

PTSD post-childbirth: a systematic review of women's and midwives' subjective experiences of care provider interaction

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Abstract

Objective: To review primary research from within the literature regarding PTSD Post-Childbirth (PTSD-PC), that focussed on Quality of Provider Interaction (QPI) from either the perspective of women who have developed PTSD-PC, or midwives.

Background: Up to 45% of women find childbirth traumatic. PTSD-PC develops in 4% of women (18% in high-risk groups). The woman's subjective experience of her childbirth has been shown to be the most important risk factor in the development of PTSD-PC, within which perceived QPI is key.

Methods: A systematic search was performed for PTSD-PC literature. Papers that focussed on either women's subjective experiences of childbirth, particularly QPI, or midwives' perspectives on QPI, were included. Study quality was assessed using the Critical Appraisal Skills Programme (CASP) tools, and a narrative synthesis of findings produced.

Results: 14 studies met inclusion criteria. Three overarching features of QPI contribute towards developing PTSD-PC: (1) *interpersonal factors*; (2) *midwifery care factors*; and (3) *lack of support*. The importance of 'how care is provided' is emphasised over 'what happens'.

Conclusion: QPI is a significant factor in the development of PTSD-PC and the identified key features of QPI have potential to be modified by midwives. The development of guidelines for midwives needs to be grounded on evidence highlighted in this review, along with further high quality qualitative research exploring QPI from the perspective of women with PTSD-PC, but also midwives' knowledge and needs regarding their role within QPI.

Key words: PTSD; childbirth; midwives; maternity care; systematic review

Introduction

The cultural and scientific move towards prioritising not only the physical wellbeing of mothers (United Nations, 2015), but also their psychological wellbeing (WHO, 2017) is well founded (Knight et al., 2016). The 1994 revised definition of PTSD in the Diagnostic and Statistical Manual of Mental Disorders (DSM) IV (APA, 1994), enabled the perception of childbirth as traumatic to meet DSM criteria A for PTSD¹. Whether someone is diagnosed with PTS symptoms (PTSS), or full PTSD, relates to whether they meet some, or all of the remaining PTSD criteria, respectively.

PTSD-PC can negatively affect a woman's perception of, attachment to (Ayers, Eagle, & Waring, 2006; Davies, Slade, Wright, & Stewart, 2008), or bonding with (Parfitt & Ayers, 2009) her infant. A mother's ability to connect with and respond appropriately to her infant has been highlighted as important to enable healthy child development (Barlow, Bennett, Midgley, Larkin, & Wei, 2013). PTSD-PC may affect a woman's experience or decisions regarding breastfeeding (Beck, Gable, Sakala, & Declercq, 2011), influence her to delay or avoid another pregnancy (Gottvall & Waldenström, 2002), or lead to severe fear of future childbirth, called tokophobia, with an increased demand for epidural analgesia and elective caesarean section (Otley, 2011). PTSD-PC produces changes in a person's physical wellbeing, mood and behaviour, social interaction, and negatively affects relationships with partners (Nicholls & Ayers, 2007) possibly including sexual avoidance (Ayers et al., 2006).

The National Institute for Health and Care Excellence (NICE) guidelines within the UK recently incorporated PTSD-PC in perinatal mental illness (NICE, 2014). From an international perspective, a recent position paper on perinatal mental health does not include PTSD-PC (Brockington, Butterworth, & Glangeaud-Freudenthal, 2017), but other reports call for further research into PTSD-PC (Bauer, Parsonage, Knapp, Lemmi, & Adelaja, 2014; McKenzie-McHarg et al., 2015; Simpson & Catling, 2015).

45.5% of women experience childbirth as traumatic, consistent with criterion A of DSM-IV (Alcorn, O'Donovan, Patrick, Creedy, & Devilly, 2010). While 52-76% of childbearing women do not develop any PTS symptoms (Ford & Ayers, 2011; Tham, Ryding, & Christensson, 2010), 10%-18% of women develop severe PTS symptoms without meeting all criteria for full PTSD-PC (Ayers, 2004; Beck et al., 2011). A recent meta-analysis identified

¹ These include DSM-III (APA, 1980), DSM-III-R (APA, 1987), DSM-IV (APA, 1994), DSM-IV-R (APA, 2000), and DSM-V (APA, 2013). Note the International Classification of Diseases (ICD) criteria for PTSD, were not referenced in this review, consistent with all identified research on PTSD-PC.

the prevalence of full PTSD-PC in community populations and high-risk populations to be 3.17% and 15.7% respectively (Grekin & O'Hara, 2014), confirmed by Yildiz, Ayers, and Phillips (2017) as 4% and 18.5% respectively. The most important factor to predispose PTSD-PC is a woman's subjective experience of childbirth (Garthus-Niegel, Soest, Vollrath, & Eberhard-Gran, 2013), within which interpersonal factors (Harris & Ayers, 2012) and 'Quality of Provider Interaction' (QPI) are significant (Sorenson & Tschetter, 2010). Dianna Spies Sorenson first used the term QPI to refer to a woman's perception of her care provider's interpersonal verbal and nonverbal relationship behaviours (Sorenson, 2003). Sorenson assessed QPI on a scale from 'disaffirmation' (woman treated as an object, denial of personhood) to 'affirmation' (recognition and support of personhood) (Sorenson & Tschetter, 2010).

QPI involves both women and midwives and is potentially modifiable within the subjective experience of childbirth. To enable optimisation of QPI, and meet recent calls for both further investigation into QPI (De Schepper et al., 2015; McKenzie-McHarg et al., 2015) and further research to enable midwives to identify and sensitively respond to women's psychosocial concerns and prevent trauma (Fenech & Thomson, 2014; Simpson & Catling, 2015; Slade, 2006), it was considered necessary to review existing PTSD-PC literature that has explored QPI.

Objectives

To review primary research from within the literature regarding PTSD-PC, that focussed on QPI from either the perspective of women who have developed PTSD-PC, or midwives.

Method

Study Design

A systematic literature search was performed. To enable representation of all relevant literature, both quantitative and qualitative research was included. To synthesise findings from a variety of methodologies a narrative synthesis was performed, as this is deemed appropriate for both qualitative and quantitative studies by the Centre for Reviews and Dissemination (CRD, 2009).

Electronic searches

Search terms

Papers identified through a scoping search for PTSD-PC literature within the bibliographic databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline, along with the review objectives, informed the creation of a list of concepts and synonyms, as outlined in the ‘Concept Mapping’ model ([University of Toronto, 2017](#)). This list enabled identification of the main keywords, subject headings and terms (Table 1).

Table 1: Keywords, subject headings and terms used the review

PTSD	Childbirth/Labour	Midwifery approach
Subject Headings	Subject headings	Subject headings
Stress Disorders, Post-Traumatic	Childbirth+/PF	Midwife attitudes
Life Change Events	Delivery, Obstetric	Holistic care
Stress, Psychological	Caesarean Section	
	Episiotomy	
	Obstetrical forceps	
	Vacuum Extraction, Obstetrical	
	Pregnancy Complications, Psychiatric+	
	Labor+/PF	
	Labor Stages	
	Management of Labor	
	Labor, Premature	
	Labor, Induced	
	Labor Support	
	Labor Stage, Third	
	Labor Stage, Second	
	Labor Stage, First	
	Labor Pain	
	Labor Complications	
Terms	Terms	Terms
"traumatic life event*"	"traumatic birth"	woman centred
"traumatic experience*"	"birth trauma"	Midwife led
"psychological trauma"	"traumatic delivery"	
	"traumatic childbirth"	
	"childbirth trauma"	
	"tokophobia"	
	"tocophobia"	
	"fear of childbirth"	
	"childbirth fear"	
	"fear of birth"	
	"birth fear"	
	"childbirth expectation"	
	"birth expectation"	
	"childbirth experience"	
	"birth experience"	
	"birth satisfaction"	
	"forceps"	
	"forceps deliver*"	
	"obstetric variable*"	
	"kiwi cup" or ventouse	

note some subject headings varied according to the database being searched, to match the requirements of the database, but the core meaning of the heading was retained.

Search Strategy

A computerised literature search performed between the 6th and 12th January 2016, used the bibliographic databases: CINAHL; Medline; PsycINFO; and Psychology and Behavioural Sciences Collection. Subject headings and terms were used to both expand and focus the searches for each of the keywords using the Boolean operator 'OR'. Paired combinations of searches were made using the Boolean operator 'AND', giving 'PTSD' AND 'Childbirth/labour' and 'PTSD' AND 'midwifery approach'. Searches were run through each database separately, with subject headings adjusted as necessary to fit the database terms. Further studies came from reading study references, those from the scoping exercise that did not emerge in the main search, and ongoing regular monitoring for new research via the International Network for Perinatal PTSD Research ([INPPR, 2017](#)).

Eligibility

Much PTSD-PC literature has shown that serious maternal and infant morbidity or mortality outcomes, such as pre-term birth or stillbirth ([Ford, 2013](#)), contribute to the development of PTSD-PC. To reduce any confounding influence on the impact of QPI, the review focused on PTSD-PC that occurred where neither mother nor baby experienced serious morbidity or mortality. The review focused on the development of PTSD-PC and excluded studies that explored diagnosis or treatment of PTSD-PC, antenatal PTSD, or living with PTSD-PC. Studies that explored QPI from either the perspective of women or the perspective of midwives were included (Table 2).

Table 2: Inclusion and exclusion criteria

Feature	Inclusion criteria	Exclusion criteria	Rationale
Year of publication	Studies after 1980	Studies prior to 1980	DSM criteria for PTSD was first established in 1980
Language of publication	English	Any other languages	Author not fluent in any languages other than English
Country study performed in	Any country	None	
Type of research	Primary research	Non-primary research	To only examine primary research in this field
Quality of study	Peer-reviewed	Non-peer reviewed	To ensure only quality primary studies are assessed
Study assessment of PTSD-PC in childbearing women	meets DSM (III, IV or V) criteria	Does not meet DSM criteria or used ICD criteria	To avoid inconsistency in approach between DSM and ICD (in fact no studies were identified that used ICD criteria)
Methodology	Any: qualitative, quantitative or mixed	No restriction	To identify a wide range of primary research
Focus of study	Primary focus on either: the subjective birth experience, including QPI, of women with PTSD-PC or the experience of QPI from the perspective of maternity care providers (in the context of PTSD-PC)	Focus on prevalence of PTSD-PC, identifying factors contributing to PTSD-PC, antenatal PTSD, stillbirth, neonatal loss, pre-term birth, serious maternal morbidity (such as HELLP*, DIC** or Pre-eclampsia), serious neonatal morbidity (including admission to a neonatal unit for more than observation), depression, anxiety, treatment or assessment of PTSD-PC, experience of living with PTSD-PC. <i>*HELLP severe medical complication of pregnancy comprising of Haemolysis, Elevated Liver enzymes and Low Platelet count.</i> <i>**DIC Disseminated Intravascular Coagulation</i>	To focus on relevant research based on search question

Terminology

The term PTSD-PC is used throughout to refer to at least moderate PTS symptoms at one month or more post childbirth, in keeping with DSM PTSD criteria. Also ‘woman’ or ‘women’ refers to those diagnosed with PTSD-PC.

Assessment of study quality

Study quality was assessed using the Critical Appraisal Skills Program (CASP), suitable for appraising both quantitative (cohort study checklist) and qualitative (qualitative study checklist) methodologies (CASP, 2017). All studies meeting the review inclusion criteria also met the CASP screening criteria (yes on checklist questions 1 and 2) for inclusion. Study quality was based on the answers to checklist questions 3 onwards: High, yes on all questions; Moderate, either yes on all, but only partially on some, or yes on more than half; and Low, yes on less than half. Studies of all levels of quality were included in order to review the full range of research related to the review objectives.

Method of narrative synthesis

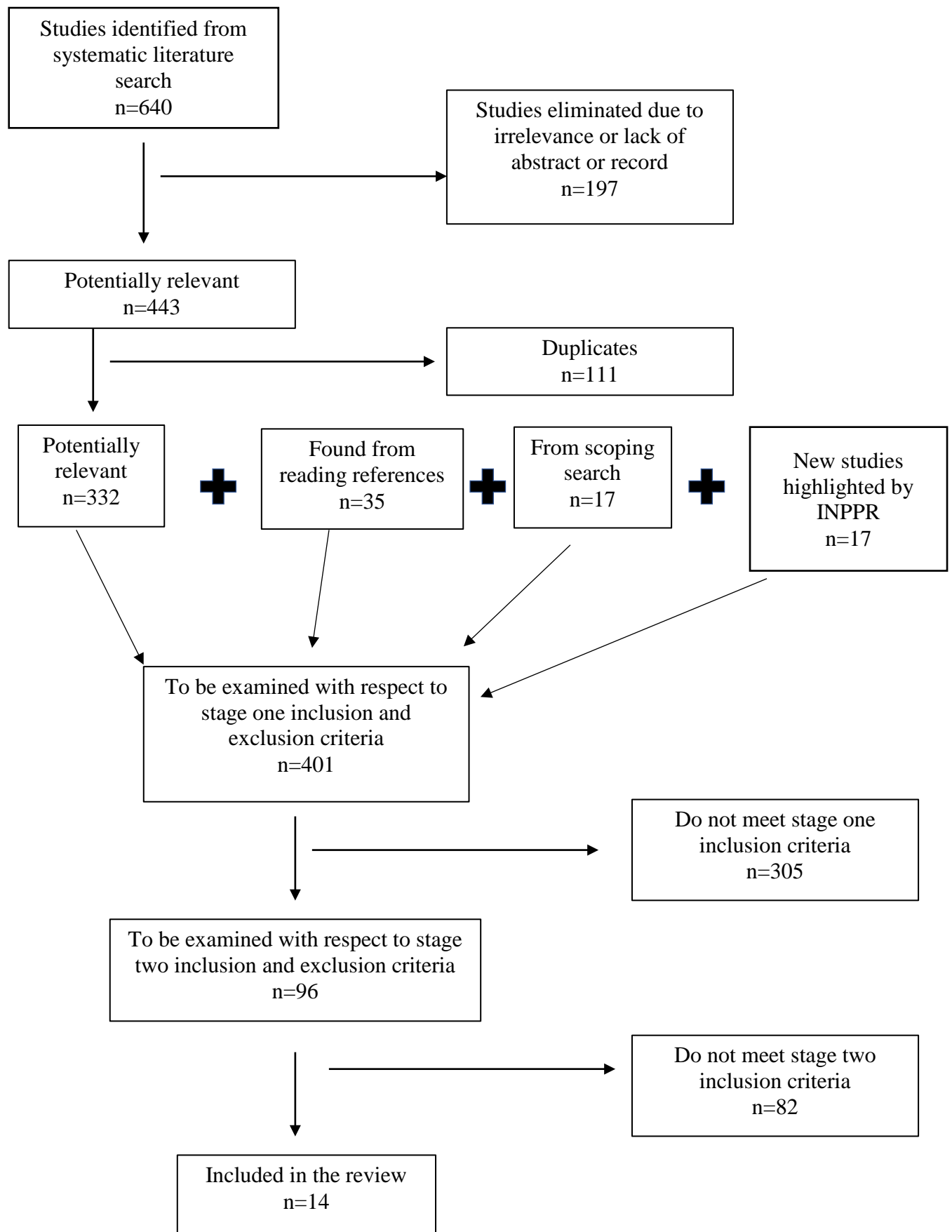
The narrative synthesis followed the three stages of the Economic and Social Research Council (ESRC) guidance (Popay et al., 2006). Stage one: a preliminary synthesis through tabulation of methods and findings (Table 3). Stage two: key findings related to aspects of QPI were identified across all studies. These formed sub themes which were then grouped to form main themes (Figure 2). Stage three: the robustness of the synthesis is considered through reference to, and discussion of, study quality.

Results

Study selection

Figure 1 details the study selection process.

Figure 1 Study selection process for stages one and two of the review



Summary of study characteristics

Table 3 presents summary characteristics, findings, and quality assessment of the 14 review studies. Cell headings are consistent with the relevant CASP checklists.

Table 3 Summary characteristics and findings of the reviewed studies

Author, title, date, location.	Characteristic of participants	Aims and focus of the study	Assessment of PTSD-PC	Methodology and analysis technique	Findings connected with care provider interaction	CASP rating Study value and implications
<p>Allen 1998 A qualitative analysis of the process, mediating variables and impact of traumatic childbirth.</p> <p>UK</p>	<p>Sample size 20</p> <p>Selection process Recruitment via health visitor routine check-up 8 months PC. Stage 1: assess level of perceived distress in labour. Stage 2: interview women who found labour extremely distressing.</p> <p>Rationale Recruit larger number of women, including those not only attending due to problems.</p> <p>Drop-outs 223 check-ups, 145 took part in 1st stage, 26 met incl. criteria for stage 2, 23 consented, 2 moved away and 1 changed her mind.</p> <p>Ethical Approval Local health district. Info provided and consent obtained.</p>	<p>Goal Explore distressing aspects of labour - the subjective experience.</p> <p>Why important Minimal previous work on subjective experience relevant to postnatal psychological state.</p> <p>Relevance Developing knowledge about PTSD-PC.</p>	<p>Measure of PTSD States IES-R, but references IES (Horowitz, Wilner, & Alvarez, 1979)</p> <p>8 months PC. 8 with PTSD-PC</p> <p>6 women score > cut-off 42 and 2 women score borderline =41.</p> <p>Note higher cut-off values than the suggested 33 for IES-R, resulting doubt onto the actual tool used, and the appropriateness of the cut-off values</p>	<p>Method Qualitative.</p> <p>Design Grounded Theory.</p> <p>Data collection Semi-structured interviews. Questions developed from pilot study.</p> <p>Collection technique Audio-taped and transcribed.</p> <p>Rationale Qualitative data provide richer more elaborate study of exploring experience. Grounded theory more structured.</p> <p>Analysis Exploratory framework based on Strauss and Corbin paradigm model. Used axial and selective coding.</p> <p>Reflexivity and reflection</p> <p>Not discussed.</p> <p>Saturation Not discussed, fixed sample size.</p>	<p>Clear statement of findings Lack of control due to: staff errors, staff panicking or too busy, dismissive, lack of communication, poor pain relief, being ignored, unmet expectations and lack of support. Lack of support also led to feeling isolated and abandoned. Receiving support reduced distress.</p> <p>Consistent with other findings PTSD related to threat of harm. Subjective interpretation influences perception of trauma. Inaccurate expectations may lead to shock.</p> <p>Discussion of findings Findings can be explained in the framework of the psycho-social model of PTSD (Green, Lindy, & Grace, 1985)</p> <p>Limitations noted Small sample, no comparison between trauma and non-trauma</p>	<p>CASP rating High</p> <p>Value of study Adds to growing awareness of PTSD-PC and related complex causes.</p> <p>implications Optimise support, sense of control. Increase provider awareness of PTSD-PC. Take account of PTSD-PC during AN education and need for treatment.</p>

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Anderson and McGuinness 2008 Do Teenage Mothers Experience Childbirth as Traumatic? USA	Sample size 28. Aged 15-19. Selection process Random sample of women previously attending a nursing educational program, spoke English, had a telephone. Rationale Not stated. Drop-outs n/a Ethical approval University board. Info provided and consent obtained – not described.	Focus Assess symptoms of PTS and PND. Also measured subjective experience. Small focus on QPI. Population Teenage, childbearing women.	Measure of PTSD IES (Horowitz et al., 1979). Timing not stated but assumed to be at same time as interview - 9 months PC, to coincide with peak time of PTSD. Cut-offs used: 19-25 mild PTS, 26-34 moderate PTS. No one had over 34. EPDS was also used at the same time as the IES.	Method Quantitative, Pilot Study. Subjective measure Likert scales. Objective measures Mode of birth (22 SVB, 6 non-specified, non-SVB) Blinding used n/a Data collection Telephone Interview. Confounding factors Does not record history of PTS. Analysis Descriptive summary statistics.	Results Fear (28), anxiety (27), midwives kind (23) supportive (26), experience ‘awful’ (worst rating) (4). Application to local population Teenage mothers in this area of USA. Fit with other findings High % of positive perception of midwives, inconsistent with other findings, may be due to particular care of teenage mothers. Discussion of findings Some teenage mothers are vulnerable to PTSD. Limitations noted Lack of knowledge re previous PTS.	CASP rating Low Implications for practice For teenage women, assessing previous trauma and providing positive midwife support, and involvement in decision making may reduce psychological sequelae of childbirth.
Ayers 2007 Thoughts and Emotions During Traumatic Birth: A Qualitative Study UK	Sample size 25 with PTSD-PC, 25 without PTSD-PC, matched by obstetric factors. Selection process Subsample from longitudinal study Rationale PTSD group scored above cut-off of 19 on either scale at 1 and 6 weeks PC.	Goal Explore non-medical aspects of birth experience, thoughts, emotions, memories. Why important Lack of previous research.	Measure of PTSD IES (Horowitz et al., 1979) and PSSS (Foa, Riggs, Dancu, & Rothbaum, 1993), adapted to reflect childbirth as the traumatic event. Cut-off used was 19 for either scale	Method Qualitative. Design Not explicit. Data collection Face-to-face interview at 3 months PC Collection technique Audio recorded and transcribed. Rationale Qualitative is most appropriate to understand range of thoughts and emotions. Analysis Thematic analysis, coding.	Clear statement of findings Women with PTS: poor understanding of what was going on, unmet expectations, anger. Women with and without PTS: lack choice, panicky, wanting all to stop (more when PTS). Women without PTS: unaware of seriousness, upset at staff behaviour or treatment, sense of control, sense of acceptance.	CASP rating Moderate Value of the research A detailed glimpse into thoughts and emotions of women during birth, highlighting some that occur

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Ayers 2007 continued	<p>Drop-outs PTSD group: 38 met incl., 28 consented, 3 had data recording errors. Non-consenters had more avoidance. Non-PTSD group: no drop outs</p> <p>Ethical approval Obtained in original study. No mention of info provided or consent obtained.</p>	<p>Relevance Developing knowledge about PTSD-PC.</p>	<p>Assessed at 1 and 6 weeks PC.</p> <p>Did not assess Criterion A of DSM-IV, so referred to women having PTS symptoms rather than PTSD.</p>	<p>Reflexivity and reflection Not described specifically, although transcripts were checked by a second researcher.</p>	<p>Consistent with other findings Anger associated with general PTSD.</p> <p>Discussion of findings midwives must attend to women's emotional state during birth to minimise negative emotions and perception of life threat.</p> <p>Limitations noted Did not measure criterion A of DSM-IV.</p>	<p>more in women with PTSD.</p> <p>Implications midwives being more aware of PTSD and potential signs and provide care to minimise risk.</p>
<p>Ballard et al. 1995</p> <p>Post-Traumatic Stress Disorder (PTSD) after Childbirth</p> <p>UK</p>	<p>Sample size 4</p> <p>Selection process Convenience sample of case reports for subjects with stress reactions after delivery.</p> <p>Rationale Describe the clinical picture and course of disorder of stress reactions PC.</p> <p>Drop-outs n/a</p> <p>Ethical Approval Not stated.</p>	<p>Goal To further explore the link between PTSD and childbirth.</p> <p>Why important Earlier studies suggest a link, which may be a concern.</p> <p>Relevance An early seminal piece of work, widely referenced in the PTSD-PC literature</p>	<p>Measure of PTSD The paper relates the symptom profiles to that of PTSD. No formal assessment tool described.</p>	<p>Method Qualitative.</p> <p>Design Case Study.</p> <p>Data Collection Cases arising requiring psychological care.</p> <p>Collection technique Written accounts of individual case histories.</p> <p>Rationale Not given.</p> <p>Analysis Descriptive.</p> <p>Reflexivity and reflection None described.</p>	<p>Clear statement of findings All had elements of PTSD. 3 describe being left alone, unsupported, lack of pain relief. 1, with objectively good outcome, describes being ignored, dismissed, overruled by punitive midwives, whilst lacking confidence in midwives' knowledge. 2 expressed anger and rage towards midwives.</p> <p>Consistent with other findings Ground breaking early study, consistent with other early observations and studies.</p> <p>Discussion of findings Confirms lack of control a consistently important feature.</p> <p>Limitations noted Small sample</p>	<p>CASP rating Low</p> <p>Value of the research Confirms further a link between PTSD and childbirth, prompting need for further research.</p> <p>Implications Suggests prompt apology after adverse events might avert some incidence.</p>

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Beck 2004 Birth Trauma In the Eye of the Beholder New Zealand (n=23), USA (n=8), Australia (n=6), UK (n=3).	Sample size 40. Selection process Purposive sample of women who perceived they had experienced birth trauma. Length of time since traumatic birth 5 weeks to 14 years. Rationale Gain perspective from those who had experienced the phenomena being studied. Drop-outs n/a Ethical Approval University review board. Participant Info provided and consent received	Goal Explore essential structure of women's experience of birth trauma. Why important Growing knowledge of PTSD-PC, need to understand features of totality of subjective experience of childbirth. Relevance Developing knowledge re PTSD-PC.	Measure of PTSD Not specified. Women self-stated birth was traumatic. Study states 32/40 had diagnosis of PTSD and 8 had PTS symptoms but had not yet sought mental healthcare. No details re means of diagnosis.	Method Qualitative. Design Descriptive Phenomenology. Data collection Women submitted, written birth stories. Collection technique Via internet or post. Rationale Exploring experience. Analysis Colaizzi's thematic analysis (1978). Reflexivity and reflection Husserl's bracketing referenced, but not made explicit re use in the study	Clear statement of findings Feeling abandoned and alone, stripped of dignity, lack of consent, felt like a battlefield. Midwife uninterested, being ignored, dismissed. Lack of support - especially when fearful. Lack of midwife communication with women and other midwives. Perception of unsafe care led to fear, powerlessness and shattered expectations of safe care. Being uninformed led to lack of trust in midwife. Words used about care: mechanical, arrogant, cold, technical, raped. Consistent with other findings Consistent with other findings re types of birth trauma. Discussion of findings n/a.	CASP rating Moderate Value of the research Increases understanding of subjective experience. Implications need good history taking re birth trauma, enhance sense of control, address unmet expectations, be alert to early signs of trauma. Treat all women as though a survivor of trauma.

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<p>Cigoli et al. 2006</p> <p>Relational factors in psycho-pathological responses to childbirth</p> <p>Italy</p>	<p>Sample size 160 recruited sequentially.</p> <p>Sample represents defined population Yes, pregnant women in late pregnancy or new mothers.</p> <p>Drop-outs Sequential process, meant no drop-outs, 160 returned the questionnaires with at least 75% completed.</p> <p>Ethical Approval States process of providing information re the study and gaining consent. But source of ethical approval not specified.</p>	<p>Focus To examine how support relates to stress symptoms of PTSD.</p> <p>Population Age over 18, at least 39 weeks pregnant, or have had healthy baby, and have no psychiatric diagnosis.</p>	<p>Measure of PTSD PTSD-Q (Czarnocka & Slade, 2000) adapted to reflect childbirth as the traumatic event, at 48 hours and 3-6 months PC, used to categorise into two groups.</p> <p>Also BDI, EFS, STAI, Perceived Desire and Support Scale (PDSS).</p>	<p>Method Observational study, selected cohort, mixed methods comparing 2 groups. Non-risk (no PTSD) n=112, risk group (partial, n=46 or full PTSD, n=2).</p> <p>Subjective measures Subjective assessment scales. Article states there is an interview, but interview data not presented in this paper or referenced.</p> <p>Objective measures Demographics using Anamnestic Schedule.</p> <p>Blinding used n/a.</p> <p>Data collection Survey and semi-structured interview</p> <p>Confounding factors Not discussed.</p> <p>Analysis Correlation statistics, Mann-Whitney and Rho of spearman. Comparisons using t-test. No details re analysis of interviews</p>	<p>Results Only quantitative results presented, discussed. Factors which contribute significantly to PTSD-PC: Unmet desired support from midwife. However, perceived support from midwife is not significant. NB only 2 participants had clinically significant PTSD, 46 had varying levels of PTS symptoms, 112 had no symptoms.</p> <p>Application to local population Yes, local childbearing women.</p> <p>Fit with other findings Yes, in terms of support being important.</p> <p>Discussion of findings PTSD is a complex situation, but higher scores are associated with stronger desire for support, often then perceived as not being met.</p> <p>Limitations observed Finding re support and PTSD, are only small part of the study.</p>	<p>CASP rating Moderate</p> <p>Implications for practice Effective social interventions, need targeted consultation at end of pregnancy and early parenthood with both mother and her potential support network.</p>

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De Schepper et al. 2015 Post-Traumatic Stress Disorder after childbirth and the influence of maternity team care during labour and birth: A cohort study Belgium	<p>Sample size 340 women in first week 229 women at 6 weeks.</p> <p>Sample represents defined population Yes, random sample from across 13 maternity postnatal wards.</p> <p>Drop-outs 420 invited, 340 agreed to first phase and of these 229 agreed to the second phase. The cohort of 340 and the cohort of 229 were similar demographically and in terms of PTSD.</p> <p>Ethical Approval Antwerp University Hospital. Info provided and consent obtained.</p>	<p>Focus Main focus is role of midwifery team care factors, also examines Prevalence of PTSD and personal and obstetric factors. AIM to inform midwives about PTSD as a possible postpartum complication.</p> <p>Population Age > 18, Dutch Speaking. Excluded stillbirth, pre-term <24 weeks and intrapartum psychosis.</p>	<p>Measure of PTSD At 1 week (day1-4) and 6 weeks IES-R (Weiss & Marmar, 1997) (cut-off = 24) and the TES (Wijma, Söderquist, & Wijma, 1997) Designed for general PTSD (cut-off is not specified).</p> <p>PTSD assessment questionnaires completed a few days after birth and at 6 weeks, via telephone call or email.</p>	<p>Method Quantitative Prospective Cohort study.</p> <p>Subjective measures Likert scales MW team care for perception of fear, experience of birth, care received, admission process, level of info, freedom to ask questions, trust in and respect for midwife, support, reassurance, respect, locus of control, perception of team being in control, and participation in birth process.</p> <p>Objective measures Demographics, mode of birth, complications, medical and obstetric history.</p> <p>Blinding used n/a</p> <p>Data collection A few days after birth: Questionnaire- Demographics, medical and obstetric history and midwifery team care.</p> <p>Confounding factors Accounted for in focus.</p> <p>Analysis Descriptive, t-tests, one-way ANOVAs, X² tests, Mann Whitney U, Spearman rank, multiple linear regression, and logistic regression.</p>	<p>Results At 6 weeks, factors which contribute significantly to lower PTSD-PC: perception of midwife being in control, being able to ask questions.</p> <p>Application to local population Good sample size representing a balanced snapshot of Belgian childbearing women.</p> <p>Fit with other findings Consistent with other findings re importance of internal locus of control by being able to ask questions.</p> <p>Discussion of findings Rate of PTS symptoms reduced between 1 and 6 weeks. PTSD at 6 weeks 0% (IES-R) and 4% (TES). Being able to ask questions is protective of PTSD as 6 weeks.</p> <p>Limitations Data collected at 6 weeks, PTSD symptoms may decline by 3 months. Different scores on IES-R and TES, possibly TES takes account of more DSM-IV criteria. Telephone/email data collection may bias results. Excluding women with language barrier, may underestimate PTSD.</p>	<p>CASP rating High</p> <p>Implications for practice First assessment of MW team care factors. Can be influenced by MW. Calls for research into QPI. Highlight PTSD-PC to MW and medical students. MWs need to be aware of the impact of care provision on woman's well-being. Take caution with interventions to let the women be in control as much as possible.</p>

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<p>Ford and Ayers 2011 Support during birth interacts with prior trauma and birth intervention to predict postnatal post-traumatic stress symptoms</p> <p>UK</p>	<p>Sample size 138</p> <p>Sample represents defined population Recruited from UK NHS Maternity units.</p> <p>Drop-outs 215 recruited, 138 completed at least one questionnaire: at 33-37 weeks pregnant (136); at 3 weeks PC (125); at 3 months PC (109). Only demographic difference between responders and non-responders was responders had fewer children.</p> <p>Ethical approval University research governance committee and NHS local research ethics committee. No mention of info given or consent obtained</p>	<p>Focus Role of midwife support and personal control during birth as predictors of PTSD-PC whilst controlling for previous trauma, antenatal depression (AND), self-efficacy, external locus of control and interventions.</p> <p>Rationale Lack of research into midwife role in PTSD-PC.</p> <p>Population Age >18, 33-37wks pregnant, able to understand questionnaires.</p>	<p>Measure of PTSD PTSD diagnostic scale (PDS) (Foa, Cashman, Jaycox, & Perry, 1997) adapted for postnatal women, at 3 weeks and 3 months PC.</p> <p>Other scales used EPDS, MHLC scale, SES, IIS, SCIB.</p>	<p>Method Quantitative Cohort Prospective longitudinal study</p> <p>Subjective measures Various scales as listed in previous column</p> <p>Objective measures Demographics, prior trauma and birth interventions.</p> <p>Blinding used n/a.</p> <p>Confounding factors Accounted for in focus.</p> <p>Analysis Correlations (statistic not identified). Hierarchical multiple regressions.</p>	<p>Results Factors which contribute significantly to PTSD-PC: Low midwife support in women with prior trauma, or average, or above average level of birth interventions. Significant correlations: midwife support & internal locus of control; midwife support & external locus of control; midwife support & PTSD.</p> <p>Application to local population findings not generalisable to local population.</p> <p>Fit with other findings other findings: control related to interpersonal e.g. midwife support (Green & Baston, 2003).</p> <p>Discussion of findings Prioritise support rather than control</p> <p>Limitations observed High attrition rate. Low power, although sample size appropriate to find a difference. Unknown if correlation between midwife support and external control is due to bias or nature of challenging conditions</p>	<p>CASP rating High</p> <p>Implications for practice Calls for one-to-one supportive care being necessary to maximise positive psychological outcomes for women.</p>

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<p>Harris and Ayers 2012 What makes labour and birth traumatic? A survey of intrapartum 'hotspots'</p> <p>UK</p>	<p>Sample size Purposive recruitment via internet support groups n=675.</p> <p>Sample represents defined population Childbearing women in UK.</p> <p>Drop-outs 699 recruited 24 excluded due to substantial missing data.</p> <p>Ethical Approval University research ethics committee. No mention of info given or consent obtained.</p>	<p>Focus Identifying frequency of hotspots, content of hotspots, cognitions and emotions during hotspots, and PTSD symptoms in women with traumatic birth experiences.</p> <p>Population Age > 18, had given birth, can read/write English fluently.</p>	<p>Measure of PTSD PTSD diagnostic scale (PDS) (Foa et al., 1997) adapted for postnatal women. Assessed at least 1 month PC.</p> <p>Other measures Cognitions and emotions during hotspots were measured using the 'Initial reactions' sub-scale of the 'Potential Stressful Events Interview' (adapted) (Resnick et al 1996).</p>	<p>Method Quantitative cross-sectional internet survey.</p> <p>Subjective measure Hotspots, questionnaire based on previous studies. Identifying hotspots of emotional distress in the trauma. Description of worst hotspot.</p> <p>Objective measures Mode of birth, parity, previous traumatic events, and time since birth.</p> <p>Blinding used n/a</p> <p>Data collection Online questionnaires.</p> <p>Confounding factors A range built into the regression models.</p> <p>Analysis Coding the description of the worst hotspots according to most prominent theme, based on coding schedule developed by the authors in a pilot study. Principal components analysis. Non-parametric tests (Kruskal-Wallis, Chi Square). Backward stepwise logistic regression.</p>	<p>Results 3 categories of worst hotspot: interpersonal difficulties (INT), obstetric compl (OBS), and neonatal compl (NEO). INT most freq content of worst hotspot: being ignored, lack of support, poor communication, (abandoned, under pressure), sig higher no. cases PTSD, sig distress, sig impairment, total symptoms, anger and conflict. INT gave 4xrisk PTSD vs NEO. OBS gave 3xrisk of PTSD vs NEO.</p> <p>Application to local population Mainly white women, not easy to generalise.</p> <p>Fit with other findings Only hotspot study. Findings re INT and lack support, consistent with previous findings in PTSD-PC and general PTSD.</p> <p>Discussion of findings suggests hotspots involve emotions / cognitions beyond DSM diagnostic criteria: Anger, failure, and negative effect (sadness and guilt).</p> <p>Limitations Retrospective design may make recall less accurate. Internet sampling, allows larger sample, but may limit range of postnatal women taking part.</p>	<p>CASP rating High</p> <p>Implications for practice Significance of interpersonal factors suggests reassurance, support, identifying and dealing with interpersonal difficulties, may prevent birth being experienced as traumatic. Future research needed around dissociation.</p>

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Menage 1993 Post-traumatic stress disorder in women who have undergone obstetric and/or gynaecological procedures: A consecutive series of 30 cases of PTSD UK	Sample size 30 Sample represents defined population Advertising for women volunteers. Research was described as investigating psychological stress caused by smear tests and vaginal examinations. Volunteers were age 18-60. Drop-outs 500 volunteered, 102 had a history which fulfilled criterion A of DSM-III-R, 30 fulfilled full PTSD criteria. Ethical approval Not specified	Focus Investigate whether the psychological stress caused by obstetric or gynaecological examinations could lead to PTSD. Population Women volunteers predominately from across UK.	Measure of PTSD PTSD Interview PTSD-I (Watson, Juba, Manifold, Kucala, & Anderson, 1991), designed for general PTSD	Method Mixed Subjective measures Perception of obstetrical or gynaecological experience using response scales. Women were also asked to relate their experience. Objective measures Demographic measures. For the 30 women with PTSD, history of previous trauma. Blinding used n/a Confounding factors Previous trauma was included, but no measure of previous PTSD. Analysis Descriptive statistics, 2-way mixed ANOVA.	Results: Factors significantly contributing to PTSD-PC: hostile doctor attitude, powerlessness, being ignored, adequacy of info given, lack of consent. Words used by women: Dehumanizing, degrading, distressing, dismissed, ignored, invaded, violated, brutal, excruciating, mutilated, held down, shouted at, humiliated, abused, terrifying, rape. Application to local population Limited to readership of advertising publications, a self-selected group, likely recognised stress in themselves. Fit with other findings Confirms other findings, especially re subjective experience. Discussion of findings Particularly important for women with previous sexual abuse, which may be undisclosed or repressed. Limitations Does not address other psychological issues.	CASP rating Moderate Implications for practice Medical profession to be aware that women need to be listened to more carefully, to determine their needs and perceptions, and to be mindful that there could be a history of sexual abuse. Medico-legal implications following trauma.

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<p>Nicholls and Ayers 2007 Childbirth-related post-traumatic stress disorder in couples: A qualitative study</p> <p>UK</p>	<p>Sample size 6 couples: 5 women and 3 men with PTSD-PC, 1 woman and 3 men without PTSD-PC. Time since birth event, 9 months to 2 years.</p> <p>Selection process Age >18, read/speak English fluently, one member of couple had to have experienced traumatic birth > 3 months ago, and one had to fulfil DSM-IV criteria for PTSD. Both had to be willing to be interviewed.</p> <p>Rationale Explore experience of both partners re experience of PTSD-PC and traumatic birth.</p> <p>Drop-outs 9 couples met incl. criteria, 6 consented. 3 partners did not consent.</p> <p>Ethical Approval Sussex university. Info provided, consent obtained.</p>	<p>Goal Exploring subjective experience of PTSD-PC in couples, but also explored experience of women and their partners during birth.</p> <p>Why important Need to extend knowledge re aetiology of PTSD-PC, the effect on women, men and parent-infant attachment</p> <p>Relevance Developing knowledge re couples' perspectives on traumatic birth/PTSD-PC.</p>	<p>Measure of PTSD PTSD diagnostic scale (PDS) (Foa et al., 1997) adapted for postnatal women.</p>	<p>Method Qualitative</p> <p>Design Phenomenological</p> <p>Data collection Semi-structured interviews using 14 open questions.</p> <p>Collection technique Not explicit about whether hand or audio recorded. Transcribed.</p> <p>Rationale Exploring experience.</p> <p>Analysis Thematic analysis per individual.</p> <p>Reflexivity and reflection Not explicit, although independent coding by a 3rd researcher.</p>	<p>Clear statement of findings 'Quality of care' (especially midwife attitude, information, environment) emerged as a major theme. Others were birth factors (pain, lack of choice, control, decision making, being restrained), perceived effect on relationship with partner/child.</p> <p>Consistent with other findings Lack of: control, communication, information, decision making.</p> <p>Discussion of findings Men reported more shock and helplessness. Women reported more fear, confusion, violation, dehumanisation, and anger. Authors highlight the emergence of 'quality of care' as a factor, which had not been asked about in the interview. Men and women differed in where they placed importance.</p> <p>Limitations No measure of pre-existing psychopathology and retrospective approach. Small sample, self-selected. Those who dropped out may have had more interpersonal difficulties.</p>	<p>CASP rating Moderate</p> <p>Value of the research Quality of care as major theme was particularly important as not specifically asked about, yet was important for all participants.</p> <p>Implications Need to increase midwife awareness of PTSD and contributing practices. Acknowledge and include partners, recognise risk of dissociation. Include partners in screening for PTSD, and consider families.</p>

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<p>Nyberg et al. 2010 Midwives' experience of encountering women with posttraumatic stress symptoms after childbirth</p> <p>Sweden</p>	<p>Sample size 8</p> <p>Selection process Midwives working in specialised clinics for women with PTS symptoms post childbirth.</p> <p>Rationale purposive sampling in one council area</p> <p>Drop-outs 15 invited, 8 consented and completed the interviews.</p> <p>Ethical approval Permission from the heads of the county's councils responsible for the clinics. Ethics group at the dept. of health sciences, Luleå University of Technology. Info provided, consent sought.</p>	<p>Goal Exploring midwives' experiences of encountering women with post traumatic stress symptoms after birth.</p> <p>Why important The only study to explore midwives experience of relating to women with PTSD-PC.</p> <p>Relevance Provides the midwives perspective, albeit in the postnatal period.</p>	<p>Measure of PTSD No measure of PTSD. Women attending clinics had been diagnosed with PTSD-PC.</p>	<p>Method Qualitative</p> <p>Design Phenomenological</p> <p>Data collection Semi-structured interviews.</p> <p>Collection technique Audio recorded and transcribed verbatim.</p> <p>Rationale Describe experience.</p> <p>Analysis Thematic content analysis.</p> <p>Reflexivity and reflection Not explicit, although all texts were read and coded a second time to check for appropriateness.</p>	<p>Clear statement of findings Midwives highlight major themes: meeting women with severe or frightening experiences, childbirth affected women's lives, need to listen to and respond to women, be gentle with words, storytelling creates confirmation, enable women to express feelings, support women to give birth, lost confidence in giving birth, caesarean section does not solve problems. Some women had PTSD-PC after objectively normal childbirth. Women described: lack of control and respect, not being involved in decision making, and unmet expectations.</p> <p>Discussion of findings Midwives highlight need to reflect on their own attitude and use gentleness. Midwives desire access to mentoring and referral options for women.</p> <p>Limitations Small sample, but rich data. May need to explore from the women's perspective.</p>	<p>CASP rating Moderate</p> <p>Value of the research Women's needs to be respected and listened to seems to be one of the most important healthcare issues.</p> <p>Implications Need to raise quality of care for women with fear of childbirth, and support women to feel safe, well informed, and involved. Midwives should know women's wishes. Need to develop further midwifery interventions to meet the needs of women with PTSD-PC.</p>

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Sorenson and Tschetter 2010 Prevalence of Negative Birth Perception, Disaffirmation, Perinatal Trauma Symptoms, and Depression Among Postpartum Women USA	Sample size 71 Sample represents defined population Women identified from archive of birth announcements in local paper, and who had current entry in local phone directory. Drop-outs 134 invited, 95 consented, 71 returned questionnaires Ethical approval Not specified	Focus Explore relationship between PTS symptoms, negative birth perception and QPI Population Women 6 months postpartum, who had recently given birthed locally.	Measure of PTSD Post traumatic childbirth stress inventory (PTCS) (Sorenson, 2003) (DSM-IV) Other measures Birth Perception Rating scale (BPRS), Quality of provider interaction inventory (QPI-I) Beck depression inventory II (BDI-II)	Method Quantitative. Subjective measures Perception of birth experience, quality of provider interaction Objective measures Demographic data. Blinding used n/a Confounding factors Analysis. Prior trauma or psychiatric wellbeing not assessed.	Results: Significant Correlations: QPI & PTS. QPI & birth perception. Birth perception & PTS. Provider affirmation more frequent than disaffirmation 15/21 affirm, 6/21 disaffirm Application to local population Sample mostly white and in stable relationships. Fit with other findings Theory of relationship between QPI and psychological status (Peplau, 1953). Discussion of findings QPI significantly correlated with PTS. QPI modifiable by midwife, whereas unmodifiable factors such as age, parity, mode of birth are not associated with PTS (statistics not provided). Limitations Sampling method may not allow accurate prevalence estimates. Correlations do not imply causal relationships.	CASP rating Moderate Implications for practice Raised questions re level of monitoring and enforcement of MIDWIFE ethic conduct. Poor QPI more readily tolerated than poor technical skills. Reinforce need for psychiatric liaison advanced practice nurses to support midwives to assess and interact with women appropriately. Reassuring that provider affirmation was more common than disaffirmation.

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Author, title, date, location.	Characteristic of participants	Aims and focus of the study	Assessment of PTSD-PC	Methodology and analysis technique	Findings connected with care provider interaction	CASP rating Study value and implications
<p>Tham et al. 2010 Experience of support among mothers with and without post-traumatic stress symptoms following emergency caesarean section</p> <p>Sweden</p>	<p>Sample size 42 women with PTSS, 42 women without PTSS, 6 months PC (note the authors refer to Post traumatic stress symptoms not full PTSD).</p> <p>Selection process Healthy women, Swedish or English speaking, delivered between 37-42 weeks, planned SVB.</p> <p>Rationale not specified</p> <p>Drop-outs 148 who met criteria were invited, 19 declined, 4 dropped out, 3 moved abroad. 122 enrolled.</p> <p>Ethical issues addressed Local research ethics committee at Karolinska Institute, Stockholm. Info provided and consent obtained.</p>	<p>Goal Experience of support amongst mothers with and without PTSD following Emergency Caesarean section (EMCS).</p> <p>Why important Understanding difference in experience between women with and without PTSD-PC following EMCS.</p> <p>Relevance Explores birth experience in relations to PTSD-PC.</p>	<p>Measure of PTSD IES (Horowitz et al., 1979) to measure PTSD. 2 groups, no symptoms of PTSD and at least moderate symptoms of PTSD, using cut-off 19/20 points.</p> <p>Other measure made SoC scales completed at 2-3 days PC, reported in parent longitudinal study.</p>	<p>Method Qualitative.</p> <p>Design Secondary analysis of 84 women from a longitudinal study.</p> <p>Data collection PTSD assessed at 3 months PC.</p> <p>Collection technique Telephone Semi-structured interview at 6-7 months PC. Interviews based on a questionnaire plus supplementary questions to understand experience. Hand recorded then transcribed.</p> <p>Rationale To explore lived experience.</p> <p>Analysis Content analysis.</p> <p>Reflexivity and reflection Interviewer did not know women's PTSS status at time of interview. Authors analysed texts separately until consensus was reached.</p>	<p>Clear statement of findings No figures presented. States majority women found midwife kind/supportive, contradicts findings: Women with PTS: several found midwife nervous; > ½ found midwife disinterested, lack support, communication; many felt lack of information, lack involvement in decisions, lack postpartum follow up (About ½ saw MW at 3 months); ⅓ experienced fear. Women without PTS: few found midwife uninterested or unsupportive. Almost all saw midwife at 3 months. New mums: majority: lack information. ⅓ each group: lack continuity. All desire counselling, only those with obj trauma, received this.</p> <p>Discussion of findings Midwives actions important, query worse care or women with PTS more sensitive, due to anxiety or history.</p> <p>Limitations Phone Interviews lack visual contact. Hand recording possible inaccuracy. No record of prior trauma or history of PTSD.</p>	<p>CASP rating Moderate</p> <p>Value of research Highlights importance of midwife's actions/inactions.</p> <p>Implications Treat all women as if vulnerable to trauma. Midwives have important support roles during EMCS. Suggest follow up women at risk of PTSD-PC. Midwives must recognise women who may be angry/ feel staff are to blame/feel shame, offering them an open discussion.</p>

Study focus

Within the wider PTSD-PC literature, few studies focussed on QPI. Two review studies had a primary focus close to QPI, for others QPI emerged as a feature of women's subjective experiences. All review studies refer predominately to midwives as the maternity care providers, and so the findings refer to midwives throughout. [Nyberg, Lindberg, and Öhrling \(2010\)](#) was the only study identified that looked at midwives' experiences of interacting with women within the context of PTSD-PC, and this occurred during a postnatal clinic. The midwives do not directly describe their experience of interacting during childbirth, however they provide their reflections on women's perception of QPI during childbirth. This study was included to enable review of all sources of research examining the perception of QPI in the context of PTSD-PC.

Study methodologies

Study methodologies were appropriate for each study design, with the following considerations. The use of grounded theory by one study was potentially appropriate due to limited existing research into factors contributing to PTSD-PC ([Allen, 1998](#)), but the fixed sample did not reflect theoretical sampling to determine data saturation ([Charmaz, 2006](#)). Reflexivity ([Berger, 2015](#); [Finlay, 2008](#)) was acknowledged by two studies, addressed by one ([Tham et al., 2010](#)), but not the other ([Ballard, Stanley, & Brockington, 1995](#)). Three papers acknowledged and addressed the need for reliability ([Ayers, 2007](#); [Nicholls & Ayers, 2007](#); [Nyberg et al., 2010](#)). Four quantitative studies built appropriate confounding variables into their statistical models ([De Schepper et al., 2015](#); [Ford & Ayers, 2011](#); [Menage, 1993](#)), but four did not discuss pre-existing confounding variables ([Anderson & McGuinness, 2008](#); [Cigoli, Gilli, & Saita, 2006](#); [Harris & Ayers, 2012](#); [Sorenson & Tschetter, 2010](#)), although two acknowledged lack of inclusion of a history of PTS ([Anderson & McGuinness, 2008](#); [Menage, 1993](#)).

Study quality

Review studies claimed inclusion of women with PTSD-PC, so it was important to reflect on PTSD-PC assessment. Two studies did not specify the PTSD-PC assessment method. Of these the frequently cited, seminal study by [Ballard et al. \(1995\)](#) was potentially biased because it contained only 4 case studies, while the internet-based story collecting design weakened the quality of the valuable study by [Beck \(2004\)](#). The remaining studies, based PTSD-PC assessment on DSM-III or DSM-IV criteria but utilised a variety of tools and

measurement cut-off levels. Five studies used the Impact of Event Scale, which is not supported as a diagnostic tool for PTSD (Motlagh, 2010). Only one study (Cigoli et al., 2006) referenced reliability of their scale in a birth trauma context, rather than general PTSD. Ayers (2007) used two validated scales, but failed to measure criterion A, so their PTSD-PC diagnosis did not fulfil DSM criteria. Allen (1998) provided a thorough qualitative exploration of women's experiences, but their unusually high cut-off value for significant PTSD-PC symptoms created uncertainty regarding the PTSD-PC level. Tham et al. (2010) hand recorded interviews, provided imprecise and contradictory presentation of results, and failed to provide actual frequencies on which statements were based. Anderson and McGuinness (2008) provided limited details about PTSD-PC levels. Within three studies, retrospective recall may have been an issue as for some participants it was up to 10 (Nicholls and Ayers, 2007), 14 (Beck, 2004) and 47 (Harris and Ayers, 2012) years since the childbirth event.

Narrative synthesis of findings

Key findings

In keeping with the findings from Garthus-Niegel et al. (2013) that a woman's subjective experience of childbirth, is the most important factor to predispose PTSD-PC, other high quality studies identified women's subjective experiences of care to be significant (De Schepper et al., 2015; Ford & Ayers, 2011). A moderate quality study identified QPI to be significantly correlated with PTSD-PC (Sorenson & Tschetter, 2010) and high quality studies found the following features of QPI within women's subjective experiences were the strongest predictors for developing PTSD-PC: (1) *interpersonal difficulties*, such as being ignored. Interpersonal difficulties and obstetric complications were respectively four and three times more likely to predict PTSD-PC, than neonatal complications (Harris & Ayers, 2012); (2) *midwifery care factors*, such as control and communication (De Schepper et al., 2015); and (3) *lack of support* (Ford & Ayers, 2011). In keeping with the planned method of synthesis, the sub themes within these key features were collated into four main theme groups, although some sub themes overlap: 1) attitude of the midwife, 2) communication, information and decision making, 3) support, and 4) control and confidence in midwives (Figure 2).

Attitude of the midwife

Experiencing the midwife's interaction as disaffirming significantly correlated with PTSD-PC (Sorenson & Tschetter, 2010). The attitude of the midwife was important (Nicholls & Ayers, 2007; Nyberg et al., 2010) with lack of respect (Nyberg et al., 2010), being *humiliated* (Menage, 1993; Nicholls & Ayers, 2007), being *dismissed* (Allen, 1998; Ballard et al., 1995; Beck, 2004; Menage, 1993) and the midwife being *disinterested* (Tham et al., 2010) reported. The midwife's attitude and degree to which women's views were respected were significant (Menage, 1993). Women described QPI using words such as: *dehumanising* (Nicholls and Ayers, 2007); *degrading* (Menage, 1993); or *betraying trust* (Beck, 2004). Some women expressed feeling *violated or raped* (Beck, 2004; Menage, 1993), alongside being physically restrained or having movement restricted (Nicholls and Ayers, 2007).

"I was trying to cover my bottom by holding the gown, and a nurse took my hands from the gown. So, I felt raped and my dignity was taken from me" (Beck, 2004 p32) Being ignored was frequently identified (Allen, 1998; Ballard et al., 1995; Beck, 2004; Nicholls & Ayers, 2007) and significant (Menage, 1993), and was the most frequent subcategory in the hotspot of 'interpersonal difficulties' (Harris and Ayers, 2012) accounting for 30% of the thematic content. Three studies found that only women with PTSD-PC expressed anger or aggressiveness at their treatment by midwives (Ayers, 2007; Ballard et al., 1995; Beck, 2004) with anger being significantly more likely as a result of interpersonal factors than other factors (Harris and Ayers, 2012). Two studies reported that the majority of women found midwives to be *kind and supportive* (Anderson and McGuinness, 2008) or *nice and friendly* (Tham et al., 2010). However, Tham et al. (2010) contradict themselves by reporting that more than half the women described midwives as uninterested, providing insufficient support, and limited in their communication. Within interpersonal difficulties, midwifery care factors, particularly communication and support, were highlighted features (Harris and Ayers, 2012).

Communication, information and decision making

Not coping or having a low sense of coherence was highlighted as important, augmented by a poor understanding of what is happening and receiving poor information (Ayers, 2007; Nicholls & Ayers, 2007; Nyberg et al., 2010), with poor information being a significant factor (Menage, 1993). For women with PTSD-PC, *having a poor understanding of what is going on* related to how things were done or communicated (Ayers, 2007).

"I didn't really understand what they were doing" (Ayers, 2007 p258).

Some women felt midwives had poor communication skills (Harris & Ayers, 2012; Nicholls & Ayers, 2007) or neglected to communicate with them (Beck, 2004; Tham et al., 2010). Many women felt they were not involved in decision making or lacked choice (Nicholls & Ayers, 2007; Nyberg et al., 2010). This lack of communication extended to whether consent was obtained (Beck, 2004), which was a significant factor (Menage, 1993). Being able to ask questions lessened PTSD-PC symptoms, even when demographics, prior trauma, and obstetric history were accounted for (De Schepper et al., 2015).

Support

Lack of support significantly correlated with PTSD-PC, being particularly predictive of PTSD-PC in women with prior trauma or who received birth interventions, even when mental health issues were accounted for (Ford and Ayers, 2011). Lack of support led to feeling *alone* (Ballard et al., 1995), *isolated* (Allen, 1998), *abandoned* (Allen, 1998; Beck, 2004; Harris & Ayers, 2012; Nicholls & Ayers, 2007; Nyberg et al., 2010), or out of control (Allen, 1998), but may only be a factor for women with high anxiety (Cigoli et al., 2006).

“I just felt really abandoned and alone...I felt really unsafe with those midwives because I knew if I had a haemorrhage in that bed and I pressed the emergency buzzer and they would ignore me” (Nicholls and Ayers, 2007 p498)

An unmet desire for support from midwives significantly contributed towards developing PTSD-PC (Cigoli et al., 2006). Harris and Ayers (2012) noted that in general, women with obstetric or neonatal complications are acknowledged to require more support, also identified by Tham et al. (2010) who described that only women who experienced objectively traumatic events automatically received a follow-up postnatal discussion, while, others, even though they desired one, were not offered this.

Control and confidence in midwives

Regarding the development of PTSD-PC, lack of control or powerlessness during labour and birth were identified as important (Allen, 1998; Ballard et al., 1995; Beck, 2004; Tham et al., 2010), and significant (De Schepper et al., 2015; Harris & Ayers, 2012; Menage, 1993).

Some women described having no control (Allen, 1998), or feeling that midwives were over controlling (Nicholls and Ayers, 2007), which differs from feeling midwives are in control of the situation, which was a significant protective factor (De Schepper et al., 2015). One study found lack of control was significantly correlated with perception of midwife support (Ford and Ayers, 2011). Women's sense of control was improved when involved in decision

making (Tham et al., 2010). Perceiving midwives to be incompetent or unprofessional was highlighted as an issue (Allen, 1998; Ballard et al., 1995; Beck, 2004; Tham et al., 2010), which maintained distress when reassurance was lacking or women felt midwives were panicking or not in control (Allen, 1998; De Schepper et al., 2015; Nicholls & Ayers, 2007).

“I remember believing that the labor and delivery team would know what was right and would be there should things go wrong. That was my first mistake. They didn’t and they weren’t” (Beck, 2004 p33)

Figure 2 Summary of themes within findings

Women’s expectations

Midwives to have positive attitude.
To be seen as more than a means to an end.
To be communicated with.
To have safe care.
To trust midwives.
That midwives are competent.

Women’s experiences

Attitude of the midwife

Lack of respect.
Being ignored.
Being dismissed, dehumanised, degraded, violated.
Midwives are hostile, disaffirming, disinterested.

Communication, information and decision-making

Lack of information.
Unable to question.
Not involved in decision-making.
Poor communication skills of midwives.
Lack of communication
Being overruled

Support

Feeling abandoned, isolated, unsafe.
Lack of support.

Control and confidence in midwives

Lack choice, consent.
Unable to rely on or trust.
Midwives incompetent, unprofessional, nervous.

Women's expectations

How women perceive the midwife's attitude; communication, information and decision making; support; and control and confidence in midwives, may relate to their expectations. In the review studies, many women felt their expectations were unmet (Allen, 1998; Ayers, 2007; Ballard et al., 1995; Beck, 2004; Nicholls & Ayers, 2007). Women expect midwives to be competent and hold positive attitudes (Nicholls & Ayers, 2007), and feel it is not too much to expect supportive and safe care (Beck, 2004; Nicholls & Ayers, 2007). When this is not their perceived experience women feel fearful and unsafe (Nicholls & Ayers, 2007), betrayed and powerless (Beck, 2004). Some women desired that midwives understand the effect poor QPI can have on them (Nicholls & Ayers, 2007). Figure 2.

Considerations for midwives

Several review studies highlighted the importance of respecting women's needs regarding information, control, and support, alongside a call to treat all women as potential survivors of trauma, given the impossibility of knowing who is potentially vulnerable (Beck, 2004; Menage, 1993; Tham et al., 2010). The suggestion by Sorenson and Tschetter (2010) that QPI is not an innate skill, but needs taught and assessed, further reflected in the calls to educate midwives about PTSD-PC and clinical practices that contribute to its development (Allen, 1998; Ayers, 2007; De Schepper et al., 2015; Nicholls & Ayers, 2007), as well as the urgent need for guidelines (Allen, 1998; Ayers, 2007; Beck, 2004; De Schepper et al., 2015), should be noted.

Discussion

While the quality of review studies varied, this review offers an important overview of current knowledge regarding the aspects of QPI that contribute to the development of PTSD-PC.

The relationship between a woman and her midwife, core to QPI, is considered distinct from other healthcare professional/client relationships (Kirkham, 2000), with a shift from the theoretical model of *vigil of care*, or surveillance perspective, to that of *care as gift*, characterised by trust and generosity (Fox, 1999), and focused on *engaging and responding to the other* (Walsh, 2007). Therefore, the finding that interpersonal difficulties, especially being ignored, were the strongest predictors for developing PTSD-PC is especially important. The four main theme groups of the narrative synthesis suggest that even though a midwife may appropriately perform her clinical duties, a negative perception by the woman regarding

the midwife's 'way of being' with her, can significantly contribute to the development of PTSD-PC. This highlights the importance of 'how' rather than 'what' care is provided. In other words, woman's constructions of midwives' attitudes and behaviour towards them, reflect their views of how they perceived they were treated as opposed to physically what happened to them. The further finding that women lacked confidence in their midwives, being related to either the midwife's competency or level of control in the situation, reflect that women need to rely on and trust their midwives at a time of vulnerability (Briscoe, Lavender, & McGowan, 2016; Simkin & Hull, 2011). These assertions are strengthened by the finding that an unmet desire for support was a significant factor predisposing the development of PTSD-PC.

While QPI has been further highlighted as a key issue in a recent large international birth trauma study (Reed, Sharman, & Inglis, 2017), It is important to note that the population of women who develop full PTSD-PC (4%) is a minority and that on the whole women more often perceive midwives to be affirming rather than disaffirming (Sorenson & Tschetter, 2010), in keeping with findings of Garthus-Niegal et al. (2013) that *on average, the women who were not very frightened during birth, rated their birth as a good overall experience, and felt well taken care of.*

The importance of 'how' along with 'what' is reflected in the Care Quality Commission values of excellence (high-performance), caring (treating everyone with dignity and respect), and integrity (doing the right thing) (CQC, 2017). Furthermore, midwives have a duty to provide safe care and use appropriate interpersonal skills in terms of both physical and psychological wellbeing (Knight et al., 2016; NMC, 2009; WHO, 2017). Given the potential impact of PTSD-PC on the wellbeing of women and children, the review findings suggest that optimisation of women's perceptions of QPI with a view to reducing subsequent development of PTSD-PC, is of significant clinical importance.

Implications for future research

This review suggests that to optimise QPI some midwives may need to change their practice. Review studies offer suggested changes and call for guidelines and education to be developed. NICE (2017) highlight the need to identify and understand potential barriers to change, noting vital first steps to be awareness and knowledge. Midwives need awareness of their role in women's perception of QPI, and knowledge regarding required changes in behaviour. This review highlights the midwife's role in women's perception of QPI, however the two high quality studies that focussed on QPI were quantitative, with limited insight into

women's lived experiences. While other review studies offered valuable insight into women's perception of QPI, their focus on QPI was limited by being only a part of the bigger picture of the subjective experience. Deeper understanding of required behaviour changes could be gained through high quality qualitative research, focussed specifically on the perception of QPI from the perspective of women with PTSD-PC. Furthermore, to enable midwives to change it is essential to understand how midwives experience their interactions with women. Midwives' 'way of being' may be influenced by their access to resources, support, training, rest, nutrition, and hydration (Edwards et al., 2016; RCM, 2016). In addition, personal concerns and systemic pressures are often significant (Edwards et al., 2016; Pezaro, Clyne, Turner, Fulton, & Gerada, 2015). This review shows that current research regarding the role of QPI in the development of PTSD-PC primarily focuses on women's experiences. Qualitative exploration of midwives' experiences of their interactions with women would give insight into midwives understanding and knowledge regarding QPI, and their needs in terms of education, guidance, and support to optimise QPI.

Limitations

The systematic approach to this review is a strength. However, the limitation of a single reviewer had potential to bias the collation and presentation of findings. The only study of teenage women (Anderson and McGuinness, 2008) was of low quality, and its findings regarding positive QPI have not been replicated so it is not possible to say if this is unique to teenage women. Nevertheless, this review has enabled synthesis of existing research and highlights a significant connection between women's perceptions of QPI, and subsequent development of PTSD-PC.

Conclusion

This review identified the significance of women's negative perceptions of QPI in the development of PTSD-PC and identified four overall themes relating to negative aspects of QPI: (1) attitude of the midwife, (2) communication, information and decision making, (3) support, and 4) control and confidence in midwives. Optimising women's perceptions of QPI may require changes in the behaviour of midwives with regard to each of these themes, and midwives should be supported through education and guidance relating to their role in women's perceptions of QPI. This education and guidance needs informed by high quality qualitative research aimed to more deeply understand women's experiences of QPI,

midwives' understanding and knowledge regarding QPI, and midwives' experiences of interacting with women.

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- Alcorn, K. L., O'Donovan, A., Patrick, J. C., Creedy, D., & Devilly, G. J. (2010). A prospective longitudinal study of the prevalence of post-traumatic stress disorder resulting from childbirth events. *Psychological Medicine*, 40(11), 1849-1859. doi: 10.1017/S0033291709992224
- Allen, S. (1998). A qualitative analysis of the process, mediating variables and impact of traumatic childbirth. *Journal of Reproductive and Infant Psychology*, 16(2-3), 107-131. doi: 10.1080/02646839808404563
- Anderson, C., & McGuinness, T. M. (2008). Do teenage mothers experience childbirth as traumatic? *Journal of Psychosocial Nursing and Mental Health Services*, 46(4), 21-24. doi: 10.3928/02793695-20080401-01
- APA. (1980). *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition. Washington, DC.: American Psychiatric Association.
- APA. (1987). *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition revised. Washington, DC.: American Psychiatric Association.
- APA. (1994). *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition. Washington, DC.: American Psychiatric Association.
- APA. (2000). *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition. Text-revision. . Washington, DC.: American Psychiatric Association.
- APA. (2013). *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition. Washington, DC.: American Psychiatric Association.
- Ayers, S. (2004). Delivery as a traumatic event: prevalence, risk factors, and treatment for postnatal posttraumatic stress disorder. *Clinical Obstetrics And Gynecology*, 47(3), 552-567
- Ayers, S. (2007). Thoughts and emotions during traumatic birth: a qualitative study. *Birth: Issues in Perinatal Care*, 34(3), 253-263
- Ayers, S., Eagle, A., & Waring, H. (2006). The effects of childbirth-related post-traumatic stress disorder on women and their relationships: A qualitative study. *Psychology, Health & Medicine*, 11(4), 389-398. doi: 10.1080/13548500600708409
- Ballard, C. G., Stanley, A. K., & Brockington, I. F. (1995). Post-traumatic stress disorder (PTSD) after childbirth. *The British Journal of Psychiatry*, 166(4), 525-528. doi: 10.1192/bjp.166.4.525
- Barlow, J., Bennett, C., Midgley, N., Larkin, S. K., & Wei, Y. (2013). Parent-infant psychotherapy for improving parental and infant mental health. from Cochrane Database of Systematic Reviews
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010534.pub2/full>
- Bauer, A., Parsonage, M., Knapp, M., Lemmi, V., & Adelaja, B. (2014). *The costs of perinatal mental health problems*. <http://everyonesbusiness.org.uk/wp-content/uploads/2014/12/Embargoed-20th-Oct-Final-Economic-Report-costs-of-perinatal-mental-health-problems.pdf>.
- Beck, C. T. (2004). Birth trauma: in the eye of the beholder. *Nursing Research*, 53(1), 28-35
- Beck, C. T., Gable, R. K., Sakala, C., & Declercq, E. R. (2011). Posttraumatic Stress Disorder in New Mothers: Results from a Two-Stage U.S. National Survey. *Birth: Issues in Perinatal Care*, 38(3), 216-227. doi: 10.1111/j.1523-536X.2011.00475.x
- Berger, r. (2015). Now I see it, now I don't: researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15(2), 219-234
- Briscoe, L., Lavender, T., & McGowan, L. (2016). A concept analysis of women's vulnerability during pregnancy, birth and the postnatal period. *Journal Of Advanced Nursing*, 72(10), 2330-2345. doi: 10.1111/jan.13017
- Brockington, I., Butterworth, R., & Glangeaud-Freudenthal, N. (2017). An international position paper on mother-infant (perinatal) mental health, with guidelines for clinical

- practice. *Archives of Women's Mental Health*, 20(1), 113-120. doi: 10.1007/s00737-016-0684-7
- CASP. (2017). *CASP checklists*. Retrieved from <http://www.casp-uk.net>
- Charmaz, K. (2006). *Constructing Grounded Theory*. London: SAGE.
- Cigoli, V., Gilli, G., & Saita, E. (2006). Relational factors in psychopathological responses to childbirth. *Journal of Psychosomatic Obstetrics & Gynecology*, 27(2), 91-97. doi: 10.1080/01674820600714566
- CQC. (2017). *Who we are: Our values*. Retrieved from <http://www.cqc.org.uk/about-us/our-purpose-role/who-we-are>
- CRD. (2009). Systematic Reviews CDR's guidance for undertaking reviews in health care.
- Czarnocka, J., & Slade, P. (2000). Prevalence and predictors of post-traumatic stress symptoms following childbirth. *British Journal of Clinical Psychology*, 39 (Pt 1), 35-51. doi: 10.1348/014466500163095
- Davies, J., Slade, P., Wright, I., & Stewart, P. (2008). Posttraumatic stress symptoms following childbirth and mothers' perceptions of their infants. *Infant Mental Health Journal*, 29(6), 537-554. doi: 10.1002/imhj.20197
- De Schepper, S., Vercauteren, T., Tersago, J., Jacquemyn, Y., Raes, F., & Franck, E. (2015). Post-Traumatic Stress Disorder after childbirth and the influence of maternity team care during labour and birth: A cohort study. *Midwifery*. doi: 10.1016/j.midw.2015.08.010
- Edwards, N., Gilbert, A., Mander, R., McHugh, N., Patterson, J., & Murphy-Lawless, J. (2016). Are staffing shortages changing the culture of midwifery? *The Practising Midwife*, 19(3), 12-16
- Fenech, G., & Thomson, G. (2014). Tormented by ghosts from their past': A meta-synthesis to explore the psychosocial implications of a traumatic birth on maternal well-being. *Midwifery*, 30(2), 185-193. doi: 10.1016/j.midw.2013.12.004
- Finlay, L. (2008). A Dance Between the Reduction and Reflexivity: Explicating the "Phenomenological Psychological Attitude". *Journal of Phenomenological Psychology*, 39(1), 1-32. doi: 10.1163/156916208X311601
- Foa, E. B., Cashman, L., Jaycox, L., & Perry, K. (1997). The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic Diagnostic Scale. *Psychological Assessment*, 9(4), 445-451. doi: 10.1037/1040-3590.9.4.445
- Foa, E. B., Riggs, D. S., Dancu, C. V., & Rothbaum, B. O. (1993). Reliability and validity of a brief instrument for assessing post-traumatic stress disorder. *Journal of Traumatic Stress*, 6(4), 459-473. doi: 10.1002/jts.2490060405
- Ford, E. (2013). "She was perfect, a beautiful baby girl... only sleeping": Stillbirth and PTSD in the era of DSM-5 Retrieved from <https://blogs.city.ac.uk/birthptsd/tag/stillbirth/>
- Ford, E., & Ayers, S. (2011). Support during birth interacts with prior trauma and birth intervention to predict postnatal post-traumatic stress symptoms. *Psychology & Health*, 26(12), 1553-1570. doi: 10.1080/08870446.2010.533770
- Fox, N. (1999). *Beyond Health: Postmodernism and Embodiment*. London: Free Association Books.
- Garthus-Niegel, S., Soest, T., Vollrath, M., & Eberhard-Gran, M. (2013). The impact of subjective birth experiences on post-traumatic stress symptoms: a longitudinal study. *Archives of Women's Mental Health*, 16(1), 1-10. doi: 10.1007/s00737-012-0301-3
- Gottvall, K., & Waldenström, U. (2002). Does a traumatic birth experience have an impact on future reproduction? *BJOG: An International Journal of Obstetrics & Gynaecology*, 109(3), 254-260 257p

- Green, B. L., Lindy, J. D., & Grace, M. C. (1985). Posttraumatic stress disorder: Toward DSM-IV. *Journal of Nervous and Mental Disease*, 173(7), 406-411. doi: 10.1097/00005053-198507000-00004
- Green, J. M., & Baston, H. A. (2003). Feeling in control during labor: concepts, correlates, and consequences. *Birth: Issues in Perinatal Care*, 30(4), 235-247 213p
- Grekin, R., & O'Hara, M. W. (2014). Prevalence and risk factors of postpartum posttraumatic stress disorder: A meta-analysis. *Clinical Psychology Review*, 34(5), 389-401. doi: 10.1016/j.cpr.2014.05.003
- Harris, R., & Ayers, S. (2012). What makes labour and birth traumatic? A survey of intrapartum 'hotspots'. *Psychology & Health*, 27(10), 1166-1177. doi: 10.1080/08870446.2011.649755
- Horowitz, M. J., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. *Psychosomatic Medicine*, 41(3), 209-218. doi: 10.1097/00006842-197905000-00004
- INPPR. (2017). *International network for perinatal PTSD research*. Retrieved from <https://blogs.city.ac.uk/birthptsd/>
- Kirkham, M. (2000). How can we relate? In M. Kirkham (Ed.), *The Midwife-Mother Relationship*. London: MacMillan.
- Knight, M., Nair, M., Tuffnell, D., Kenyon, S., Shakespeare, J., Brocklehurst, P., & Kurinczuk, J. J. (2016). *Saving Lives, Improving Mothers' Care. surveillance of maternal deaths in the UK 2012-14 and lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009-14*. <https://www.npeu.ox.ac.uk/downloads/files/mbrace-uk/reports/MBRRACE-UK%20Maternal%20Report%202016%20-%20website.pdf>.
- McKenzie-McHarg, K., Ayers, S., Ford, E., Horsch, A., Jomeen, J., Sawyer, A., . . . Slade, P. (2015). Post-traumatic stress disorder following childbirth: an update of current issues and recommendations for future research. *Journal of Reproductive & Infant Psychology*, 33(3), 219-237 219p. doi: 10.1080/02646838.2015.1031646
- Menage, J. (1993). Post-traumatic stress disorder in women who have undergone obstetric and/or gynaecological procedures: A consecutive series of 30 cases of PTSD. *Journal of Reproductive and Infant Psychology*, 11(4), 221-228. doi: 10.1080/02646839308403222
- Motlagh, H. (2010). Impact of Event Scale-Revised. *Journal of Physiotherapy*, 56, 203
- NICE. (2014). *Antenatal and postnatal mental health: Clinical management and service guidance*. London: T. B. P. S. a. T. R. c. o. Psychiatrists <https://www.nice.org.uk/guidance/cg192/evidence/full-guideline-193396861>.
- NICE. (2017). *How to change practice: Understand, identify and overcome barriers to change*. Retrieved from <https://www.nice.org.uk/media/default/about/what-we-do/into-practice/support-for-service-improvement-and-audit/how-to-change-practice-barriers-to-change.pdf>
- Nicholls, K., & Ayers, S. (2007). Childbirth-related post-traumatic stress disorder in couples: a qualitative study. *British Journal of Health Psychology*, 12(4), 491-509. doi: 10.1348/135910706X120627
- NMC. (2009). *Standards for competence for registered midwives*: Nursing and Midwifery Council.
- Nyberg, K., Lindberg, I., & Öhring, K. (2010). Midwives' experience of encountering women with posttraumatic stress symptoms after childbirth. *Sexual & Reproductive Healthcare: Official Journal Of The Swedish Association Of Midwives*, 1(2), 55-60. doi: 10.1016/j.srhc.2010.01.003

- Otley, H. (2011). Fear of childbirth: Understanding the causes, impact and treatment. *British Journal of Midwifery*, 19(4), 215-220 216p
- Parfitt, Y. M., & Ayers, S. (2009). The effect of post-natal symptoms of post-traumatic stress and depression on the couple's relationship and parent-baby bond. *Journal of Reproductive & Infant Psychology*, 27(2), 127-142. doi: 10.1080/02646830802350831
- Peplau, H. E. (1953). *Interpersonal relations in nursing*. New York: G.P. Putnam's and Sons.
- Pezaro, S., Clyne, W., Turner, A., Fulton, E. A., & Gerada, C. (2015). 'Midwives Overboard!' Inside their hearts are breaking, their makeup may be flaking but their smile still stays on. *Women And Birth: Journal Of The Australian College Of Midwives*. doi: 10.1016/j.wombi.2015.10.006
- Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., . . . Duffy, S. (2006). Guidance on the Conduct of Narrative Synthesis in Systematic Reviews. *ESRC Methods Programme*,
- RCM. (2016). Royal College of Midwives campaign for healthy workplaces delivering high quality care.
- Reed, R., Sharman, R., & Inglis, C. (2017). Women's descriptions of childbirth trauma relating to care provider actions and interactions. *BMC Pregnancy And Childbirth*, 17(1), 21-21. doi: 10.1186/s12884-016-1197-0
- Simkin, P., & Hull, K. (2011). Pain, Suffering, and Trauma in Labor and Prevention of Subsequent Posttraumatic Stress Disorder. *Journal of Perinatal Education*, 20(3), 166-176 111p. doi: 10.1891/1058-1243.20.3.166
- Simpson, M., & Catling, C. (2015). Understanding psychological traumatic birth experiences: A literature review. *Women And Birth: Journal Of The Australian College Of Midwives*. doi: 10.1016/j.wombi.2015.10.009
- Slade, P. (2006). Towards a conceptual framework for understanding post-traumatic stress symptoms following childbirth and implications for further research. *Journal of Psychosomatic Obstetrics & Gynecology*, 27(2), 99-105. doi: 10.1080/01674820600714582
- Sorenson, D. S. (2003). Healing traumatizing provider interactions among women through short-term group therapy. *Archives of Psychiatric Nursing*, 17(6), 259-269. doi: 10.1053/j.apnu.2003.10.002
- Sorenson, D. S., & Tschetter, L. (2010). Prevalence of negative birth perception, disaffirmation, perinatal trauma symptoms, and depression among postpartum women. *Perspectives in Psychiatric Care*, 46(1), 14-25. doi: 10.1111/j.1744-6163.2009.00234.x
- Tham, V., Ryding, E. L., & Christensson, K. (2010). Experience of support among mothers with and without post-traumatic stress symptoms following emergency caesarean section. *Sexual & Reproductive Healthcare: Official Journal Of The Swedish Association Of Midwives*, 1(4), 175-180. doi: 10.1016/j.srhc.2010.06.004
- United Nations. (2015). The Millennium Development Goals Report.
- University of Toronto. (2017). *Searching the literature: a guide for nurses*. Retrieved from <http://guides.library.utoronto.ca/c.php?g=250707&p=1680563>
- Walsh, D., J. (2007). A birth centre's encounters with discourses of childbirth: how resistance led to innovation. *Sociology of Health and Illness*, 29(2), 216-232. doi: 10.1111/j.1467-9566.2007.00545.x
- Watson, C. G., Juba, M. P., Manifold, V., Kucala, T., & Anderson, P. E. D. (1991). The PTSD interview: Rationale, description, reliability, and concurrent validity of a DSM-III based technique. *Journal of Clinical Psychology*, 47(2), 179-188

- Weiss, D. S., & Marmar, C. R. (1997). The Impact of Event Scale—Revised. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD*. (pp. 399-411). New York, NY, US: Guilford Press.
- WHO. (2017). *Maternal Mental Health*. World Health Organisation. Retrieved from http://www.who.int/mental_health/maternal-child/maternal_mental_health/en/
- Wijma, K., Söderquist, J., & Wijma, B. (1997). Posttraumatic stress disorder after childbirth: A cross sectional study. *Journal of Anxiety Disorders*, 11(6), 587-597. doi: 10.1016/S0887-6185(97)00041-8
- Yildiz, P. D., Ayers, S., & Phillips, L. (2017). The prevalence of posttraumatic stress disorder in pregnancy and after birth: A systematic review and meta-analysis. *Journal of Affective Disorders*, 208, 634-645. doi: 10.1016/j.jad.2016.10.009