79
Ngai et al., 2015	8	2	2	2	2	2	2	n/a	2	2	2	2	2	2	2	26	0.95
Liu & Yang, 2021	9	2	2	2	1	2	2	n/a	2	2	2	1	1	1	1	21	0.76
Chibanda et al., 2014	10	2	2	2	2	2	0	n/a	2	1	2	1	2	2	1	21	0.76
Sampson et al., 2020	10	2	1	1	1	n/a	n/a	n/a	2	1	2	1	1	2	2	16	0.6
Misri et al., 2004	11	2	2	2	2	2	2	n/a	2	0	2	1	2	2	2	23	0.84
Hou et al., 2014	14	2	1	2	1	1	0	n/a	2	2	2	1	1	1	1	17	0.62
Milgrom et al., 2016	14	2	2	2	2	2	2	n/a	2	1	2	1	2	2	2	24	0.87
Marrs, 2013	23	2	1	1	0	n/a	n/a	n/a	2	1	2	2	0	2	2	15	0.57
Milgrom et al., 2021 ¹	28	2	2	2	2	2	2	n/a	2	0	2	2	1	2	2	23	0.84
Van Lieshout et al., 2020	29	2	2	2	2	n/a	n/a	n/a	2	0	2	1	1	2	2	18	0.68
Appleby et al., 1997	33	2	2	2	2	2	2	2	2	2	2	1	2	1	1	25	0.89
Milgrom et al., 2005	39	2	2	2	2	1	2	n/a	2	2	1	2	1	2	2	23	0.84

Pugh et al., 2016	40	2	2	2	2	1	2	n/a	2	1	2	1	2	2	2	23	0.84
Van Horne et al., 2022	46	2	2	2	2	1	0	n/a	2	2	2	2	1	2	1	21	0.76
Milgrom et al., 2021 ¹	54	2	2	2	2	2	2	n/a	2	0	2	2	1	2	2	23	0.84
Fonseca et al., 2020	58	2	2	2	2	1	0	0	2	1	2	1	1	2	2	20	0.71
O'mahen et al., 2014	88	2	2	2	2	2	1	n/a	2	1	2	1	1	2	2	22	0.8

¹This study is reported twice in the table as it involved two treatment arms; one in-person CBT and the other remote CBT

Dropout and therapy-related factors

The dropout rate ranged from 0% to 88% across the 22 studies and 23 CBT interventions (Table 1). Most studies based their intervention on pre-existing CBT manuals (13/22), and three of the study teams created their own manual. Five studies chose to base their intervention on the CBT approach developed by Milgrom et al. (1999) which was tailored specifically to women with PND, and delivered either online (N=2) or in person (N=1) format. Two of the papers using the Milgrom et al. (1999) approach did not report whether it was delivered in-person or remotely (Hou et al., 2014; Marrs, 2013) and these studies subsequently lost points on the quality appraisal tool (Kmet et al., 2004) due to the lack of clarity of their study designs. Six papers did not report whether their intervention was manualised.

Most papers reported on a CBT-only intervention (18/22) and four studies combined CBT with other interventions: psychotropic medication (N=2), systemic family therapy (N=1) or psychodynamic therapy (N=1). The content of the CBT interventions was similar across studies, with most focusing on thinking patterns and cognitive restructuring, behavioural activation, and problem solving. However, the level of detail about the intervention varied.

One study in this review compared participant perspectives about the intervention between those who dropped out and those who completed (Fonseca et al., 2020). They found that the participants who dropped out perceived the CBT interventions to be less useful than the those who completed. While this study did not explore the specific factors that participants found useful, this finding does suggest that therapy-related factors play some role in relation to dropout in CBT interventions for PND.

In-person and remote interventions

Interventions were delivered either in-person (N=12) or remotely (N=5), however, five interventions did not report this distinction. The in-person interventions were delivered in clinic (N=4), community bases (N=3), a combination of clinic and community (N=1) and home visits (N=3). One study did not report the location of in-person sessions (Milgrom et al., 2021). Six interventions were delivered remotely with differing levels of therapist input: one was delivered over the telephone by a therapist and five were web-based with telephone support (N=3), with email support (N=1) or was self-guided without therapist input (N=1). The web-based interventions involved the participants completing between five and seven online CBT modules that were designed to be completed at a pace of one per week. The dropout rate of the in-person interventions (N=12) ranged from 0% to 54% (Weighted Mean=1.9%). The telephone CBT intervention involved five weekly 20-30 minute sessions and had a dropout rate of 8% (Ngai et al., 2015). This study was also the highest in quality (Kmet et al., 2004) due to its transparency in methods and statistical analyses. In contrast, the dropout rate of the web-based interventions (N=5) ranged from 14%-88% (Weighted Mean=10.4%). Of the five web-based interventions, the two with the lowest dropout rates (14%-28%) involved weekly telephone support, whereas the intervention with email support (Pugh et al., 2016) had a dropout rate of 40% and the intervention with no therapist input (Fonseca et al. 2020) had a dropout rate of 58%. Whilst it is possible that the level of therapist input contributed to dropout rates in these studies, it is notable that the study with the highest dropout rate (O'Mahen et al., 2014) received weekly telephone support. This study, which yielded high scores on the quality appraisal tool (Kmet et al., 2004), also included participants with more severe PND than other studies. Therefore, it possible that multiple factors explain the dropout rate observed.

One-to-one and group interventions

In-person interventions were delivered in one-to-one (N=8) or group (N=4) format. One-to-one sessions involved the delivery of between five and twelve weekly sessions (N=7); one study (Pinheiro et al., 2014) did not report the frequency of the sessions. The one-to-one sessions were one hour in length in five of the studies. Three studies did not report on session duration (Cooper et al., 2003; Pinheiro et al., 2014; Milgrom et al., 2021). Three of the one-to-one interventions were delivered during home visits. The group sessions were similar to the one-to-one sessions in number and frequency, ranging from nine to twelve weekly sessions. The group sessions were generally longer than the one-to-one-sessions (1.5-to-2-hour sessions), although one group intervention involved twice weekly hour-long group sessions (Chibanda et al., 2014). The dropout rate in one-to-one interventions ranged from 0%-54% (Weighted Mean=2.8%), however the three home visits had the smallest dropout rate, ranging from 0%-2%. The dropout rate of the group interventions ranged from 7%-39% (Weighted Mean=19.3%). The group intervention with the highest dropout rate (Milgrom et al., 2005) involved a greater number of sessions (12) than the other group interventions (6-9) which may explain the higher dropout rate. This paper also yielded high scores on the quality appraisal tool (Kmet et al., 2004).

Dropout and health system factors

Table 3 shows that a range of therapists with different levels of training and professional background were utilised across the studies. Given this spread of expertise, it was not possible to draw out patterns regarding dropout rate. Only one study reported therapist by age (Amani et al., 2021) and they did this by providing an age range (20-57) rather than any other metric to gauge an average. Two studies reported high levels of therapeutic alliance between patients and therapists, using the Scale to Assess the Therapeutic Relationship-Patient (STAR-P; McGuire-Snieckus et al., 2007; Amani et al., 2021) and the

Treatment Satisfaction Questionnaire-Modified (TSQ; Cox et al., 1994; Pugh et al., 2016).

The dropout rates in these studies were 7% (Amani et al., 2021) and 40% (Pugh et al., 2016).

Neither of these studies directly investigated the relationship between alliance scores and dropout rate. No other studies reported measures of therapeutic alliance and therefore it was not possible to further explore the role of ‘alliance’ in relation to dropout.

Table 3. Dropout rate and health system factors, condition-related factors and patient-related factors

Paper	Dropout rate (%)	Health system factors	Therapeutic Alliance	Condition-related factors			Patient-related factors			
		Therapist characteristics <i>Personal/prof. background</i> <i>Age</i> <i>Level of training</i>		PND measure and cut-off for inclusion	Mean baseline score on PND measure	Average EPDS level of severity (if applicable)	Participant demographics <i>Mean maternal age</i> <i>Mean infant age</i> <i>More than one child (%)</i> <i>Ethnicity</i> <i>Psychotropic medication</i>	Socioeconomic Factors <i>Marital status</i> <i>Employment</i> <i>Income</i> <i>Education level</i> <i>SES</i> <i>Geographical area</i>	Characteristics of participants who dropped out <i>Compared to those who completed</i> <i>Descriptive characteristics</i>	Reported reasons for dropping out
Chabrol et al., 2002	0	Master's Degree level psychology students. NR Didactic and clinical training, weekly supervision from first author based on audiotapes.	NR	≥11EPDS, Major depressive episode on the MINI	12.8 (EPDS)	Highly possible	31 years NR 33 100% Caucasian NR	100% married/cohabiting 75% employed NR NR NR Toulouse/Narbonne cities	No significant difference between dropouts and completers on any demographic or clinical variables	NR
Prendergast & Austin, 2001	0	Early Childhood Nurses. NR Trained by a psychiatrist, psychologist and senior psychiatry registrar in the modified CBT method. Weekly group supervision throughout study.	NR	> 12 EPDS	15.9 (EPDS)	Probable	32 years 15 weeks 18 NR NR	92% married NR NR 75% tertiary education High SES area Eastern Sydney	NR	NR
Cooper et al., 2003	2	A specialist in the research treatments. NR Weekly supervision to review progress of each case and adherence to the treatment.	NR	≥12 EPDS	NR	N/A	30 years NR 42 68% White, 16% South Asian ² 100% Paroxetine	95% Married 42% working NR 11%<HS, 42%HS, 37% HE 24% high social disadvantage Vancouver	NR	Dropped out of treatment early/moved away from the study area (n=1)
Leung et al., 2016	5	NR	NR	≥10 EPDS	12.79 (EPDS)	Highly possible	32 years NR 39 Hong Kong Chinese NR	100% married 54% FT, 27% housewife, 15% 'other'. 62% 20K-30K HKD, 36% >30K HKD 51% secondary school, 41% HE NR NR	NR	Discontinued intervention (n=2) Time clash (n=1) Changed work schedule (n=1)
Pinheiro et al., 2014	6	Clinical psychology interns with previous experience in short-term psychotherapy NR	NR	≥ 12 BDI	20.43 (BDI)	Probable	27 years NR NR NR	72% live with baby father NR 597.45 Brazilian Real NR	NR	NR

Three months training by psychologists and psychiatrists with CBT training.

0%

NR
Urban zone of Pelotas

Amani et al., 2021	7	Peers (women who have recovered from PND). 20-57 Two days of in-classroom instruction, 9-week observation of CBT intervention delivered by two experienced therapists, weekly supervision from experienced therapist	High level of positive collaboration and peer input on STAR-P.	≥10 EPDS	16 (EPDS)	Probable	32 years 5.1 months 67 96% white 38%	100% married NR MHI: 75652 CD MYE: 15 yrs NR City and outlying areas	NR	NR
Ngai et al., 2015	8	Experienced midwife NR 20hrs of CBT training.	NR	≥10 EPDS	11.9 (EPDS)	Highly possible	31 years NR 0 NR NR	NR 18% unemployed, 82% employed HKD: 24% >40K, 25% <20K 57%≥UD, 42% secondary, NR Hong Kong residents	NR	NR
Liu & Yang, 2021	9	Nurses NR NR	NR	≥9 and <13 EPDS	11.24 (EPDS)	Possible	27 years NR 0 NR NR	100% married 71% working NR 63% senior high or polytechnic ² NR NR	NR	NR
Chibanda et al., 2014	10	Peers (HIV-infected women) who previously participated in the program. NR 2-day training workshop and ongoing supervision from psychiatrist	NR	≥11 EPDS, DSM Major depression	17.3 (EPDS)	Probable	25 years 6-7 weeks 67 100% black Zimbabwean NR	87% married/cohabiting 7% employed NR MYE: 11yrs NR A peri-urban community	NR	NR
Sampson et al., 2021	10	Chemical dependency counsellor, non-mental health professional. NR One-day training in the intervention by PI and research assistant.	NR	≥10 EPDS	16 (EPDS)	Probable	27 years NR NR 43% Black, 41% White ² NR	81% single 86% unemployed 97% no income 65% at least high school NR Houston, Texas	Dropouts (M=22.5 years old), sig. younger ($p = .017$). No sig. diff. between completers and dropouts in terms of PND symptom severity, self-efficacy, race/ethnicity or marital status.	NR

Misri et al., 2004	11	Registered psychologist. NR NR	NR	≥ 18 HAM-D, ≥ 12 EPDS	21.16 (HAM-D), 18.87 (EPDS)	Probable	30 years NR 42 68% White, 16% south Asian ² 100% Paroxetine	95% Married 42% working NR 11%<HS, 42%HS, 37% HE. NR Vancouver	Dropouts were younger ⁴ , a higher proportion were working. No dropouts responded to treatment prior to withdrawing. Highest level of education was high-school.	Noncompliance with medications (n=1), inability to comply with CBT protocol (n=1)
Hou et al., 2014	14	> 7 years experience of psychotherapy. NR 250hrs of trainings and supervisions for CBT	NR	Depression diagnosed by experienced physicians on the basis of criteria described in the Structured Clinical Interview for DSM-IV	NR	N/A	28 years NR 100 NR NR	NR NR NR NR Completer SES: good (N=3), general (N=76), poor (N=25) Dongguan, Guangdong	NR	Busy with work (n=10); refusal of repeated follow-up (n=4); emigration (n=3)
Milgrom et al., 2016	14	Graduate psychology trainees, clinical psychologists, health psychologist. NR Training involved working through the program, reading the coach manual, observing others and support from senior psychologist.	NR	11-23 EPDS	16.6 (EPDS)	Probable	32 years 7 months 67 NR 0%	86% married, 14% single NR 62% >\$80K 29% UD, 19% PD NR Rural and metropolitan	NR	NR
Marrs, 2013	23	“Sure Start staff” NR NR	NR	≥12 EPDS	NR	N/A	NR NR NR NR NR	NR NR NR NR NR West Lothian, Scotland	NR	Reasons included a decline in their mental health, deciding the group ‘wasn’t for them’, feeling too anxious leaving their baby, and being referred elsewhere.
Milgrom et al., 2021⁵	28	NR for web-based therapy condition	NR	11-25 EPDS	NR	N/A	31 years 28.5 weeks 49 NR 23% depression medication	69% married, 31% defacto ² NR AD: 62% ≥80K 3% < high school, 18% Bachelors, 18% CG ² NR Rural/metropolitan Victoria	NR	NR

Van Lieshout et al., 2020	29	Public health nurses, with no prior mental health training. NR 2 days of in-classroom training and observation/supervision of one 9-week CBT group.	NR	≥10 EPDS, diagnosis of major depressive disorder	17.14 (EPDS)	Probable	30 years NR NR NR NR	71% married, 29% CL AHI: \$75K 43% college, 43% UD NR Ontario province	NR	Several participants also noted that having childcare available made it possible to attend the group.
Appleby et al., 1997	33	A ‘psychologist’ with no previous clinical training. NR ‘Brief training’ and supervised by a psychiatrist.	NR	≥10 EPDS, ≥12 the revised clinical interview schedule	17 (EPDS) 27 (revised clinical interview schedule)	Probable	27 years NR 81 NR 50% Fluoxetine	29% single 24% employed NR NR NR South Manchester	³ Dropouts were younger (M=23.7; <i>p</i> =0.04), more likely to have an unemployed partner and a planned pregnancy. No diff. on psychiatric morbidity scores, employment, obstetric complications, parity, family history, or personal history of depression. Dropouts had older partners (<i>p</i> =.0045).	64% did not give a reason, 14% disliked the drug, 14% side-effects of drug, 7% lack of improvement
Milgrom et al., 2005	39	Professional registration in clinical psychology, postgraduate psychology research, and nursing with postgraduate qualifications in counselling and/or psychology. NR 1-to-1 instruction in the use of the therapy manuals, regular supervision from PI	NR	≥12 EPDS	16.6 (EPDS)	Probable	30 years 18 weeks NR 2.7% first language not English NR	81.4% living with partner NR MHI: 41,400AD 62.7% ≥ 12 years of school NR Northern metropolitan Melbourne/rural eastern Victoria		NR
Pugh et al., 2016	40	Doctoral students in Clinical Psychology. NR Training workshop in the provision of TA-ICBT, supervised by a registered psychologist and expert in TA-ICBT	High level of therapeutic alliance, giving a rating of 86.42% on TSQ	≥10 EPDS, Sub-clinical and clinical symptoms of PPD on MINI	15.68 (EPDS)	Probable	NR NR 56 92% Caucasian, 8% ‘other’ 38%	92% married, 4% engaged, 4% single NR NR NR 8%<grade 12, 29% college, 38% UD ² NR Resided in Saskatchewan	No differences between dropouts and completers on the baseline EPDS	NR
Van Horne et al., 2022	46	Master's level licensed social workers. NR Trained in the PST4PPD intervention by the developer.	NR	10-20 EPDS	12.58	Highly possible	31 years NR NR 36% Hispanic, 29% Black, 18% White ² NR	47% married, 16.7% Single ² NR NR 5.6% < high school, 22.2% CG NR Houston, Texas	NR	NR
Milgrom et al., 2021⁵	54	An experienced psychologist (in-person group)	NR	11-25 EPDS	NR	N/A	32 years 31.3 weeks 51 NR	67% married, 26% defacto ² NR AD: 54% ≥80K 3% < high school, 32%	NR	NR

							38% depression medication	Bachelors, 13% CG ² NR Rural/metropolitan Victoria		
Fonseca et al., 2020	58	n/a ¹	NR	>5.5 PDPI-R), >10 EPDS	9.32 (EPDS)	Possible	32 years 2 months 37 NR NR	90% married/cohabiting ² 84% employed 52% 1K-2K, 22% 2K-3K euros 29% basic/secondary, 43% HE, 29% PD SES: 13/98 Low, 85/98 med-high NR	Dropouts sig. lower ratings of satisfaction and usefulness, and lower intention to use it if needed. Dropouts were more likely to have basic or secondary education, low SES, live in a rural area. The infants of the participants who dropped out from the study were older ³	NR
O'Mahen et al., 2014	88	Psychological therapies under the UK IAPT training scheme. NA 5 days of training in the 'high-intensity' perinatal-specific BA approach	NR	≥13 EPDS	20.24 (EPDS)	Probable	NR NR 54 93% White/British, 5% 'other' NR	93% Married/Cohabiting, 7% single 84% Not working ² , 8% FT/PT 10%<£10K, 48%>£40K ² 32%UD, 24% PD NR UK Wide	No sig diff in recruitment route, demographic data, PND risk Not opening/completing online modules associated with lower income (p=0.02), working (p=0.04), lower perceived social support (p=0.04), lower social and occupational functioning (p=0.01).	Did not have enough time (n=2), overwhelmed (n=1), feeling better (n=1)

¹no therapist, ²Further details included in paper, ³across all participants in paper (not just CBT intervention), ⁴Statistical analyses to compare means not completed, ⁵This study is reported twice in the table as it involved two treatment arms; one in-person CBT and the other remote CBT, CL=Common Law, AHI: Annual household income, PI=Principal Investigator, TSQ= Treatment Satisfaction Questionnaire, STAR-P=Therapeutic Relationship-Patient, CG=College Graduate, , PD=Postgraduate degree, MHI=Mean household income, CD=Canadian Dollars, EPDS= Edinburgh Postnatal Depression Scale, NR=not reported, MYE=Mean years of education, HE=Higher Education, PDPI-R= Postpartum Depression Predictors Inventory-Revised, UD=Undergrad degree, FT=Full-time employment, HKD=Hong Kong Dollar, AD=Australian Dollars, HAM-D=Hamilton Rating Scale for Depression, Becks Depression Inventory=≥ 12 BDI

Dropout and condition-related factors

The Edinburgh Postnatal Depression Scale (EPDS; Cox et al. 1987) was used to assess level of PND symptoms in 20 studies (Table 3). One study used the Beck Depression Inventory (BDI; Cunha 2001; Pinheiro et al., 2014) and one study stated that depression was diagnosed by an experienced physician using the criteria described in the Structured Clinical Interview for DSM-IV (APA, 1994). The cut-off for inclusion on the EPDS ranged from 9 (Liu & Yang, 2021) to 13 (O'Mahen et al., 2014) and the average total EPDS score ranged from 11 (Liu & Yang, 2021) to 20 (O'Mahen et al., 2014). As shown in Table 3, the EPDS total scores can be categorised according to the likelihood of depression; 9-11 indicates 'possible' depression, 12-13 indicates 'highly possible' depression, and 14 upwards indicates 'probable' depression (Cox et al., 1987). Most studies reported average EPDS scores in the 'probable' range (N=12), four in the 'highly possible' range, and two in the 'possible' range. Three studies that used the EPDS, did not provide baseline EPDS data (Milgrom et al., 2021; Marrs, 2013; Cooper et al., 2003). The studies indicating higher ('probable') depression on the EPDS had smaller average dropout rates (Weighted Mean=2.3%) compared to those indicating 'highly possible' (Weighted Mean=3.6%) or 'possible' (Weighted Mean=15.1%) depression. Conversely, the study with the highest dropout included the participants with the highest average PND score, as indicated on the EPDS (O'Mahen et al., 2014).

Five studies reported no significant difference at baseline when comparing participants who dropped out to those who completed. Most studies (N=17) did not directly compare PND severity in those who dropped out compared to those who completed, at baseline.

While not directly comparing participants who dropped out to those who completed, four studies collect reasons for the dropout and outlined reasons related to declining mental health and lack of improvement (O'Mahen et al., 2014; Appleby et al., 1997; Marrs, 2013;

Misri et al., 2004). O'Mahen et al. (2014) also reported that one of their participants had dropped out due to feeling better. Importantly, only a small proportion of the overall number of participants who dropped out provided reasons in these studies and therefore conclusions cannot be drawn about dropout as a whole.

Taken together, the limited number of studies comparing EPDS baseline data of participants who dropped out and those who completed, and the heterogeneity in how PND was assessed and understood, makes it difficult to draw out patterns regarding PND severity and dropout rate.

Dropout and patient-related factors

Patient demographic information was inconsistently reported across the included studies (Table 3) with one study reporting almost no demographic information (Marrs, 2013) which contributed to a lower quality appraisal score (0.56) compared to the other studies (Table 2). The mean maternal age was the most consistently reported variable (N=20) and ranged from 25-32, however most participants (N=14) were in their 30s. Seven studies reported mean infant age which ranged from six weeks to seven months. Of the studies reporting on number of children (N=17), most (N=9) reported a minority of parents with multiple children. Data about ethnicity was available for 11 of the 23 interventions. Of these, six reported that most of their participants identified as White Caucasian. Use of psychotropic medication was reported in only nine of the 22 studies.

Data about marital status was reported in 20 interventions, and all but one study (Sampson et al., 2021) reported participants as mostly married or cohabiting. Data about employment was reported for 9 interventions, and 5 of these reported most participants to be working. Income level was reported in just over half the interventions (N=12), however this was difficult to compare due differences in currency and how the data was reported i.e.

individual versus family income. Similarly, education level was reported in different formats in 14 studies (Table 3). Data about socioeconomic status was reported for a small number of interventions (N=4). Overall, the inconsistency in reported patient-related characteristics across the 23 interventions reviewed made it difficult to pull out patterns regarding dropout rate.

Comparing participants who dropped to those who completed

A small group of papers reported the characteristics of the dropouts in their studies and compared them to the completers (N=8; Table 3). Maternal age was suggested to play a role in dropout for three studies (Appleby et al., 1997; Misri et al., 2004; Sampson et al., 2020) which reported the participants who dropped out were significantly younger than completers. Three studies compared aspects of the family system and found that partners of people who dropped out were significantly older than partners of completers (Milgrom et al., 2005), significantly more likely to have an unemployed partner (Appleby et al., 1997) or infants that were older than those of completers (Fonseca et al., 2020).

Changes in work schedule, lack of time or moving home were noted as factors contributing to dropout in four studies (Hou et al., 2014; Cooper et al., 2003; Leung et al., 2016; O'Mahen et al., 2014). Furthermore, non-concordance with medication or the CBT protocol was recorded as reasons for dropout in Misri et al. (2004).

Both Misri et al., (2004) and O'Mahen et al. (2014) found that a higher proportion of participants who dropped out were in employment compared to those who completed. Contrary to these findings, Appleby et al. (1997) found no differences across a range of demographic variables, including employment status. Appleby et al. (1997) also did not report other factors that could have confounded a relationship between employment and dropout, such as income, education level or SES. Fonseca et al. (2020) reported that dropouts

were more likely to have a low socioeconomic status and live in a rural area compared to completers of their study. While Fonseca et al. (2020) found that participants that dropped out were more likely to have basic or secondary education compared to completers, Misri et al. (2004) reported that the participants that dropped out were not educated above school level. O'Mahen et al. (2014) found that having higher perceived social support, better social and occupational functioning and a higher income was associated with completing more online CBT modules. Only one study compared race, ethnicity and marital status between those who dropped out and those who completed and found no significant differences (Sampson et al., 2020). Given the relative homogeneity of ethnicity and marital status across the papers in this review, it was difficult to draw out patterns in these factors and dropout rates between studies.

Overall, due to the small number of studies directly comparing the characteristics of participants who dropped out to those who completed, and the inconsistencies in type of data collected, there is not sufficient evidence to conclusively state the patient-related factors that accompany dropout in CBT interventions for PND. At the same time, the findings suggest that factors such as maternal age, socioeconomic status and social support may have played some role in influencing retention and dropout. These factors need further investigation in studies with robust experimental designs.

Discussion

To the authors' knowledge, this systematic review of the literature is the first to investigate the dropout rate reported in CBT interventions for PND and to examine the factors that accompanying dropout in these interventions. 22 papers, and 23 interventions (Milgrom et al., 2021) were included in the review. Dropout rate ranged widely across studies, from 0%

(Chabrol et al., 2002; Prendergast & Austin, 2001) to 88% (O'Mahen et al., 2014). This is a slightly wider range than previously indicated by a review looking at CBT intervention across the perinatal period which included only RCTs and quasi-randomised studies (Sockol, 2015). This difference may be accounted for by the current review's broader inclusion criteria, its specificity to the postnatal period and conducting a more recent database search.

Dropout and therapy-related factors

The CBT interventions reviewed included in-person, one-to-one and group formats to allow for a fuller investigation of the therapy-related factors that might play a role in dropout rates. While there was broad consistency in the content of the CBT, the individual studies followed different CBT manuals or did not report what they were guided by. The majority of interventions were in-person compared to remote delivery, and the average dropout rate was lower in the in-person interventions compared to web-based sessions, and for one-to-one sessions compared to group sessions. Furthermore, the dropout rate was lowest in the three studies that conducted home-visit CBT sessions and highest in the remote interventions that had less therapy input. These findings suggest that the level of therapist input, and the location of therapy may be important considerations when trying to enhance retention. Notably, none of the eight studies that reported reasons for the dropouts in their studies, commented on the format of CBT being a factor.

Studies employing qualitative interviews with women with PND have suggested that lack of free time, and issues with finding childcare can pose a barrier to accessing CBT sessions (Pugh et al., 2015). It is therefore possible that the unique set of demands faced by women with PND mean that they are more likely to dropout from CBT interventions that require them to take more time out of their day and away from their children. Similarly, retention may be promoted by greater therapist input. These are tentative suggestions that

could be explored by studies employing qualitative interviews with participants that dropped out from CBT interventions for PND.

Dropout and condition-related factors

Evidence regarding the impact of PND severity on dropout was limited. While most studies used the EPDS (Cox et al., 1987) to provide an indication of the level of PND severity, they used different clinical cut-offs and therefore the severity of PND varied between studies. Due to the heterogeneity in the use of the EPDS cut-off to indicate PND, a systematic review indicated that a cut-off of 14 would most accurately reflect a structured clinical interview (Lyubenova et al., 2021). Therefore, future research should consider establishing a more consistent clinical cut-off to allow for more direct comparisons between studies. While five studies found there to be no significant difference in EPDS baseline scores between participants that dropped out and those that completed, comparison data was not collected from the other studies in the review. Therefore, this finding should be considered with caution and built on in future studies.

Dropout and patient-related factors

The level of demographic data collected in studies of CBT for PND varied between studies. The available demographic data was suggestive of a majority of married or cohabiting participants who were over the age of 30 years old. Eleven studies reported data about ethnicity and over half of these reported a majority of White participants in their studies. Due to the limited data reported, or the variety of formats it was reported in, it was difficult to pull out patterns with regard to patient-related factors across all the papers. Importantly, while socioeconomic status has been suggested as one of the factors that impacts adherence in health interventions (Sabaté, 2003), this was only reported by four papers.

Therefore, there is a need for future studies to ensure they collect and report on patient demographic data more thoroughly.

Eight of the 22 papers used statistical procedures to compare the participants who dropped out to those who completed the interventions, on a range of different patient-related factors. There was some evidence to suggest that younger mothers and those that were in employment were more likely to dropout compared to completers, and that those with better social support were more likely to complete. These results need further replication and exploration because only a small number of studies investigated these differences.

These tentative findings make sense in the context of the stress-vulnerability model (O'Hara et al., 1991) which emphasises the increased vulnerability of women experiencing hormonal changes, increased socio-emotional and cognitive demands and who may not be adequately resourced. Additionally, the TPB (Ajzen, 1991) proposes that background factors such as social support are crucial in encouraging positive help-seeking attitudes and intentions. Therefore, while CBT is predominantly focused on the one individual, greater consideration may need to be given to systemic factors and social supports, to ensure greater motivation for continuing in treatment.

Strengths and Limitations

This review utilised three large databases in combination with hand searches on Google scholar and the reference lists of included papers. This use of databases and method of searching has been suggested to be optimal for retrieving a high proportion of relevant literature (Bramer et al., 2017). The narrative method of synthesising the data was helpful for identifying patterns across studies of different designs and methodologies.

Some limitations to the current systematic review should be acknowledged. Firstly, the studies varied widely in the data they chose to collect and report on, which made it difficult to compare across studies. For example, some findings were only reported by one or two studies, such as the impact of having an unemployed partner (Appleby et al., 1997). It is recommended that future studies of CBT interventions for PND should follow the approach of the small number of studies in this review that statistically compared participants who dropped out to participants who completes interventions.

Information about patient- and condition-related factors were often absent from papers or reported in different formats which meant it was not possible to draw out patterns or conclusions about these factors across all CBT interventions for PND. There also appeared to be limited participant diversity regarding age, marital status and ethnicity. Furthermore, the interventions were largely delivered in English-speaking high-income and suburban settings. Given that one study indicated that participants in rural locations were more likely to drop out, it is important that future research explores the impact of location further. Furthermore, given that an individual's belief system and social context is likely to influence their views towards mental health services and CBT (Naeem, 2019), it is important to evaluate retention and dropout in more diverse participant groups.

Despite the studies in this review being largely of high quality due to the eligibility criteria selecting for studies reporting structured CBT and dropout rate, many studies were excluded due to not reporting on dropout rate, and those that were included did not systematically compare the people who dropped out to those who completed. For this reason, the conclusions regarding the factors accompanying dropout in this review should be considered with caution and explored more thoroughly in future studies.

Recommendations for the future

This review highlights a range of avenues for future research. To address gaps in the evidence-base regarding the factors accompanying dropout in CBT for PND, future intervention studies should make it standard practice to report dropout rate as well as the characteristics of the participants that drop out, separately to completers. As stated above, it would be valuable for research to address the issue of lack of diversity in CBT studies for PND and more rigorously collect data about participant characteristics and cultural background. Further qualitative studies would help capture the nuances of mothers' perspectives, which may be missed from quantitative studies.

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Service Improvement Project

The impact of expert by experience involvement in teaching on the Oxford DCLinPsych programme; for students and experts by experience

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Abstract

Introduction: There is growing acknowledgement of the value of creating partnerships between those delivering and those accessing health services. Less is known about Experts by Experience (EbE) involvement in the context of clinical psychology doctoral training programmes. This study explored the models of involvement of EbEs in teaching on a DClinPsych course in England; the impact of EbE involvement, both for EbEs and trainee clinical psychologists and whether improvements were required to better meet their needs.

Methods: The level of current involvement was explored by review of course records. A qualitative design was employed in which EbEs and trainees completed one of two survey questionnaires designed around commonly used frameworks of participation and reflective learning were completed by EbEs and trainees. Thematic Analysis was used to evaluate the written feedback from the surveys. **Results:** Records of current EbE involvement were found to be lacking in detail and sometimes missing. Ten EbEs and nineteen trainees completed the survey questionnaires. Key themes extrapolated from the surveys highlighted the importance of EbE involvement in supporting the wellbeing of EbEs and the learning experiences of trainees. **Conclusions:** Recommendations are given regarding the processes for future EbE involvement in teaching.

Key words: Experts by Experience, Trainee Clinical Psychologist, Participation, Involvement, Doctorate of Clinical Psychology, Teaching

Introduction

Experts by Experience (EbEs) are people with lived experience of using or caring for someone who uses health or social care services (NHS Improvement, 2018). EbEs are thought to bring invaluable perspectives, via their personal expertise, to the training of health practitioners (Ahuja & Williams, 2005). The importance of encouraging patient participation and co-production has been emphasised in statutory guidance (NHS England, 2014; 2015), and there is growing recognition of the value of EbE involvement in training programmes such as the Doctorate in Clinical Psychology (DClinPsych; HCPC, 2017). The DClinPsych is a three-year training course, incorporating academic teaching, research and clinical placements for trainee clinical psychologists. Despite national guidelines, research studies show that there can be a gap between what is recommended and what is delivered in healthcare training settings (Duffy et al., 2013; Paul & Holt, 2017). Therefore, there is an ongoing need to evaluate the process of EbE involvement in clinical psychology training, to ensure that it remains beneficial and meaningful, rather than tokenistic, for those involved (Howarth, 2018).

Impact of involvement for experts by experience

Closer partnerships between EbEs and organisations involved in their care can bring about a sense of empowerment, confidence and wellbeing for EbEs (Hanley, 2005; Sadd, 2011). This empowerment is thought to in part be due to a breaking down of stigmatising power differentials through greater contact between EbEs and professionals, in the context of equal status (Allport et al., 1954; Link & Phelan, 2001). The redistribution of power hierarchies is central to the Ladder of Participation (Arnstein, 1969); an eight-step model that provides a benchmark for understanding different levels of involvement, ranging from

‘manipulation’ to ‘citizen control’ (Figure 1; Arnstein, 1969). It measures the extent to which EbEs are provided with opportunities to exert influence and power in the health system and their own care (Neech et al., 2018), taking account of their personal ‘choice’ over the positions they wish to hold (Collins & Ison, 2006).

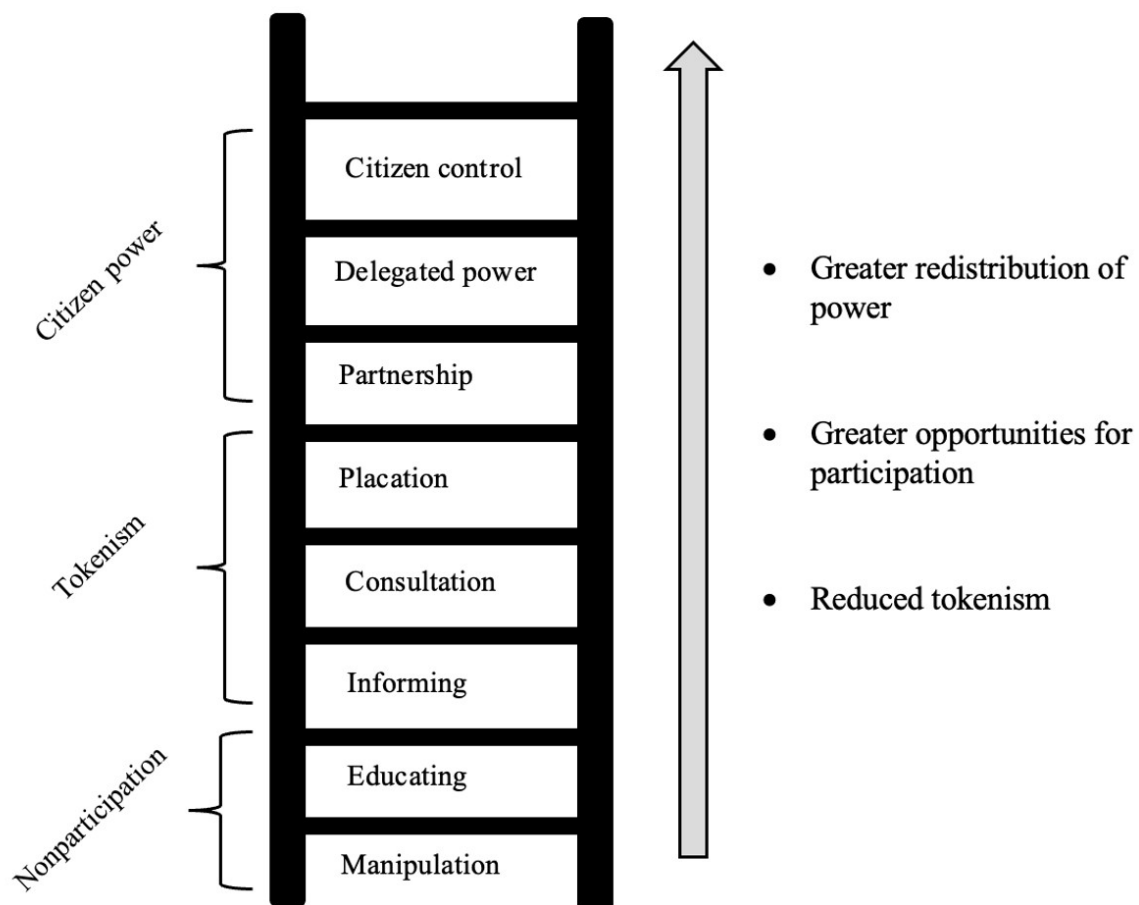


Figure 1. Adaptation of the 'Ladder of participation' (Arnstein, 1969)

The impact of involvement for students

Studies show that students, including clinical psychology doctorate trainees, feel that EbE involvement in their education can improve their clinical practice by helping them reflect on their therapeutic relationships (Speers & Lathlean, 2015; Tickle & Davison, 2008). The process of learning is promoted by experiences of reflection that occur within a social

context (Bandura & McClelland, 1977; Kolb, 1984). In line with Kolb's reflective cycle (Figure 2), EbE involvement in teaching may offer greater opportunities for learning by reaching students on an emotional level and supporting the transformation of experience into learning and new behaviour (Felten et al., 2006; Kolb, 1984). Kolb's reflective cycle has been used to conceptualise the process by which EbE involvement in social work training can promote trainee learning by building greater reflective awareness that can then be taken into their practice (Skilton, 2011). As yet, this model has not been used to evaluate the impact of EbE involvement in the training of trainee clinical psychologists.

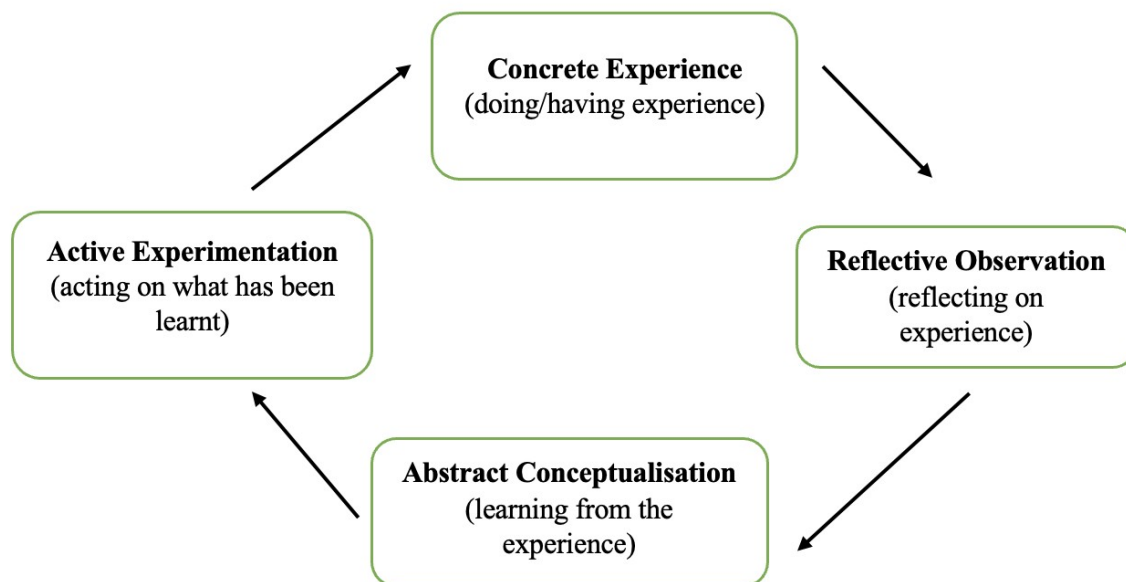


Figure 2. Adaptation of Kolb's reflective learning cycle (Kolb, 1984)

In line with ongoing plans to increase EbE involvement on the DCLinPsych and move towards a position of co-production (Appendix C), this study had the following aims:

- 1) To explore the level of current EbE involvement in teaching on the DCLinPsych course.

- 2) To explore the perspectives of EbEs and trainees with regard to how they are impacted by EbE involvement in teaching.
- 3) To develop recommendations for service development based on the above findings

Methods

The HRA decision tool (Appendix D) indicated that the project was not classified as research and as such ethical approval was not required. This project met the criteria for a service improvement project and was approved by the local NHS Trust's audit committee (Appendix E).

Design

This study employed a qualitative survey design and was guided by The Model for Improvement (Langley et al., 2009). It aimed to gather the information required to generate change ideas and recommendations for EbE involvement in teaching on a DClinPsych course. The survey approach was chosen to allow for a broader range of perspectives to be collected, compared to an interview approach which may not reach as many participants.

Participants

EbEs and trainee clinical psychologists were recruited by email via a DClinPsych course in the UK between October 2021 and December 2021. The email included information about the project and an invitation to complete a survey questionnaire. EbEs were included if they were currently a member of the 'People's Experience Group' (PEG): a group of carers and people with lived experience of accessing physical and mental health services. The purpose of the PEG was to contribute lived experience perspectives to a range of areas of

the DClinPsych course. They were excluded if they had been consulted about the design or implementation of the current service improvement project prior to recruitment of participants. Only trainees who had recently completed their first year of clinical psychology training were included. Trainees in other training years, or those from other training courses were excluded. No further inclusion or exclusion criteria were employed.

Procedure

The level of EbE involvement in teaching was explored by requesting information by email from course teaching leads (representing 13 different teaching streams), regarding the number of teaching sessions that included EbEs, and details of the format of involvement.

Demographic information was also collected about the PEG participants which included details of age, gender, ethnic background, education, employment status, religion, and whether they were a carer or a service user. This information was selected to give an indication of whether certain demographic groups were less represented than others. No demographic information was collected about the trainee participants because this was not directly linked to the research aims.

The online survey platform, Qualtrics, was used to create and store answers from two separate survey questionnaires that were provided to the PEG and trainees respectively. Each survey began with an initial participant information sheet and consent form that participants were required to complete before progressing to the full survey.

The two surveys were designed separately, through a process of consulting the literature regarding Arstein's Ladder of Participation, for the PEG survey (Arnstein, 1969) and Kolb's Learning Cycle, for the trainee survey (Kolb, 1984) to ensure that the questions allowed the participants to expand on the concepts suggested by these models. The questions were then reviewed with the research team and piloted with a member of the PEG and a

current trainee who also provided feedback regarding the feasibility of the surveys such as the clarity of the wording and the duration of the survey.

The PEG survey (Appendix F) included 15 questions that were underpinned by the Ladder of Participation (Arnstein, 1969). Therefore, questions targeted the broad themes of ‘level of involvement’ (e.g. ‘what kind of way were you involved in teaching?’), ‘impact’ (e.g. ‘How might PEG involvement in teaching impact PEG members?’) and ‘improvement’ (e.g. ‘how would you like PEG involvement in teaching to change?’).

The trainee survey (Appendix G) included 10 questions that were underpinned by Kolb’s Learning Cycle (Kolb, 1984). In this way, the questions targeted the different stages of Kolb’s reflective learning cycle e.g. ‘Please explain how EbE have been involved in teaching’ (concrete experience), ‘How have you found the experience?’ (reflective observation), ‘What have you learnt about your own practice from EbEs in teaching?’ (abstract conceptualisation), and ‘How has EbE involvement changed your attitude, behaviour and practice?’ (active experimentation).

Data analysis

The thematic analysis (TA) procedure described by Braun and Clarke (Braun & Clarke, 2006) was used to manually code and analyse key themes in survey responses. The PEG and trainee surveys were analysed separately. TA was the chosen method of analysis because it is a widely used and flexible qualitative analytic approach which can be used with survey responses of small to large datasets. A predominantly inductive and realist stance to reflexive TA (Braun & Clarke, 2013) was taken, because this study was interested in the participants’ perspectives and the meanings that they were drawing from their experiences. This approach differs from more deductive approaches that base the analyses on a predetermined theory or set of codes, as with Template Analysis (King, 1998), or those that

measure the frequency of codes and themes as a method of identifying patterns in the data, as with Content Analysis (Dicle & Dicle, 2018). In TA (Braun & Clarke, 2013), themes are established through a process of determining whether a pattern is meaningful for answering a research question, rather than being determined by a quantitative approach. Therefore, while themes need to be identified across a proportion of the data, they are not required to be present in every, or even most data items (Braun & Clarke, 2013; Vaismoradi et al., 2013).

The free text for each survey was read and re-read to ensure familiarisation. Key words or phrases were highlighted, and the 'comment' function in Word was used to develop initial codes alongside the text data. These codes were then organised into categories of repeated patterns, or themes. An inductive approach to analysis was taken, to ensure that the themes would closely reflect participants' experiences rather than be driven by specific research questions. Provisional themes were reviewed to check that they (a) reflected the codes, and (b) reflected the semantic content of the data set as a whole. Interpretations and conclusions were reviewed and discussed in meetings with the research team. The research team was made up of a trainee, PEG member and course tutor. It was therefore important for them each to reflect on their own positions in relation to the topic and how this might influence their interpretation of the data. Where possible, the words used by participants were included in the theme title. Quantitative data derived from the two surveys were summarised by descriptive statistics.

Results

Current level of EbE involvement

The information collected from course teaching leads revealed that nine out of the 13 teaching streams involved EbEs in teaching in some way. The teaching areas covered were:

‘Equality, Diversity and Inclusion’, ‘Working Age Adult’, ‘Research’, ‘Older Adult’, ‘Neuropsychology’, ‘Health’, ‘Forensic’, ‘Intellectual Disability’ and ‘Advanced Therapeutic Interventions’. Types of involvement included: 1) EbEs talking about their experiences of certain conditions, and the processes of receiving diagnoses and psychology involvement, 2) EbEs co-designing and co-facilitating the teaching sessions, and 3) EbEs facilitating small group discussions. Two of the 13 teaching leads contacted were not able to provide any data due to recently being appointed in the post and therefore not having access to previous records of EbE involvement.

Overall, the above findings demonstrated that there was no current centralised or agreed upon method for recording data about EbE involvement, and the level and detail of data recorded varied across teaching.

PEG survey

Of the 14 PEG members who were provided information about the study, 12 (83%) consented to complete the survey. Two of these 12 did not continue past the initial consent stage, leaving 10 participants who completed the survey in full. The majority were female (60%), aged 36+ (90%) and identified as white (80%). Seven had been PEG members for 1-2 years and three for 10 years. Eight considered themselves to have a mental health difficulty, seven a physical health difficulty and three stated they were caring for someone with a mental health difficulty. Five had completed a bachelor’s degree and one a doctorate degree. Four were retired, three were working part-time, one was self-employed and one was a student. The majority identified with a religion (6 Christianity, 2 Islam) and five of these were actively practising.

The initial questions on the survey asked about their level of involvement in teaching in the 2020 academic year. Seven PEG members stated that they had been directly involved in teaching, with the majority having heard about involvement through a course email or PEG meeting. They identified types of involvement as ‘talking about lived experience in large or small groups’, ‘co-presenting’ and ‘leading small group discussions’. Three PEG members stated that they had not been made aware of the opportunities available for involvement.

Thematic analysis yielded four EbE themes: (1) ‘informing change’, (2) ‘bringing purpose to experiences’, (3) ‘ensuring empowerment’ and (4) ‘educating by ‘making it real’. These themes are presented below and supported by excerpts from the survey.

EbE Theme 1: Informing change

Eight PEG members commented on a motivation to bring about change in themselves, in the trainees, and therefore in future clients. They reported that being involved in teaching helped them in their journey to recovery. Some also reported wanting to raise awareness in particular areas such as gender identity diversity and mood disorders. This theme aligns with the Ladder of Participation (Arnstein, 1969), because it demonstrates a redistributing of power in which the EbEs are using their knowledge and expertise to drive an agenda of change.

“I hoped that, by discussing good and bad experiences, we could influence future outcomes for clients in a similar position to us.” (EbE 3)

EbE Theme 2: Bringing purpose to experiences

All ten PEG members wrote about the process of making sense of their lived experiences through participation in teaching. They noted a shift in their mindset away from focusing solely on their negative experiences which built their confidence and understanding of

themselves. They reported that involvement gave them purpose and helped them develop personally and professionally. This sense of empowerment in taking the lead to tell their story in their own way, is suggestive of a shift up the Ladder of Participation towards a position of greater shared power (Arnstein, 1969).

“This teaching helps me both to appreciate the journey I have been on, the extent of my knowledge, gives me confidence...” (EbE 1)

EbE Theme 3: Ensuring empowerment

In contrast to the previous theme, all PEG members recognised the potential for discomfort when being asked challenging questions by trainees or feeling unsupported in a session.

“Sharing our experience can be draining and emotional” (EbE 1)

PEG members encouraged opportunities to pre-plan the lecture together with the co-facilitator and to have access to a debrief session. They also emphasised the importance of trainees and co-facilitators being sensitive and responsive, and actively listening to them. Some reported the benefits of being able to join online when they were not able to travel to lecture locations, however others noted a need for further training in online processes. A few PEG members suggested that it would be helpful to receive evidence of their involvement, such as a certificate they can produce for future employers. This theme highlights the need for a collaborative and fair partnership between EbEs, facilitators and trainees, in which the EbEs are afforded the same opportunities and respect as other lecturers. If this were not the case, then the level of involvement would remain on the lower rungs of the ladder of participation, associated with tokenism (Arnstein, 1969).

EbE Theme 4: Educating by ‘making it real’

Seven PEG members reported that involvement helped trainees reflect on the reality of lived experiences, to a greater extent than in other more theory-based lectures. They also encouraged participation and questioning from trainees because they thought this improved their learning. This aligns with Kolb’s reflective model which speaks of the importance of active participation and questioning in the learning process (Kolb, 1984)

“Lived experience says more than just reading from a book, people can relate.” (EbE 10)

Trainee survey

Of the 30 trainees who were provided with information about the study, 27 (90%) consented to complete the survey, and 20 of these continued with the survey after consenting. Nineteen completed the survey in full, and one trainee partially completed the survey.

Thematic analysis yielded four trainee themes: (1) ‘Connecting with ‘lived realities’’, (2) ‘How to be a better clinical psychologist’, (3) ‘Emotional impact’, and (4) ‘Integrating EbEs into teaching’. As above, these themes are supported by excerpts from the survey.

Trainee Theme 1: Connecting with ‘lived realities’

Most of the trainees reported that the teaching involving EbEs gave them greater insight into the ‘lived realities’ of the people they worked with clinically. They emphasised the value of hearing about the ‘whole journey’ of an EbE, in terms of the onset and development of the difficulties, rather than the psychology input alone. They also reflected on the importance of connecting on an emotional level with EbEs, and how this influenced their actions clinically,

and built their confidence as professionals. This process was aided by having informal conversations, sometimes in smaller groups, and being afforded the opportunity to ask questions that might ordinarily be left unanswered. In line with the fourth theme of the PEG survey (Educating by ‘making it real’), this theme demonstrated that the process of reflective observation aided the transforming of learning into action (Kolb, 1984).

“They’re often the things that would be difficult to ask someone in session...” (T14)

Trainee Theme 2: How to be a better clinical psychologist

Most trainees identified that EbE involvement in teaching supported them to develop their skills as clinical psychologists. They wrote about the importance of hearing about negative experiences, in order to gain greater understanding of what to avoid as clinicians. Trainees reported learning about the importance of working with the whole system around a client, and about the barriers that present in the health system. Trainees highlighted a range of ‘specific’ and ‘non-specific’ therapeutic skills that were improved by their exposure to EbEs in teaching.

“... it is sometimes easy to forget the softer skills of compassion, empathy and kindness” (T9)

Reflecting on their own assumptions in response to hearing from EbEs was reported to be a valuable learning experience. The process of reflection leading to the development of new ideas pertains to the ‘Abstract Conceptualisation’ stage of Kolb’s reflective model.

“...discussing their experience of dementia hugely challenged my preconceptions...I tried to bear this learning in mind when delivering post-diagnostic groups” (T3)

Trainee Theme 3: Emotional impact

Many trainees recognised the impact of the emotional content of lectures with EbEs, both on a personal and professional level. Some wrote about having their passion for clinical psychology reignited after hearing from EbEs and feeling more connected to a sense of striving for positive change.

“I find after sessions with EbEs I have a real fire in my belly again!” (T21)

They also recognised that feeling emotionally engaged with the content of these lectures aided their memory for the material and made them more likely to act on this learning in their clinical work. In line with Kolb (1984), having time to process and reflect on the EbE teaching (i.e. the concrete experience) is crucial for embedding learning and taking it into practice. There was recognition of the need for trainees to feel supported in relation to the emotional content of the sessions involving EbEs. They wrote about the importance of being emotionally prepared for the content of certain sessions or being offered time out to process the content.

“...make sure we take time out for ourselves after meeting them”. (T9)

Trainee theme 4: Integrating EbEs into teaching

Most trainees reflected on elements of equality and disparity regarding the method of integrating EbEs into teaching. Some observed an underrepresentation of certain EbE groups or perspectives, namely younger people or those that did not hold positive views of the

psychology input they had received. The lack of any involvement from certain groups indicates an area for improvement regarding EbE involvement on the course.

“...would be helpful to hear from individuals with lived experience who may not quite fit specific diagnostic criteria, or who may have had alternative reflections on diagnoses.” (T3)

While some trainees noted strengths in co-delivery, others thought more could be done to ensure the roles were shared more evenly between facilitators, EbEs and trainees. They recommended creating ‘ground rules’ regarding appropriate questions, and letting EbEs know they did not need to answer questions they were not comfortable with. Taking these steps would shift the power from the trainees and co-facilitators to the EbEs, giving them greater autonomy over what they share and how they take part in teaching (Arnstein, 1969)

The trainees suggested that more time should be allocated for trainees to reflect on what had been heard, and think about their learning from the EbEs, rather than asking questions. Involving the EbEs in these reflections would likely move closer to a position of partnership (Arnstein, 1969) whilst also enhancing the learning process for trainees (Kolb, 1984).

“Sometimes I felt like they were being exhibited, for us to ask nosy questions.” (T13)

Overall, the PEG and trainee surveys both indicated that EbE involvement in teaching could bring about a sense of empowerment for EbEs (Arnstein, 1969), and promote the trainee reflective learning process (Kolb, 1984). Both the PEG and the trainees emphasised the importance of being sensitive and responsive to EbEs and endorsed active participation and

reciprocal interactions between trainees and EbEs as a way of embedding knowledge and creating close partnerships between trainees and EbEs.

Discussion

This study aimed to examine the level and impact of EbE involvement on a UK DCLinPsych course, to ensure a meaningful process for those involved. Records of involvement varied in quality across teaching, with some gaps in evidence regarding whether EbEs were involved at all in some teaching areas. The lack of consistent record keeping meant that it was not possible to report on the number of lectures that involved EbEs, however, nine of the 13 teaching streams were found to involve EbEs in some way. Level of involvement varied, with some EbEs choosing to talk about their personal experiences, and others co-presenting teaching material or being more actively involved in the design and production of a lecture. At the same time, some EbEs reported to have not been made aware of their options for involvement. In this way, the degree to which power was shared, and therefore the level of participation (Arnstein, 1969), appeared to vary across teaching and EbE.

Both the PEG and trainee surveys indicated that EbE involvement in teaching can be beneficial for bringing about a sense of empowerment for EbEs (Arnstein, 1969). For the PEG, the sharing of personal experiences and interacting more with trainees gave them a sense of ownership over their experiences, which enhanced their confidence and sense of empowerment. Both the PEG and the trainees noted factors that could influence the level of partnership and power sharing between the EbEs, co-facilitators and trainees. They emphasised the importance of being sensitive and responsive to EbEs, and the trainees suggested creating 'ground rules' for sessions involving EbEs. The PEG reported that closer

partnerships between EbEs and the course could be promoted by providing planning and debrief sessions, further training and evidence of their participation for future employers. The trainees also reported that some EbE groups were not represented in teaching. Overall, these findings are consistent with studies showing that service user involvement in mental health systems has therapeutic benefits, as long as the level of partnership and power is considered (Abayneh et al., 2022; Lloyd, 2010).

The PEG and trainees shared the perspective that EbE involvement in teaching promoted the trainee reflective learning process (Kolb, 1984). They also both endorsed active participation, questioning and reciprocal interactions between trainees and EbEs as a way of embedding knowledge. In line with research (Felten et al., 2006) trainees noted that connecting emotionally with EbEs led to a process of reflecting on assumptions and planning for change, which in turn enhanced their recall of these lectures. Some trainees reported having actively made changes to their clinical approach following teaching with EbEs (Active Experimentation; Kolb, 1984). Given that a sharing of participation between EbEs and trainees appeared to be important both with regard to EbE empowerment (Arnstein, 1969) and trainee learning (Kolb, 1984), it is possible that a relational and interactive process underlies both Kolb's and Arnstein's model. This was not investigated by the current study and is an avenue to be explored in future research.

Limitations

The limitations of this study need recognition. Firstly, while the survey methodology was chosen to allow access to a greater number of participants, it was limited with regard to the level of exploration afforded around each question. In some cases, the responses were short or unclear and an interview approach would have allowed for follow-up questions to be

asked. Because many of the PEG were highly educated and interested in research, it is possible that their responses were not be transferable to other EbEs. Therefore, future research incorporating wider recruitment strategies of EbEs outside of the PEG, and utilising interview methods would enhance the current findings. Notably, no demographic data was collected about the trainees and therefore it is not possible to know if these findings transfer to other trainee groups, or whether the demographics played a role in the feedback they gave.

While the research team worked closely to try to ensure that the codes and themes closely matched the extracts so that no aspects of the data were overlooked (Terry et al., 2017), the findings should be considered with the positions of the researchers in mind. The team was made up of a trainee, PEG member and course tutor and therefore their interpretation of the results could have been influenced by the lens through which they were looking (Braun & Clarke, 2013). The impact of missing data should also be considered because there was attrition from consent to completion that could have led to a bias in the findings. It is difficult to interpret the reason for the attrition; it could have been due to participants forgetting to finish the survey, or choosing not to complete for other reasons. Greater researcher input and prompting to complete, or enquiring about the reason for non-completion could have minimised these omissions and improved the robustness of the findings.

Clinical implications and future directions

Based on the findings of this study, several recommendations for future were made. To overcome issues of record keeping, a centralised and agreed upon system for inputting data relating to EbE involvement in teaching should be created and include details of the opportunities offered and those taken up. As some EbEs may have preferences for certain types of involvement, they should be consulted about the positions they wish to hold. A

greater breadth of EbE perspectives should be sought by increasing recruitment to PEG and encouraging a diversity of viewpoints.

Based on feedback from the PEG and trainees, the method of integrating EbEs into teaching should be carefully considered. EbEs should have the opportunity to meet with the co-facilitator to plan and debrief each session. Agreed 'ground rules' should also be established. Further consideration should be given to the development of training and certificates to evidence the involvement. Finally, greater opportunities should be given to the trainees to process and reflect on their learning and consider what they will take into their practice.

Conclusion

There were some parallels to the feedback from PEG members and trainees with regards to the impact of EbE involvement in teaching. Issues around methodology and sampling have guided suggestions for future research. Recommendations for the service aimed to enhance the training of clinical psychologists and benefit the clients and services they work with.

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Theoretically Driven Research Project

The impact of perceived social support on parenting self-efficacy for mothers of infants admitted to a neonatal care unit

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Intended journal and rationale: *Journal of Reproductive and Infant Psychology*. This is a peer-reviewed journal that publishes research on psychological, behavioural, medical and social aspects of human reproduction, pregnancy and infancy. Research into psychological aspects of midwifery, health visiting and nursing is central to the interests of the Journal.

The Journal is of particular interest to those concerned with fundamental processes in behaviour and to issues of health promotion and service organisation.

Abstract

Introduction: Parenting self-efficacy (PSE) encompasses the set of beliefs a parent holds about their capability to care for their child. Admission to a Neonatal Care Unit (NCU) can disrupt the development of PSE, because parents are less able to provide active care for their newborn. Reduced PSE can interfere with the bonding process and is associated with negative physical and mental health outcomes. Greater perceived levels of social support have been found to play a role in promoting parenting confidence, but this relationship has not yet been studied within a UK neonatal population. The aim of this study was to investigate whether greater perceived levels of social support predicted greater PSE in parents of infants admitted to an NCU following birth. **Methods:** A longitudinal, within-group design was employed in which participants completed self-report questionnaires about their perceptions of social support and PSE at three time-points; 69 completed time 1 measures, 52 completed time 2 measures and 56 completed time 3 measures. Hierarchical Multiple Regression, a repeated-measures ANOVA and partial correlations were used to investigate the change in PSE over time and the relationship between perceived social support and PSE. **Results:** A strong positive correlation was found between perceived social support and PSE. PSE was also found to increase significantly over time. Perceived social support at admission to the unit was found to predict PSE one month after discharge. Perceived social support was not found to predict social support at discharge. **Conclusion:** The implications with regard to staff support and training are explored, as well as the strengths and limitations of the research.

Key words: Parenting Self-Efficacy, Social Support, Neonatal Care Unit, NICU

Introduction

While many births progress safely, a minority of cases involve birth complications related to pre-existing health problems or unexpected changes during pregnancy and birth. Neonatal care units (NCUs) provide specialist support for newborn infants who need further intervention following a premature birth or medical complication during or following birth. In the UK, approximately 1 in 7 infants are admitted to NCUs each year and the duration of their stay varies depending on their gestational age and physical health (Watkinson, 2010).

Parenting self-efficacy

Parenting self-efficacy (PSE) relates to a parent's self-belief about their capability of successfully engaging in parenting tasks and behaviours that promote their child's development (Vance & Brandon, 2017). A complicated birth or the sudden physical separation between parent and child such as when an infant is admitted to an NCU, can interrupt the development of PSE and is associated with significant parental distress (Arockiasamy et al., 2008; Jackson et al., 2003). The importance of self-efficacy in promoting health outcomes in the general population has been well documented (Guan & So, 2016). There is also a growing evidence-base for the importance of PSE as a predictor of parental wellbeing and behaviour, and of child socioemotional development (Benedetto & Ingrassia, 2018; Coleman & Karraker, 1998; Parker, 2014). As such, a range of NCU interventions are being developed for the purpose of boosting PSE and improving outcomes (Franck et al., 2019). These interventions include better education and training for parents with regard to understanding their infants' needs (Caretto et al., 2000), and involving parents more actively while still on the NCU (Hess et al., 2004).

Few studies have investigated the predictors of maternal self-efficacy in mothers of pre-term infants. There is some limited evidence to suggest that gestational age of the infant at birth and experience of bringing up other children can influence PSE, whilst maternal depression can interrupt the development of PSE (Klawetter et al., 2021; Pitetti et al., 2016). These studies were conducted in the context of a non-UK healthcare system, so there is a need to better understand the factors influencing maternal PSE in a UK NCU setting.

Family Integrated Care

Family integrated care (FICare) is a relatively new model of NCU care which promotes the involvement of parents as active partners, rather than passive observers, in their infant's care (Bracht et al., 2013). FICare has shown promise in improving both parent and child outcomes (He et al., 2018; O'Brien et al., 2018). However, implementation across UK NCUs is variable, and there remain gaps in knowledge regarding the relative efficacy of the different FICare components (Banerjee et al., 2018; Franck et al., 2019). It is therefore crucial for these components to be evaluated separately, to further build the evidence-base for the FICare model.

Social support and self-efficacy

The Canadian model of FICare promoted the importance of 'Psychosocial support' (Kirby & McKeon-Carter, 2018) which has primarily been studied in relation to peer-to-peer support (Mansour et al., 2018). In the UK, the British Association of Perinatal Medicine (BAPM) provides an adapted FICare framework which emphasises the need to encourage support via a range of sources such as family and friends, peers and professionals (Clements et al., 2022).

Social support is commonly defined as a combination of emotional and instrumental support that facilitates an individual's psychological resilience during times of stress (Reblin & Uchino, 2008). 'Perceived' social support is distinguished from 'received' support (Vangelisti, 2009), taking account of the 'perceptions' of availability of social connections, in contrast to objective support provided. Research shows a stronger relationship between perceived social support and self-efficacy across a range of settings, compared to received support (Chen et al., 2019; Haber et al., 2007; Rhoad-Drogalis et al., 2020). Longitudinal studies have shown social support to be predictive of the development of self-efficacy and behaviours related to higher self-efficacy (Rhoad-Drogalis et al., 2020; Warner et al., 2011).

The principles of self-efficacy theory (Bandura, 1995) are thought to underlie the association between social support and maternal PSE in the postnatal period (Leahy-Warren et al., 2012) and may also be applicable to parents in the NCU (Lee et al., 2012). In a study looking at the relationship between social support and self-efficacy in first-time mothers (Leahy-Warren et al., 2012), social support was defined as the combination of social structures (i.e. sources of personal and professional support) and four types of social function (i.e. informational, instrumental, emotional and appraisal). Research has suggested that hands-on help with infant care tasks (i.e. instrumental support), affirmations and feedback (i.e. appraisal), empathy and care (i.e. emotional support) and advice about infant care (i.e. informational support) enhance PSE (Angley et al., 2015; Häggman-Laitila, 2003; Podkolinski, 1998). In line with Bandura (1995), it is thought that maternal self-efficacy in carrying out infant care tasks is promoted by social support that increases knowledge and a sense of capability (Leahy Warren, 2005; Mercer & Ferketich, 1994; Reece & Harkless, 1998). As depicted in Figure 1, the four resources necessary for PSE are likely to be influenced by these four types of functional social support.

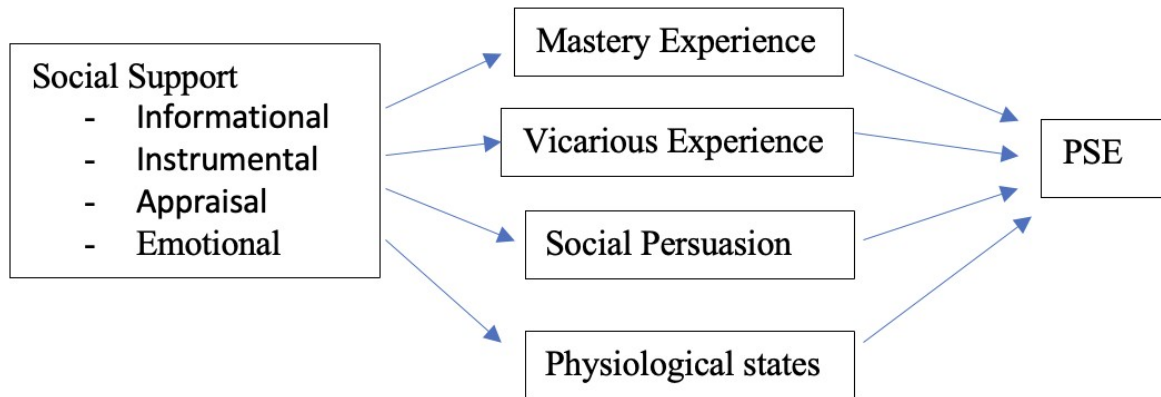


Figure 1. Self-efficacy theory as applied to social support received in the NCU

The above model fits with emerging research indicating the impact of parent-staff interactions on parental distress in the NCU (Guillaume et al., 2013; Tedstone & Tarrier, 2003). Social support in the form of encouragement from friends and family has been shown to increase PSE for parents of full-term infants (Angleley et al., 2015; Leahy-Warren et al., 2012) and more recently has been associated with PSE in a correlational study developed in Iran (Alinejad-Naeini et al., 2021). Social support has not yet been directly studied in parents of NCU infants in the UK, and this is particularly important to understand given the unique setting of the NCU and the impact this has on the parenting role.

Study aims

Building on existing research, the aim of the present study was to address the gap in the literature by examining whether maternal perceptions of social support during their stay in an NCU are predictive of later PSE.

Hypotheses

- (1) Perceived social support would be associated cross-sectionally with perceived PSE

- (2) Perceived PSE would increase over time after admission to an NCU
- (3) Higher perceived social support at admission to an NCU would predict higher PSE at, and following, discharge

Methods

Design

A longitudinal, within-group design was employed. Data collection took place between May 2022 and March 2023. NHS ethical approval was obtained from a Research Ethics Committee (REC) as provided by the Health Research Authority (IRAS project ID 303756; REC reference 22/SW/0017; Appendix H) and sponsorship was obtained from Oxford University's Clinical Trials & Research Governance (CTRG) team. Approval was also obtained from the NHS trust's Research and Development (R&D) Department (Reference: 16051).

Patient and public involvement

People with personal experience of having an infant in an NCU were contacted via a Parent Advisory Group (PAG) attached to the neonatal network of the general hospital. They provided feedback about the language used and the design of the study forms and questionnaires. They also supported the research team to consider the feasibility and acceptability of the study, and the battery of questionnaires.

Participant inclusion/exclusion criteria

Participants were recruited from a tertiary level Newborn Care Unit in the South of England. All birth mothers over the age of 18, who lived locally, whose infant was born at 28-weeks' gestation onwards and with an NCU admission within the last two weeks were eligible to

take part in the study. Participants were excluded if safeguarding concerns had been raised. No further exclusion criteria were used. All eligible participants were invited to take part and were required to provide informed consent prior to embarking on the study.

Sample size

According to an a priori power analysis, a sample size of 55 was required to detect a small-medium Cohen's *d* effect size of 0.3, with alpha set at .05 and power at .80. The power calculation was derived using G*Power software (Faul et al., 2009). The effect size was chosen because it was in line with studies of full-term infants (Leahy-Warren et al., 2012) and parenting self-efficacy (Benedetto & Ingrassia, 2018) which demonstrate effect sizes ranging from small to large. To combat issues of attrition that are common to longitudinal studies of preterm infants (Foulon et al., 2015; MacBean et al., 2019), a target of 69 participants was set, in order to achieve the required sample size after an estimated 20% drop-out at follow-up. This estimate of sample size was conservative because more papers report medium-large effects sizes than small, and the reported dropout rate in perinatal longitudinal research is 17% (Foulon et al., 2015).

Measures

Table 1 outlines the standardised measures used in this study. Primary outcome measures were those used to test the research hypotheses; secondary outcome measures were used to control for potentially influencing variables and provide an overview of the clinical characteristics of the sample. As research shows maternal depression is associated with anxiety and lack of control (Porter & Hsu, 2003), and previous experiences of trauma has been shown to influence parental self-efficacy (Caldwell et al., 2011), measures of anxiety and trauma symptoms were taken in addition to one for depression. A demographics

questionnaire was also used to collect information about participant characteristics including maternal age, number of children, ethnicity and mental health history.

Table 1: Overview of standardised measures

Measure	Rationale for use	Clinical Domain	Number of items	Subscales	Likert scale format (if applicable)	Range of Scores	Meaning of scores	Psychometric Properties
Primary Outcome Measures								
<i>The Perinatal Social Support Questionnaire (PICSS; Appendix I)</i>	Designed to be used to assess perceived social support of mothers in the perinatal period (Leahy Warren et al., 2019)	Social Support; Structural Domain	20 items	N/A	N/A	0-20	Higher scores indicate participants 'expect' to receive support from a greater range of sources i.e. partners, nurses, mothers.	N/A (The structural social support domain was not amenable to psychometric testing; Leahy Warren et al., 2019).
<i>Leahy-Warren et al., 2019.</i>		Social Support; Functional Domain	19 items	Two subscales; <i>Supporting Presence</i> (SP; emotional and appraisal support), <i>Practical Support</i> (PS; information and instrumental support). Exploratory analysis was conducted on these subscales following analysis of total scores.	1 (Strongly Disagree) – 4 (Strongly Agree).	19-76	Higher total scores indicate higher overall perceived social support in the context of infant care practice.	Content Validity: 0.9, Cronbach's coefficient alpha: 0.88 (Leahy Warren et al., 2019)
<i>The Perceived Maternal Parenting Self-Efficacy questionnaire (PMP-SE)</i>	Designed to be used with mothers of hospitalised pre-term infants.	Perceived Maternal Parenting Self-Efficacy	20 items	Four subscales; caretaking procedures, evoking behaviors, reading behaviors, signaling and situational beliefs. For the purposes of this study, only the total scores were evaluated.	1 (Strongly Disagree) - 4 (Strongly Agree).	20-80	Higher total scores indicate higher maternal self-efficacy.	Cronbach's coefficient alpha: 0.91, Test-retest reliability: 0.96 (Barnes & Adamson-Macedo, 2007)
<i>Barnes & Adamson-Macedo, 2007</i>								

Secondary Outcome Measures								
<i>The Patient Health Questionnaire-8 (PHQ-8)</i> <i>Kroenke et al, 2009</i>	Can be used across a range of clinical and research settings. Often used when the PHQ-9 is not approved by an institution (Alpizar et al., 2018)	Depression Symptoms	8 items	N/A	0 (Not at all) - 3 (Nearly every day)	0-24	Higher scores indicate higher levels of depression. Cut-off of 10 indicates clinical levels of depression.	High correlation between PHQ-8 and PHQ-9 (>.997) which has good psychometric properties (Kroenke et al., 2009).
<i>The generalized anxiety disorder 7-item (GAD-7)</i> <i>Spitzer et al., 2006</i>	Used widely as a measure of anxiety across a range of clinical settings and in research. Validated in primary care and general adult populations.	Anxiety Symptoms	7 items	N/A	0 (Not at all) - 3 (Nearly every day)	0-21	Higher scores indicate higher levels of anxiety. Cut-off of 10 indicates clinical levels of anxiety.	Cronbach's coefficient alpha: 0.92, test-retest reliability: 0.83, sensitivity and specificity exceed 0.80. Construct validity also demonstrated (Spitzer et al. 2006)
<i>The Impact of Event Scale—Revised (IES-R)</i> <i>Beck et al., 2008</i>	Designed and validated with specific traumatic events. Easy to administer and score.	Post traumatic Disorder (PTSD) symptoms.	22 items	Three subscales; Intrusion, Avoidance, Hyperarousal. For the purposes of this study, only the total scores were evaluated.	0 (Not at all) – 4 (Extremely)	0-88	Higher scores indicate higher levels of impairment from post traumatic stress. Cut-off of 33 indicates clinical levels of PTSD.	Cronbach's coefficient alpha: 0.87-0.94. Concurrent and discriminant validity. Also has test-retest reliability (Beck et al. 2008)

Procedure

Eligible participants were approached within the first two weeks of their admission to the NCU. Interested participants were given a participant information sheet (PIS; Appendix J) and those wishing to take part provided informed consent (Appendix K). The participants then completed the demographics questionnaire followed by the five questionnaires in Table 1. The date at which they completed these first questionnaires was Time-Point 1 (T1). They were provided with ‘debrief’ information (Appendix L) which included resources and support services to access if needed.

At discharge (time-point 2; T2) and 4-weeks after discharge (time-point 3; T3), the participants were contacted via email with a link to the same five questionnaires to complete online. The questionnaire survey package, Qualtrics, was used to store the online questionnaire answers.

Statistical analysis

All statistical analyses were performed in IBM SPSS, v29 and interpreted with reference to 0.05 significance levels (alpha level). Therefore, the findings that produce an alpha level of 0.05 or lower indicate that a hypothesis is supported and the null hypothesis is rejected, in contrast to alpha levels higher than 0.05 which indicate a hypothesis is not supported.

Descriptive statistics were used to explore the sociodemographic and clinical characteristics of the sample.

Hypothesis 1: Perceived social support at T2 would be associated with perceived PSE at T2

A correlation analysis was used to determine the strength and direction of relationship between perceived social support (PICSS) and maternal PSE (PMP-SE). The assumptions of parametric correlations were tested to consider the distribution of data and any outliers.

Hypothesis 2: Perceived PSE would increase between T1 and T3

A one-way repeated measures ANOVA was used to determine whether the scores on the PMP-SE showed any statistically significant change over the three time-points measured. The assumptions of an ANOVA were tested to consider the distribution of data, outliers and sphericity.

Hypothesis 3: Higher perceived social support at T1 would predict higher PSE at T2 and T3

Hierarchical multiple regression was employed to determine the proportion of the variation in PSE at T3 that could be explained by perceived social support, after accounting for the other variables of interest. The variables chosen aligned with those indicated as correlates of PSE in current literature. Spearman correlations were also run to identify whether any further variables should be included as covariates. Assumptions of independence of observations, linearity, normality, homoscedasticity, absence of multicollinearity and outliers were tested by inspection of the output of the hierarchical multiple regression procedure. The process by which the variables were entered into the regression model was as follows:

- Model 1: Number of children, gestational age, time between T1 and T2
- Model 2: Maternal depression (PHQ-8) at T1
- Model 3: PSE (PMP-SE) at T1
- Model 4: Perceived social support (PICSS) at T1

Results

Sample characteristics

Table 2 presents sociodemographic characteristics of the participants. A total of 72 participants consented to participate in this study. Of these, 69 completed T1 measures, seven of which were discharged from the NCU the same day and therefore were not asked to complete T2 measures. 52 participants completed T2, and 56 completed T3. The flow of participants in the study and reasons for noncompletion at each stage can be found in the participant flowchart in Appendix M.

On average, participants completed baseline measures 5 days after their infant's admission to the unit with a modal average of 1-day post-admission. The average age of participants was 30 (SD = 4.92) and the majority were married (61%), identified as White British (83%) and had not had a previous NCU stay (80%). On average, infants were born at 35 weeks' gestation (SD = 4.11). Just over half of the participants (54%) did not have any other children. 41% had received prior treatment for anxiety, depression, or trauma.

Table 2. Baseline sociodemographic characteristics of the sample

	Whole sample (n=69)
<i>Demographics</i>	
Age (Mean/SD)	30.5 (4.92)
Ethnicity (n, %)	
White - English, Welsh, Scottish, Northern Irish or British	57 (83%)
White - other	4 (6%)
White and Black Caribbean	1 (1%)
Other Mixed or Multiple ethnic background	1 (1%)
Asian British - Indian	1 (1%)
Asian British - Pakistani	1 (1%)
African	1 (1%)
Caribbean	1 (1%)
Other background	1 (1%)
Prefer not to say	1 (1%)
Marital status (n, %)	
Single	4 (6%)
Married	42 (61%)
Cohabiting	16 (23%)
Divorced/separated	1 (1%)
In a relationship, but not cohabiting	5 (7%)
Prefer not to say	1 (1%)
Previous experience of a neonatal stay (n, %)	7 (10%)
Gestational weeks born (M, SD)	35.2 (4.11)
Number of other children (n, %)	
0	37 (54%)
1	15 (22%)
2	12 (17%)
3	4 (6%)
4	1 (1%)
Received treatment for anxiety, depression or trauma	28 (41%)

Table 3 and 4 describe the participants' scores on the outcome measures at baseline. Table 3 shows an average total functional support score of 67 (range 19-76, SD = 9.7), with average subscale scores of 33 ('supporting presence') out of a possible total of 36 and 35 ('practical support') out of a possible total of 40. This measure was developed to be interpreted as a continuous variable and therefore it does not include anchor points for categorising levels of support (Leahy-Warren, Mulcahy, & Lehane, 2019). The mean 'structural' social support score was 11, indicating that on average, participants identified 11 people in their social and professional network that they expect to provide at least one type of functional support. Those most indicated as supportive were partners (97%), maternal mothers (90%), neonatal nurses (88%) and friends (84%). Partners were indicated most frequently as the person most often offering all four types of social support (informational, instrumental, emotional, appraisal).

Regarding the other baseline measures, the average baseline scores were as follows; 60 (SD = 8.28) on the PMP-SE, seven (SD = 5.69) on the PHQ-8, eight (SD = 5.9) on the GAD-7, and 22 (SD = 18.12) on the IES-R. These average total scores were all below the thresholds suggestive of clinically significant impairment.

Table 3. Baseline clinical characteristics – PICSS

The Perinatal Social Support Questionnaire (PICSS)	(Mean, SD)
Functional social support	67.43 (9.69)
<i>Supporting Presence</i>	32.97 (4.38)
<i>Practical Support</i>	34.46 (5.77)
Structural Social Support	10.86 (3.78)
Persons indicated as providing Structural Support	(N, %)
<i>Partner</i>	67 (97%)
<i>Mother</i>	62 (90%)
<i>Father</i>	52 (75%)
<i>Partners' mother</i>	56 (81%)
<i>Partners' father</i>	48 (70%)
<i>Sister(s)</i>	37 (54%)
<i>Brother(s)</i>	38 (55%)
<i>Friend(s)</i>	58 (84%)
<i>Neighbour(s)</i>	17 (25%)
<i>Local doctor (GP)</i>	38 (55%)
<i>Public Health Nurse(s)</i>	29 (42%)
<i>Practice nurse(s)</i>	30 (43%)
<i>Neonatal nurse</i>	61 (88%)
<i>Neonatal doctor</i>	53 (77%)
<i>Neonatal nursery nurse</i>	41 (59%)
<i>Neonatal psychologist</i>	25 (36%)
<i>Occupational Therapist</i>	12 (17%)
<i>Physiotherapist</i>	10 (14%)
<i>Speech and Language Therapist</i>	9 (13%)
<i>Others (specify)</i>	3 (4%)

Table 4. Baseline clinical characteristics – other clinical variables

Clinical Variables	(Mean, SD)
PMP-SE (self-efficacy)	60.12 (8.28)
PHQ-8 (depression)	6.64 (5.69)
GAD-7 (Anxiety)	8.32 (5.90)
IES-R (post-traumatic stress)	21.94 (18.12)

PMP-SE=The Perceived Maternal Parenting Self-Efficacy questionnaire, PHQ-8=The Patient Health Questionnaire-8, GAD-7=The generalized anxiety disorder 7-item, IES-R=The Impact of Event Scale—Revised

Hypothesis 1: Perceived social support at T2 would be associated with perceived PSE at T2

A Non-Parametric Partial Correlation showed there was a strong and significant positive correlation between the PICSS and PMP-SE at T2, whilst controlling for the scores on the PHQ-8, GAD-7 and IES-R, number of children and gestational age; $r(7) = .938, p < .001$.

Hypothesis 2: Perceived PSE would increase between T1 and T3

Using the Greenhouse-Geisser correction, a repeated measures ANOVA demonstrated that PMP-SE scores differed significantly across the three time points, $F(1.71, 75.15) = 44.37, p < .001$, partial $\eta^2 = .502$. Post hoc pairwise comparisons using the Bonferroni correction showed that PMP-SE increased significantly between T1 ($M=58.67, SD = 8.00$) and T2 ($M=66.56; SD = 7.51, 95\% CI [4.76, 11.01], p < .001$), and between T2 and T3 ($M=69.42; SD = 8.07, 95\% CI [.60, 5.14], p = 0.009$).

Hypothesis 3: Higher perceived social support at T1 would predict higher PSE at T2 and T3

A hierarchical multiple regression was run to determine if the addition of perceived social support at T1 improved the prediction of maternal PSE at T2 and T3, over and above gestational age, number of children, prior self-efficacy, maternal depression and time between T1 and T2. The GAD-7 and IES-R were not included in the model as an initial regression revealed they were not associated with the PMP-SE while being highly correlated with the PHQ-8, indicating multicollinearity.

The multiple regression model significantly predicted approximately 33% of variance in T2 PSE, $F(6, 45) = 3.65, R^2 = .33, p < .05$. Prior PSE (PMP-SE at T1) accounted for a statistically significant increase of 23% in variance in T2 PMP-SE, $F(5, 46) = 3.87, R^2 = .30, p < .05$. The

addition of perceived social support (PICSS) to the prediction of PSE (Model 4) did not statistically significantly increase the R^2 ($p = .16$). Exploratory analysis was conducted by adding each of the two subscales of the PICSS ('Supporting Presence', 'Practical Support') into the regression Model instead of the total score on the PICSS, however, neither of these subscales significantly contributed to the prediction of PSE. Regression coefficients and standard errors can be found in Table 5.

The multiple regression model to predict T3 PSE was also statistically significant, $F(6, 39) = 5.83$, $R^2 = .47$, $p < .05$. In this case, the variables 'duration between T1 and T2', 'number of children' and 'gestational age' added significantly to the prediction of PMP-SE at T3, $F(3, 42) = 7.61$, $R^2 = .35$, $p < .05$, as did perceived social support ($p < .05$). When including the two subscales of the PICSS separately, as part of exploratory rather than planned analysis, it was found that the 'Supporting Presence' subscale added significantly to the model ($p < .05$). None of the other variables added statistically significantly to the prediction of PMP-SE at T3. Regression coefficients and standard errors can be found in Table 6.

Table 5. Multiple regression results for PMP-SE at T2

Model	95% CI for B			Standard Error (B)	Beta	Sig.	R ²	Adj R ²
	B	LB	UB					
Constant	39.0	10.6	67.36	14.08		<0.001	0.26	0.3
Number of children	1.03	-0.79	2.86	0.91	0.14	0.29	0.3	0.24
Gestational Age	-0.34	-0.98	0.30	0.32	-0.18	0.59		
Time between T1 & T2	0.05	-0.15	0.25	0.10	0.09			
PHQ-8	-0.08	-0.43	0.27	0.17	-0.06	0.64		
T1 PMP-SE	0.48	-0.23	0.73	0.12	0.50	<0.001		
T1 PICSS	0.14	-0.06	0.33	0.10	0.18	0.16		

PMP-SE=The Perceived Maternal Parenting Self-Efficacy questionnaire, PHQ-8=The Patient Health Questionnaire-8, PICSS=The Perinatal Social Support Questionnaire, B=Coefficient, CI=Confidence Interval, LB=Lower Bound, UB=Upper Bound, Sig=significance level, Adj R²=Adjusted R²

Table 6. Multiple regression results for PMP-SE at T3

Model	95% CI for B			Standard Error (B)	Beta	Sig.	R ²	Adj R ²
	B	LB	UB					
Constant	86.38	59.43	122.3	17.77		<0.01		
Number of children	2.64	0.08	5.19	1.26	0.27	0.04	0.47	0.39
Gestational Age	-1.45	-2.21	-0.70	0.38	-0.55	<0.01		
Time between T1 & T2	-0.55	-0.79	-0.31	0.12	-0.68	<0.01		
PHQ-8	0.39	-0.09	0.87	0.24	0.20	0.11		
T1 PMP-SE	0.17	-0.19	0.53	0.18	0.12	0.35		
T1 PICSS	0.37	0.02	0.73	0.18	0.26	0.04		

PMP-SE=The Perceived Maternal Parenting Self-Efficacy questionnaire, PHQ-8=The Patient Health Questionnaire-8, PICSS=The Perinatal Social Support Questionnaire, B=Coefficient, CI=Confidence Interval, LB=Lower Bound, UB=Upper Bound, Sig=significance level, Adj R²=Adjusted R²

While not systematically analysed, a few key themes emerged in the feedback that mothers gave about their experiences of support and self-efficacy whilst completing the questionnaires. There was some discomfort about disagreeing with questions in the PMP-SE for fear of this making them look like a bad mother. Similarly, one mother shared fears that

her answers on the questionnaires might indicate need for social care involvement. Some also thought that the first time-point was too soon after the birth and they therefore found the questions hard to process and reflect on. A few mothers also commented that it would be important to capture the fathers' views because they would likely have different experiences of support and self-efficacy. There was a repeating theme about the multiple influencing factors that the mothers thought were not being addressed by the social support questionnaire such as their pre-existing beliefs and knowledge about what to expect from childbirth, and the medical health and temperament of their infant.

Discussion

This is the first study to investigate the relationship between perceived social support and PSE for mothers of infants admitted to a UK NCU, and the predictive utility of perceived social support in explaining later perceptions of PSE. Underpinned by self-efficacy theory (Bandura, 1997), this research builds on previous cross-sectional studies in other populations and intends to feed into the evidence-base for best-practice in NCUs.

Hypothesis 1: Perceived social support at T2 would be associated with perceived PSE at T2

In line with the first hypothesis, there was a strong significant positive correlation between perceived social support and PSE at T2, when controlling for the other clinical variables. This finding is in line with that reported in a cross-sectional study of full-term infants in the early postnatal period (Leahy-Warren et al., 2012). T2 was chosen as a more suitable time-point to investigate this relationship than T1, because the sudden transition to parenthood is thought to interfere with a mothers' ability to process their thoughts and feelings about being a new parent (Eriksson & Pehrsson, 2002).

Hypothesis 2: Perceived PSE would increase between T1 and T3

In line with the second hypothesis, perceived parenting self-efficacy was shown to increase significantly over the course of the infants' NCU stay, and again between discharge and a month later. This finding aligns with previous research showing that PSE improves over time in the postpartum period (Botha et al., 2020; Leahy-Warren & McCarthy, 2011), and reflects what is known from self-efficacy theory, because more time allows for greater experience of success in parenting tasks and so builds a stronger sense of self-efficacy (Bandura, 1997).

Hypothesis 3: Higher perceived social support at T1 would predict higher PSE at T2 and T3

The third hypothesis was partially supported by the findings of this study. Higher ratings of perceived social support at T1 did not predict higher ratings of PSE at T2 but did predict higher ratings of PSE at T3. Contrary to our hypothesis, the only variable in the regression model shown to significantly contribute to the prediction of T2 PSE was T1 PSE (Table 5). In contrast, and in line with the hypothesis, perceived social support at T1 was found to be a significant predictor of PSE a month after discharge (T3). A difference in the predictive ability of the two subscales of social support was also found, as the 'supporting presence' subscale was found to contribute to the prediction of T3 PSE, whereas the subscale of 'practical support' did not. This finding is the first to suggest a delineation in the types of support that might impact on later PSE. As 'Supporting presence' encompasses emotional and appraisal support, further exploration of these variables may be necessary in future studies on the link between perceived social support and self-efficacy. The contrast in the findings from the two regressions predicting T2 and T3 PSE respectively, may suggest a

lagged effect of social support over time, however this also requires replication in other longitudinal studies.

Overall, the findings align with self-efficacy theory (Bandura, 1995) because it appears that maternal experiences of personal and professional support in the early stages of NCU admission may go some way to promoting maternal knowledge and a sense of capability in new mothers.

Clinical implications

By replicating and extending previous research looking at the relationship between social support and PSE, this study helps emphasise the importance both emotional and practical support in the NCU setting for mothers of hospitalised infants. As nurses were a common source of professional support, it is important to ensure that nurses are equipped to provide this support. Studies have demonstrated that stress and burnout in NCU staff is negatively associated with the delivery of FICare (Vittner et al., 2022). Therefore, their emotional needs should be prioritised, so they are in the best place to offer support to parents. Increasing resources and staffing in NCUs and providing reflective spaces or psychological support for staff may help them feel more emotionally resourced in their work with parents.

Strengths and limitations

The strengths and limitations of the current study need some consideration. Firstly, the longitudinal design of the study, and the use of hierarchical multiple regression, allows for greater inferences to be made about cause and effect than in previous research, which to date has been mostly limited to cross-sectional examination of relationships. This study therefore adds further evidence about the value of perceived social support for mothers of neonates

over time. The method of recruiting mothers in person in the NCU is also likely to have reduced the self-selection bias that can exist in studies utilising online recruitment. Finally, following an a priori power analysis that indicated a required 55 participants to detect an effect will have reduced the likelihood of Type 2 error. This study was fully powered at T3, however, the regression model predicting T2 PSE was slightly underpowered as 52 participants completed T2. Therefore, the non-significant result regarding the impact of social support on T2 PSE requires further research with a larger sample.

A limitation regarding the generalisability of the results should be considered. A convenience sampling approach was taken whereby all eligible and available participants in the NCU were approached. As recruitment was primarily in-person on the NCU, this meant that those mothers who less often visited the NCU were less likely to be recruited. Given that the sample was relatively homogenous in terms of age, ethnic background, and geographical location, it is possible that the sampling approach contributed to a sampling bias. While it would have been preferable to recruit from a range of NCUs across the UK, this was not feasible within the scope and timeframe of the current study. It is therefore pertinent for future researchers to carry out similar studies across multiple NCUs and with a more diverse range of participants. The impact of socio-economic status in particular has been shown to influence self-efficacy in other adult populations (Seyedi-Andi et al., 2019), and therefore this requires further attention in parents of infants in NCUs.

It is notable that the average scores across all the clinical measures at baseline were below threshold, and that the scores in social support and parenting self-efficacy remain relatively high throughout the study. While this matches up to other studies using the PICSS in mothers of full-term infants (Leahy Warren et al., 2012), the scores on the PMP-SE were higher than

in a previous study exploring PSE in parents of hospitalised infants (Vance et al. 2020). It is possible that a social desirability bias had some influence over this, especially as some mothers mentioned a fear that their answers may lead to their baby being taken away from them. Additionally, while the PICSS has been validated with mothers of full-term infants, it has not yet been valid in the NCU setting. Future validation studies with this measure would provide further evidence for its utility for mothers of NCU infants.

As shown by the results of the hierarchical regression, while the model was significant, it accounted for only a relatively small proportion of the overall variance in self-efficacy. It is therefore likely that other influencing factors remain unstudied, and future research should consider these both using interview methods and validated questionnaires. Notably, this study did not employ a measure that directly targeted the participants experiences of the NCU specifically. While the PICSS Functional Domain measured perceptions of the quality of overall support during the NCU stay, this incorporated both personal (i.e. husband, mother) and professional (i.e. nurse, doctor; Appendix I), rather than separating out perceptions of support for specific sources. Other variables of interest may include the infant's temperament or medical issues that are ongoing post-discharge from the NCU, and studies have shown that parents of more medically unwell infants struggle more in terms of PSE (Vance et al., 2020). The omission of these variables presents a potential confounder that should be taken account of and examined more closely in future studies looking at self-efficacy in the NCU.

Conclusions

Taken together, the findings of this study provide preliminary evidence of a relationship between perceived social support while an infant is on the NCU and maternal self-efficacy. Additionally, it suggests that early support predicts later self-efficacy after discharge. This

relationship aligns with self-efficacy theory as social support can directly promote the resources necessary for PSE (Bandura, 1997). These findings require further study and greater exploration of the types of support that are most valuable in a wider range of participants.

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Executive summary

Background

A mother's self-belief in her capability to successfully parent her child and promote their development and wellbeing, is known as maternal parenting self-efficacy (PSE; Vance & Brandon, 2017). Greater PSE is associated with more positive psychological outcomes for both the parent and child (Benedetto & Ingrassia, 2018). Admission to a neonatal unit following birth complications can interrupt the development of PSE and therefore have negative consequences for mothers and their infants (Arockiasamy et al, 2008). There is growing evidence to show that social support, which involves both practical and emotional support, can encourage PSE (Leahy-Warren et al., 2012), however this has not been directly investigated with mothers of infants admitted to neonatal units.

This study aimed to address the gap in the literature, to examine whether maternal perceptions of social support during their infant's stay in a neonatal unit is associated with PSE and also predictive of PSE after discharge.

Method

Participants were recruited via a neonatal unit, within two weeks of their infant's admission. They were asked to complete questionnaire measures taking approximately 15 minutes to complete, at three time points (admission, discharge and a month post-discharge). The questionnaires included a demographics form and questionnaires about their perceptions of the social support available to them, as well as their PSE and mental health.

Results

69 participants completed the questionnaire measures shortly after admission to the neonatal unit. Of these, 56 participants also completed measures a month after discharge. The average age of participants was 30 (SD = 4.92). The majority were married (61%), identified as White British (83%) and had not had a previous NCU stay (80%). Mothers most often indicated that their partners, their parents, and neonatal nurses were sources of support.

Statistical analyses indicated a strong positive association between perceived levels of social support and maternal parenting self-efficacy. Further to this, self-efficacy increased significantly over time. Finally, the perceived levels of social support at admission to the unit significantly predicted the level of parenting self-efficacy a month after discharge. The type of social support provided appeared important as perceptions of Emotional and appraisal support (i.e. positive feedback) also significantly predicted later parenting self-efficacy.

Research implications

Further research is required to explore the relative impact of the different types of social support such as emotional, appraisal, practical and informational support as this is the first study to indicate that they may impact self-efficacy to different degrees. Further longitudinal investigation would help to replicate and build on these findings, to understand the extent to which social support has a sustained effect on self-efficacy. Future studies that include in-depth interviews with new parents about their personal experiences of support and

how they value this in relation to their parenting confidence, would allow for a more nuanced understanding of individual experience of support during this vulnerable period.

Clinical implications

The results have clinical importance as they provide further emphasis for a model of neonatal care that allows mothers to feel confident in themselves as new parents and suggests that the provision of both practical and emotional support may contribute to this. In order for social support to be adequately provided, there is also need for professionals to be adequately trained and supported to ensure their own wellbeing is protected. While this study focused on mothers, it is known that fathers, partners and family networks are also impacted by a neonatal admission and it is therefore important to ensure they are involved and supported throughout the process as well. Further research is also essential to better understand needs of the wider family system.

Connecting narrative

The three projects within this portfolio are linked by a common theme of giving voice to groups that have historically been overlooked and unrepresented both in research, clinically, and in society. While my SRL and TDRP centred on new mothers, my SIP explored the broader impact of involving people with lived experience, including parents, both clinically and in research. I have continued to build a strong interest in the mental health of new parents, and through my three projects, have developed a better understanding of the psychological theories underpinning knowledge of mental health and wellbeing in vulnerable groups. I have been fortunate to begin clinical psychology training at a time when greater national emphasis is being placed on the importance of supporting people during the perinatal period, and on co-production and better representation of people with lived experiences in the field of clinical psychology.

Systematic Review of the Literature

Before the course, my clinical and research work was largely focused on the theory and application of CBT. As a result, I had some awareness about the strengths and limitations of research into CBT interventions. I was struck by the inconsistencies in how engagement and dropout were reported, and how little we know about people who did not finish CBT treatment. Given my clinical interest in working with perinatal populations, I was interested in how the CBT approach translated and whether it was adhered to in this group. I wanted to include both quantitative and qualitative studies to give a broad understanding about reasons for dropout, and allow for both voices of the patients and the therapists to be heard through the narrative synthesis.

I found the initial design of an appropriate research question and the eligibility criteria for the review to be the most challenging part of the SRL as I was trying to balance my interest and curiosity in the topic, with the logistical necessity to keep the review of an appropriate size for a DClinPsych project. It was necessary to put thought into the number of papers that would be realistic to include, and returning to think about the research questions and eligibility if too few or too many papers were identified.

Service Improvement Project

The SIP felt like an incredibly collaborative process and aimed to systematically report on the value of experts by experience being involved in the teaching of clinical psychology trainees. The SIP sat within a broader course context and ethos of encouraging involvement but importantly, doing this in a tailored and meaningful way. I was conscious about the reflective nature of the conversations about the project from the outset with my two supervisors, and the importance of recognising that we each had a stake in it from our different perspectives as student, lecturer and expert by experience. In this way, the project was unique from any other research experience I have had to date, as I felt emotionally closer to the clinical reality of the project, compared to larger scale research projects I have been involved with.

The decision to use survey software, rather than qualitative interviews for the collection of data is one that I am still wondering about. This methodology was chosen to allow for a larger number of responses within a limited time-frame rather than choosing in-depth interviews. I think that this allowed for a richness in the variety of responses from trainees and EbEs that may not have been possible in a smaller number of interviews. At the same time, I think there would have been huge value to explore the nuances in the views of EbEs in a few follow-up interviews, and I hope that a future DClinPsych trainee will take this

on. I intend to use this knowledge and skills in my future clinical work and roles in service development.

Theoretically Driven Research Project

The TDRP has been the most challenging project to conduct for a number of reasons, but at the same time it has taught me a huge amount about the processes, and challenges involved in conducting research in the NHS. A role I held prior to clinical training was as a clinical research assistant in a children's hospital. At this time, I was one of many cogs in a large research wheel and was therefore protected from some of the more intricate steps required to ensure all the ethical and governance steps were covered. Due to changes in agreed ethical and governance processes since the COVID-19 pandemic, I found myself at the front of newly developed pathways which required me to link in with multiple teams and stakeholders to ensure transparency and close working. I value this experience on reflection as it gave me a sense of self-efficacy in being able to identify issues and take steps necessary to lead on project development.

I welcomed the shift to in-person recruitment as it helped me gain greater understanding of the experiences of the participants in the study, but also the experiences of the staff supporting them. Due to the variety of personal circumstances of the participants involved, I became more aware of the importance of capturing this not only through quantitative methods but again, as with my SIP, through qualitative interviews. Given that mothers expressed concerns about how they would be viewed by the answers to the questionnaires, I feel there is so much more to learn about the impact of stigmatisation and shame in this under researched group.

Conclusions

Being afforded the time to conduct these three projects alongside the DClinPsych training, has helped shape my clinical and research interests which are very much interrelated. I hope to continue to develop the evidence-base with regard to understanding and supporting the experiences and needs of new parents and professional systems around them, in my qualified roles.

Acknowledgments

I would like to acknowledge the contribution and participation of the group of people with lived experience who were so generous with giving their time to shaping the design of my research, and for providing me with such invaluable feedback and encouragement throughout the process. This would not have been possible without you.

I would like to thank my research supervisors, Dr Nicola Collett, Jason Gunn, Dr Libby Barnardo, Dr Jacinta Cordwell, Dr Nicola Lane and Dr Rebecca Knowles Bevis for all your ongoing support, encouragement and guidance. I am also very grateful to Professor Patricia Leahy-Warren for your expert advice regarding the theory and application of the social support measure.

Thank you to each of my clinical supervisors who have helped me understand what it is to be a clinical psychologist and shaped my interests and values as a clinician. To my course tutor, Dr Fin Williams, I have really appreciated your frankness and support at some of the more challenging times on the course.

To my wonderful friends and course-mates, thank you for all your support, humour and sharing of difficulties that have brought us closer as a cohort over the last three years. To all the Emmas, Fahreen, Stacey, Eims, Madeleine, Jade, Mariann and Fi (and li'l M) - I 100% would not have got through this without you!

And to Harry, simply for being there each step of the way.

Appendices

Appendix A: SRL - Search Terms

("cognitive behavio* therap*" or "cognitive therapy" or "Behavioral activation" or CBT or problem-solving or "problem solving").ab,ti. or cognitive behavioral therapy/

AND

(depress* adj4 (Puerperal or postnatal or postpartum or puerperium or perinatal)).ab,ti. or postnatal depression/ or PND.ab,ti. or (cyclothymia adj4 (Puerperal or postnatal or postpartum or puerperium or perinatal)).ab,ti. or (dysthymia adj4 (Puerperal or postnatal or postpartum or puerperium or perinatal)).ab,ti.

Appendix B: SRL - Standard Quality Assessment Criteria Checklist (Kmet et al., 2004)

Checklist for assessing the quality of quantitative studies

Criteria		Yes	Partial	No	N/A
1	Question/objective sufficiently described?				
2	Study design evident and appropriate?				
3	Method of subject/comparison group selection or source of information/input variables described and appropriate?				
4	Subject (and comparison group, if applicable) characteristics sufficiently described?				
5	If interventional and random allocation was possible, was it described?				
6	If interventional and blinding of investigators was possible, was it reported?				
7	If interventional and blinding of subjects was possible, was it reported?				
8	Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?				
9	Sample size appropriate?				
10	Analytic methods described/justified and appropriate?				
11	Some estimate of variance is reported for the main results?				
12	Controlled for confounding?				
13	Results reported in sufficient detail?				
14	Conclusions supported by the results?				

Checklist for assessing the quality of qualitative studies

Criteria		Yes	Partial	No	N/A
1	Question / objective sufficiently described?				
2	Study design evident and appropriate?				
3	Context for the study clear?				
4	Connection to a theoretical framework / wider body of knowledge?				
5	Sampling strategy described, relevant and justified?				
6	Data collection methods clearly described and systematic?				
7	Data analysis clearly described and systematic?				

8	Use of verification procedure(s) to establish credibility?				
9	Conclusions supported by the results?				
10	Reflexivity of the account?				

Appendix C: SIP – PEG 3-year plan

Year 1 – 2020/21	Year 2 – 2021/22	Year 3 – 2022/23
Design and Embedding	Improving	Maintaining and continue move towards co – production
The PEG aims to develop a selection process for new membership, with the aim of increasing diversity and experience within the group. The course will run an open day for interested parties to hear more about the role. An information sheet and role specification will be developed and shared with interested parties. Following this, a one-to-one meeting will be held and if it's felt by both parties that joining the PEG would be of benefit, a three-year term of office will begin. This includes an induction training session and induction pack. New members will be allocated a mentor (who will initially be a course staff member but as the PEG is further established, experienced PEG members will be mentors). The PEG will meet quarterly and will comprise:	The second year of the PEG implementation will focus on building on the initial progress from year one. This includes: Research PEG members with an interest and/or experience in research will act as collaborators/co-supervisors (as appropriate) for trainee research projects. This will include training for PEG members interested. The PEG will have greater involvement with trainee research through informal lunches following PEG meetings. Trainees can join the lunch to discuss their project and research ideas in a less formal setting with members, to share ideas and promote collaboration. Academic A PEG member will be linked in with each stream lead to provide input when reviewing the content of teaching for the following year, and to review	Further aims for the final phase include an increase in PEG presence for admissions, with a PEG member on each panel for clinical interviews and a member working with the video task team. PEG members will also sit on interview panels for new course staff. In addition, the formation of a young person's PEG will begin. The aim is to establish a small (3-4 person) group who meet biannually comprising young people and young carers. The remit of this group will be much smaller than the original PEG. By this phase the aim is to recognise and measure the impact of the existing PEG group through a PEG annual report and research project. PEG members who were recruited in 2020 will be reaching the end of their term of office and future recruitment and signposting will be considered. Finally, future aims will include a PEG conference and publication of any research projects. PEG members will be paid for their time in

-Approximately 8 people with personal experiences -2 course staff -one trainee from each year (minimum) There will be PEG representation in all streams. Academic (co-facilitating teaching), clinical (attendance at the practice and placement committee) and research (attendance at PAS, consulting on trainee research projects and attendance at the research committee). A PEG member will be represented on each course committee (including admissions) and will feedback to the PEG group quarterly. A PEG member will also attend GTiCP.	trainee's feedback on teaching for each stream. Admissions The aim by this stage is to include a PEG member in the video task design and production. In addition, we plan to have a PEG member available each day at interviews to welcome applicants and to be involved in invigilating the video task.	accordance with Oxford Health FT guidelines.
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Appendix D: SIP – HRA decision tool



Is my study research?

i To print your result with title and IRAS Project ID please enter your details below:

Title of your research:

The impact of expert by experience involvement in teaching on the Oxford DClinPsych programme; for students and experts by experience

IRAS Project ID (if available):

You selected:

- 'No' - Are the participants in your study randomised to different groups?
- 'No' - Does your study protocol demand changing treatment/ patient care from accepted standards for any of the patients involved?
- 'No' - Are your findings going to be generalisable?

Your study would NOT be considered Research by the NHS.

You may still need other approvals.

Researchers requiring further advice (e.g. those not confident with the outcome of this tool) should contact their R&D office or sponsor in the first instance, or the [HRA](#) to discuss your study. If contacting the HRA for advice, do this by sending an outline of the project (maximum one page), summarising its purpose, methodology, type of participant and planned location as well as a copy of this results page and a summary of the aspects of the decision(s) that you need further advice on to the HRA Queries Line at Queries@hra.nhs.uk.

For more information please visit the [Defining Research](#) table.

[Follow this link to start again.](#)

Appendix E: SIP – audit confirmation email

From: Rhodes Katie (RNU) Oxford Health <Katie.Rhodes@oxfordhealth.nhs.uk>
Sent: 20 September 2021 11:22
To: Kerry Ellie (RNU) Oxford Health <Ellie.Kerry@oxfordhealth.nhs.uk>
Subject: FW: Is my project audit?

Good morning Ellie,

Your audit has been approved.

Upon completion please submit a report of your findings.

Kind Regards,

Katie Rhodes

Senior Team Administrator

Buckinghamshire Mental Health Directorate

Oxford Health NHS Foundation Trust

The Whiteleaf Centre | Bierton Road | Aylesbury | HP20 1EG

Caring, Safe and Excellent. If you are interested in becoming a member of our Foundation Trust please join us online at www.oxfordhealth.nhs.uk

From: Bale Rob (RNU) Oxford Health <Rob.Bale@oxfordhealth.nhs.uk>
Sent: 15 September 2021 08:04
To: Rhodes Katie (RNU) Oxford Health <Katie.Rhodes@oxfordhealth.nhs.uk>
Subject: RE: Is my project audit?

approved

Regards

Rob

Dr Rob Bale

Clinical Director and Consultant Psychiatrist, Oxford Health NHS Foundation Trust

Oxfordshire, BaNES, Swindon and Wiltshire Mental Health Directorate, Oxfordhealth NHS Foundation Trust, John Sharich House, Slade Hospital, Horsepath Driftway, Oxford

OX3 7JH

Email: rob.bale@oxfordhealth.nhs.uk

PA: Ian Horwood, Phone: 01865 902759,

Email: ian.horwood@oxfordhealth.nhs.uk

Appendix F: SIP - PEG survey questions

Identifying levels of participation
Were you made aware of opportunities available to you for getting involved with teaching on the DClinPsych course in 2020-2021?
If applicable, how did you hear about the types of opportunities available? (please state 'n/a' if not applicable)
Were you involved in teaching in the 2020-2021 academic year?
If yes to q 3: In what capacity were you involved?
Please can you expand on your answer (we want to understand more about your individual experience)
What made you decide to get involved?
If you were not involved, please state your reason for this
Is there anything else that you feel would be important to share with us about any reasons for or barriers to getting involved with teaching?
Impact
Do you think it is important for PEG members to be involved in some way with teaching prospective clinical psychologists?
How do you think PEG members can help improve the teaching experience for prospective clinical psychologists?
What do you think is the positive impact for PEG members specifically, for being involved in teaching?
What do you think is the negative impact for PEG members specifically, for being involved in teaching?
Improvement
Would you like to be involved in teaching in a different kind of way than is available to you now?
If applicable, please explain how would you like PEG involvement in teaching to change and what difference this would make to you?
What else might improve the way PEG members are involved in teaching? Please explain your answer

Appendix G: SIP - trainee survey questions

Concrete experience
How were experts by experience involved in your teaching?
Reflective observation
How have you found the experience of experts by experience being involved in teaching?
Overall, how satisfied were you with the involvement of experts by experience in teaching?
Overall, how much would you say you have benefitted from experts by experience being involved in teaching?
What worked with regard to experts by experience being involved in teaching?
What didn't work with regard to experts by experience being involved in teaching?
How are you impacted emotionally by expert by experience involvement in teaching?
Abstract conceptualization
What have you learnt about your own practice from expert by experience involvement?
What could be improved with regard to EbE involvement in teaching?
What would be the impact of these changes, for you as a trainee?
Active experimentation
How has EbE involvement in teaching changed your attitude, behaviour or practice?

Appendix H: TDRP - Letter of HRA Ethical Approval



Dr Nicola Lane
Oxford Institute of Clinical Psychology Training &
Research
Isis Education Centre, Warneford Hospital
Headington, Oxfordshire
OX3 7JX

Email: approvals@hra.nhs.uk
HCRW.approvals@wales.nhs.uk

28 March 2022

Dear Dr Lane

**HRA and Health and Care
Research Wales (HCRW)
Approval Letter**

Study title:	The impact of perceived social support on parenting self-efficacy for parents of infants admitted to a neonatal care unit
IRAS project ID:	303756
REC reference:	22/SW/0017
Sponsor	University of Oxford

I am pleased to confirm that [HRA and Health and Care Research Wales \(HCRW\) Approval](#) has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

Please now work with participating NHS organisations to confirm capacity and capability, [in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.](#)

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?

HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) have been sent to the coordinating centre of each participating nation. The relevant national coordinating function/s will contact you as appropriate.

Please see [IRAS Help](#) for information on working with NHS/HSC organisations in Northern Ireland and Scotland.

How should I work with participating non-NHS organisations?

HRA and HCRW Approval does not apply to non-NHS organisations. You should work with your non-NHS organisations to [obtain local agreement](#) in accordance with their procedures.

What are my notification responsibilities during the study?

The standard conditions document "[After Ethical Review – guidance for sponsors and investigators](#)", issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The [HRA website](#) also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

Who should I contact for further information?

Please do not hesitate to contact me for assistance with this application. My contact details are below.

Your IRAS project ID is **303756**. Please quote this on all correspondence.

Yours sincerely,

Laura Howe

Approvals Specialist

Email: approvals@hra.nhs.uk

Appendix I: TDRP – Perinatal Infant Care Social Support (PICSS) Scale

This study is about the impact of support received from a range of sources including family, friends and staff from within the neonatal unit. **From the following list of people, please do indicate all the people you expect to be supportive and helpful to you in caring for your new baby.**

Types of Support Persons (tick more than one as necessary) If any of the names below are not applicable or relevant please leave blank (tick more than one person as necessary)	Provide information about caring for your baby in relation to feeding, changing, bathing and settling your baby	Carry out infant care tasks, such as feeding, changing, bathing and settling your baby	Show that they care, love and respect you in caring for your baby	Praise you for doing a good job in caring for your baby
Partner				
Mother				
Father				
Partners' mother				
Partners' father				
Sister(s)				
Brother(s)				
Friend(s)				
Neighbour(s)				
Local doctor (GP)				
Public Health Nurse(s)				
Practice nurse (s)				
Neonatal nurse				
Neonatal doctor				
Neonatal nursery nurse				
Neonatal psychologist				
Occupational Therapist				
Physiotherapist				
Speech and Language Therapist				
Others (specify)				

The following statements ask about the support that was available to you once your baby was born (NB: this includes family, friends and staff within the NCU)

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I have someone to care & comfort me	1	2	3	4
2. I have someone to talk to & share experiences with	1	2	3	4
3. Those close to me understand that it is ok for me to need help	1	2	3	4
4. I have someone to talk to about how I feel	1	2	3	4
5. I have someone who shows me appreciation	1	2	3	4
6. If I need advice there is someone who will assist me	1	2	3	4
7. I have people to count on when things go wrong	1	2	3	4
8. I won't be on my own taking care of my baby	1	2	3	4
9. I have someone to help with routine housework	1	2	3	4
10. I can get information on how infant comfort/settling	1	2	3	4
11. I can get information on infant changing/dressing	1	2	3	4
12. I can get hands-on help with comforting baby	1	2	3	4
13. I can get hands-on help with infant changing/dressing	1	2	3	4
14. I can get hands-on help with infant feeding	1	2	3	4
15. I can get information on infant feeding	1	2	3	4
16. I can get information on infant bathing	1	2	3	4
17. I can get hands-on help with infant bathing	1	2	3	4
18. I can get consistent information on infant care	1	2	3	4
19. I can get information on taking care of my body after birth	1	2	3	4

Appendix J: TDRP - Participant information sheet



Ellie Kerry

Ellie.kerry@hmc.ox.ac.uk

PARTICIPANT INFORMATION SHEET

The impact of perceived social support for parents of neonates

We invite you to take part in our research study. Before you decide, it's important for you to understand why the study is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. If you have any questions about the information in this sheet, please get in touch with me. My contact details are provided above.

What is the purpose of the study?

This project is looking to better understand the impact of social support from the neonatal care unit (NCU) staff on parenting confidence during their stay in the NCU and after discharge. Parenting a baby on the NCU can be challenging so understanding what support helps parents is important.

Appendix K: TDRP - Consent form



Add contact details of the
local research team and
either the Chief or Local Investigator

Study Code:

Site ID Code:

Participant identification number:

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CONSENT FORM

Social support for parents of neonates

Name of Researcher:

If you agree, please

initial

box

1. I confirm that I have read the information sheet dated..... (version.....) for this study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.	
3. I understand that research data collected during the study may be looked at by designated individuals from the University of Oxford, Oxford University Hospitals NHS Foundation Trust and regulatory authorities where it is relevant	

to my taking part in this study. I give permission for these individuals to access my data.		
4. I understand that my personal contact details (email) will be retained in a secure database so that the researchers can contact me about the second and, if applicable, third phase of the study.		
5. I understand that it may be necessary for the research team to contact me about any clinically relevant information.		
6. I would like to receive a written summary of the research upon completion of the study		
7. I agree to take part in this study.		
_____	_____	_____
<i>Name of Participant</i>	<i>Date</i>	<i>Signature</i>
_____	_____	_____
<i>Name of Person taking Consent</i>	<i>Date</i>	<i>Signature</i>

When completed: 1 for participant; 1 for researcher site file (original); 1 to be kept in medical notes

Appendix L: TDRP - Participant debrief

Research debrief

Thank you so much for taking part in this research study.

Your input will help ensure the highest quality of support for the parents of babies on neonatal units.

If any of the information you provide in your questionnaire responses suggests a possible risk to yourself or others, it may be necessary for us to notify your GP to ensure you are fully supported. Where possible, we will ensure to notify you about this first.

If you are finding it difficult to answer one or more of the questions, and would like support from a member of the study team, please contact Ellie Kerry:

Email: ellie.kerry@hmc.ox.ac.uk

If you would like additional information regarding the study, or a confidential discussion with a senior member of the research team, please contact:

- Libby Barnardo on 01865 226 431 or libby.barnardo@hmc.ox.ac.uk
- Jacinta Cordwell on 01865 572387 or jacinta.cordwell@ouh.nhs.uk

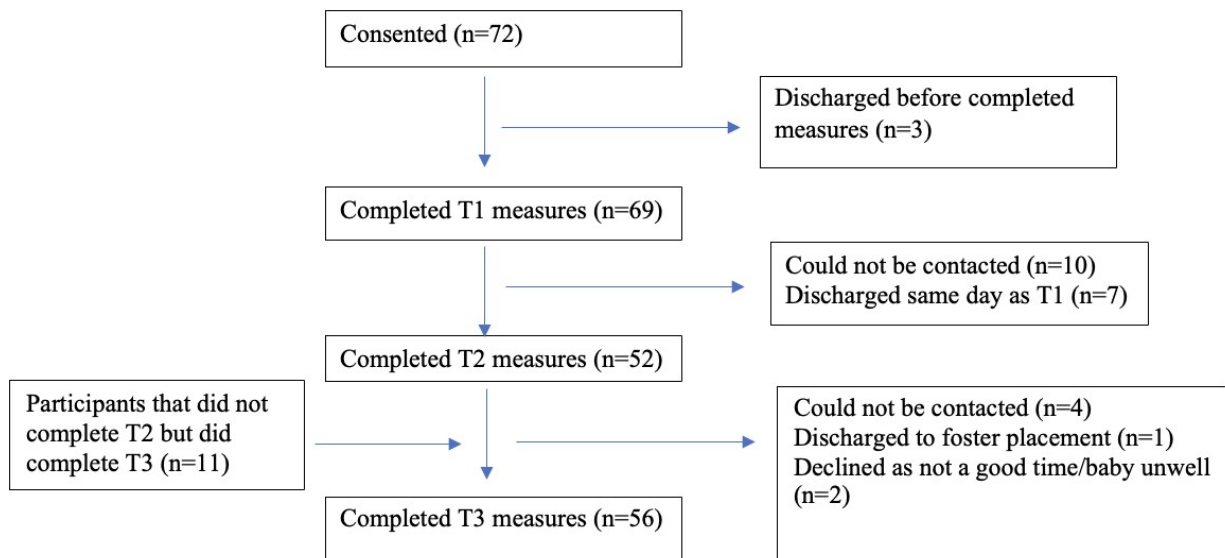
Advice and support

Advice and support are available from the NHS if you are finding things difficult. There are also charities who can provide advice and support. If you are feeling distressed, we encourage you to speak to your General Practitioner (GP)/Family Doctor who can then refer you for further specialist help.

Please see below details of where you can access advice and support:

- Your **General Practitioner/Family Doctor**
- Your **Health Visitor**
- Your **community midwife**
- **Neonatal Psychology Team** (neonatalpsychology@ouh.nhs.uk)
- **NHS 111:** To contact NHS 111 call “111”. Available 24 hours a day, 7 days a week.
- **Samaritans:** Call “116 123” to contact their helpline which is available 24 hours a day, 7 days a week. A range of support can also be found on their website www.samaritans.org
- **BLISS Charity:** A UK charity for babies born premature or sick. It supports families with a baby in neonatal care, website: <https://www.bliss.org.uk> email: hello@bliss.org.uk (they aim to respond within 3-5 working days)
- **SSNAP:** A Charity supporting the families of sick and premature babies treated in Oxford to receive the best care, website: <https://www.ssnap.org.uk>, telephone: 01865 221359 email: ssnap@ouh.nhs.uk (office hours 10am – 3pm).

Appendix M: TDRP - Participant flowchart



Appendix N: SRL and TDRP journal submission guide

Journal of Reproductive and Infant Psychology

Instructions for authors

Thank you for choosing to submit your paper to us. These instructions will ensure we have everything required so your paper can move through peer review, production and publication smoothly. Please take the time to read and follow them as closely as possible, as doing so will ensure your paper matches the journal's requirements.

About the Journal

The *Journal of Reproductive and Infant Psychology* is an international, peer-reviewed journal publishing high-quality, original research. Please see the journal's [Aims & Scope](#) for information about its focus and peer-review policy.

Please note that this journal only publishes manuscripts in English.

The *Journal of Reproductive and Infant Psychology* accepts the following types of article: original articles.

This journal is now including Alt Text (alternative text), a short piece of text that can be attached to your figure to convey to readers the nature or contents of the image. It is typically used by systems such as pronouncing screen readers to make the object accessible to people that cannot read or see the object, due to a visual impairment or print disability.

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Appendix O: SIP journal submission guide

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