



Fear of childbirth: psychological and medical interventions

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Introduction

Childbirth is a highly complex and subjective life experience for women. Despite significant advances in maternity care provision (Iravani, Zarean, Janghorbani, & Bahrami, 2015), women can experience negative appraisals about pregnancy and birth if they have high levels of fear. Fear of childbirth (FOC) can have long-term implications for both mother and baby (Nilsson et al., 2018). Women are more at risk of pre-and post-natal mental health difficulties (Veringa, et al., 2016), and babies development can be affected (Schetter & Tanner, 2012).

FOC can also influence women's decision making about delivery (Eide, Morken, & Bævre, 2019). In Europe, between 7% and 22% of caesarean sections on maternal request (CSMR) were performed due to FOC (Saisto & Halmesmääki, 2003). The number of caesarean sections (CS) without medical justifications have increased globally (Mascarello, Horta, & Silveira, 2017). With regards to maternity services in the United Kingdom, they are currently not required to ask women about FOC (Richens, Hindley, & Lavender, 2015). Subsequently, the identification of FOC and the support offered to women varies (O'Brien, Garbett, Burden, Winter, & Siassakos, 2017).

Research also suggests that some maternity clinicians view CSMR to be problematic, due to dilemmas concerning respecting women's autonomy and evidence-based practice (Karlström, Engström-Olofsson, Nystedt, Thomas, & Hildingsson, 2009). CS can be lifesaving when medically indicated, yet they still pose significant risks to women (Mascarello et al., 2017).

The National Institute of Clinical Excellence (NICE, 2013) guidance states that women who request a CS should be offered support to consider a vaginal birth, with elective CS being a last resort. A review of the literature summarising the effectiveness of psychological interventions to support women with FOC suggests that the findings are still equivocal; due to resource constraints, briefer interventions have been recommended (Striebich, Mattern, & Ayerle, 2018).

More research is needed to understand and support women-centred childbirth further (D'Souza, 2013). Therefore, the development of briefer psychological interventions aimed at preventative care in order, to support women with FOC during the perinatal period is a clinical priority, along with the need to explore further how maternity services can support women's rights and prevent CSMR driven by fear.

This thesis seeks to address these gaps in the literature. Chapter One is a mixed-methods systematic review that synthesises clinicians' attitudes regarding CSMR. This provides a greater understanding of how clinicians' views influence CSMR decision-making outcomes and how this can impact upon women's birth satisfaction. Chapter Two offers an empirical study, of whether a single-session Acceptance and Commitment Therapy (ACT) intervention was acceptable to women during primigravadae. Such an approach could have the potential to be cost effective and beneficial to women. Together, the papers highlight the importance of exploring maternity clinicians' attitudes, as negative views can influence women's experience of FOC, as well as the need to support women's wellbeing effectively during the perinatal period. Both of these factors have implications for the delivery of safe, effective antenatal care.

Chapter One: *What attitudes do maternity staff hold towards elective caesareans by maternal request? A systematic review and meta-synthesis.*

This review synthesised the findings of 21 studies (16 quantitative, four qualitative and one mixed-methods). Included papers fulfilled the eligibility and methodological quality criteria and they reported on attitudinal factors that influenced obstetricians', gynaecologists', and midwives' decision-making to perform CSMR.

The findings illustrate that maternity clinicians hold a wide range of attitudes and that CSMR decision-making is multifactorial. Five themes emerged following thematic synthesis: clinicians' personal beliefs, clinicians' beliefs about the psychological reasons underlying women's requests, risk perception, societal culture and healthcare systems.

This review shows that attitudinal factors influenced maternity clinicians' CSMR appraisal and decision-making outcomes. It provides further insight into 'why' clinicians perceive CSMR to pose personal and professional dilemmas and also highlights that clearer, culturally relevant, women-centred CSMR guidance is needed. This information is valuable to services regarding the possible barriers to change and evidence-based practice as well as how iatrogenic factors such as clinicians' attitudes can impact upon women's levels of birth satisfaction. Future research should establish how clinicians can maintain women's rights but also decrease unnecessary CSMR.

Chapter Two: *The acceptability of a single Acceptance & Commitment Therapy (ACT) session to support women to cope with the uncertainties of childbirth in a first pregnancy.*

FOC can cause women to have a negative experience of pregnancy and birth (Wigert et al., 2020). The main mechanism thought to underpin FOC is intolerance of uncertainty (IOU)

(Sheen & Slade, 2018), a type of cognitive bias that leads to experiential and emotional avoidance (Birrell, Meares, Wilkinson, & Freeston, 2011). Cognitive Behavioural Therapy (CBT), focuses on changing unhelpful thoughts and behaviours linked to emotional distress (Hoffman, Sawyer, & Fang, 2010), whereas ACT proposes an alternative approach to tolerating uncertainty. Mindfulness and value-based approaches are used to help individuals ‘be more present, be more open to experience and do what matters’ (Hayes, Strosahl, & Wilson, 1999).

No study has explored whether using ACT delivered via a single session is acceptable for women during a first pregnancy. The objectives were: 1) to determine whether an appropriate group of women could be recruited and retained; 2) to ascertain whether a single-session ACT intervention is acceptable to this population; 3) to discern whether suitable measures could be identified to explore changes in psychological distress, FOC, value-driven behaviour; and 4) to identify the parameters for a clinical trial.

The findings suggest that a single session of ACT is acceptable during the perinatal period. The findings also question whether IOU is the mechanism of change. This study is an important step in the development of complex interventions (National Institute of Health Research, 2015). A pilot randomised control trial (RCT) is now warranted.

Appendices

Additional information supplements both chapters, and includes author guidelines, information sheets, and measures. Of particular importance are the ACT materials (Appendices G & H).

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Chapter One

*What attitudes do maternity staff hold towards elective
caesareans by maternal request?
A systematic review and metasynthesis*

Sarah Howard

Declaration of interests: None.

For submission to PLoS ONE (author guidelines in Appendix A)

Keywords: Systematic review; meta-synthesis; maternal request; elective; maternal choice; cesarean section; caesarean section; c-section; attitudes; beliefs; views; opinions; Obstetricians, Gynaecologists; Midwives

Abstract

The rate of caesarean section (CS) across the globe is increasing. The identification of attitudes held by obstetricians, gynaecologists, and midwives about caesarean sections on maternal request (CSMR) is important, as their views may influence decision-making outcomes.

This systematic review used a meta-synthesis to synthesise quantitative, qualitative and mixed-methods literature to explore this phenomenon. Six databases (PsycINFO, Medline, CINAHL Plus, Scopus, Web of Science and PubMed) and reference lists were searched for literature published up until 2019, with 1365 articles screened.

Twenty-three papers fulfilled the eligibility criteria (18 quantitative, four qualitative and one mixed-methods). Methodological quality was assessed. Two quantitative papers of low quality were excluded, leaving 21 papers in the review.

CSMR decision-making was multifactorial; clinicians held a range of beliefs which influenced CSMR decision-making. Five themes emerged; 'clinicians' personal beliefs' (about self, others, world), 'clinicians' beliefs about the psychological reasons underlying women's requests (purported traits), 'risk perception' (characteristics and severity), 'societal culture' (population norms) and healthcare systems' (organisation and resources).

This review demonstrates that attitudinal factors influence CSMR appraisal and outcomes. It also highlights that clinician's need clearer, culturally relevant CSMR guidance to inform decision-making. To increase clinicians' awareness of how their beliefs can impact upon women's childbirth satisfaction, increased opportunities for reflective practice are recommended. Further research should explore how to support clinicians to maintain women's rights and reduce unnecessary CSMR.

Introduction

Caesarean sections (CS) are readily available, they can be requested, and they are considered to be 'safe' in high income countries, due to their standards of care [1]. CS performed due to medical complications during childbirth can be lifesaving. For example, when women experience hypertensive disease or when babies are distressed or breach [2]. Yet, despite the importance of 'safe' CS being available, the procedure poses risks to women. Risks include: infection [2], reduced fertility [3], risk of uterine rupture and placental implantation [4], prolonged recovery [5], and psychological distress [6]. There are also increased risks of respiratory difficulties for babies [4].

The optimal rates of CS are suggested to be between 10% to 15% of births [7]. Since 1985, the number of CS have been increasing at a concerning rate [8], due to improved emergency access as well as indiscriminate use without medical reasoning [2]. During 2015, globally, 21% of births were by caesarean with fifteen countries reporting rates above 40%, including: Brazil, Egypt, and Turkey [9]. In the UK during 2000, the rate of caesarean births was 19.7%, this increased to 26.2% by 2015 [9]. CS rates above the WHO recommendation [7], incur financial burdens and high levels of risk [10].

Caesarean section by maternal request (CSMR) refers to a caesarean birth performed following a woman's request, in the absence of any maternal or foetal medical indications [11]. Estimates of CSMR vary from 1% to 48% in public healthcare systems, to 60% in the private sector [12]. Research regarding the prevalence of CSMR is limited. Global rates of CS suggest they are more frequent in the richest quintiles of low- and middle-income countries. They are also believed to be more frequent in private settings and for low risk births, amongst women who are higher educated [13]. During 2018, in the UK's public healthcare system, 13% of caesarean births were elective [9].

Advantages of an elective caesarean birth (versus vaginal birth or emergency CS) include reduced risks of haemorrhaging, obstetrical trauma, urinary incontinence [11] and less foetal stress [14]. Yet, as highlighted, CS (whether elective or emergency) also pose clinical risks for both mother and baby [2,4].

The Department of Health [15] states that providers should give women ‘choice’ throughout their pregnancy care pathway, regarding the place of birth and obstetrician. Some women however, consider this ‘choice’ to include autonomy over their birth mode. This has meant that CSMR without medical indications have been deemed to be readily available [16]. The National Institute of Clinical Excellence (NICE) [17] states that mental health support should be offered to women who request a CS. If a vaginal birth is not acceptable to women, an elective CS is feasible.

Numerous studies using a variety of research methods (i.e. qualitative designs and observational studies) have investigated why women may request a CS, with themes around childbirth fear, previous trauma, control, and safety being prominent [18,19]. Yet CSMR remains a contentious issue for some organisations and maternity staff. Birthrights [20] published a report regarding the treatment of women who request a CS. The findings suggested that 75% of National Health Service (NHS) Trusts did not have policies which upheld women’s autonomy in this area. This runs contrary to NICE [17] guidance and potentially breaches human rights [20].

The two most important principles of medical ethics which guide maternity clinicians are; ‘to respect women’s wishes’ (autonomy) and ‘to cause no harm’ (non-maleficence). Declining to perform a CSMR negates the principle of autonomy; presenting a moral dilemma, as expert clinical judgement runs the risk of being devalued [16]. In countries with public healthcare, where maternity services may be strained, performing CSMR affects the rights of others who

may need these services. Yet, the obligation is to prioritise the woman's interest over that of society [21].

However, the Birthrights report [20] suggested that CSMR was met with judgemental attitudes and barriers from maternity clinicians, in contrast to compassion and support. This is important to explore as potential attitudinal barriers may negatively impact upon women's childbirth satisfaction as well as the emotional and physical safety of women and their babies.

Systematic reviews to date have focussed on identifying organisational interventions to reduce high rates of CS [22] and to review evidence-based guidance for surgical decision-making [23]. Clinicians' beliefs, characteristics, and the healthcare system provision have also been found to influence decision-making to perform a CS [24]. Although there is increasingly robust evidence to suggest the role of clinicians' beliefs impacting upon rates of CS more generally, no review has explored what attitudes clinicians hold specifically about CSMR and how these may affect decision-making outcomes.

As this is the first review to explore this question, a broad approach was adopted to fully capture the available information to date regarding clinician's attitudes towards CSMR. The review did not have any limiters regarding country of origin or date, and it integrated both qualitative and quantitative data. The findings of the review also serve as a springboard specifying current gaps in understanding.

Preliminary scoping searches in Google Scholar using the terms 'midwife', 'obstetrician', 'gynaecologist' AND 'attitudes' AND 'CSMR' were carried out to ensure the validity of the proposed idea, to avoid duplication and to ensure enough articles could be retrieved to conduct the synthesis. Relevant papers were identified which highlighted potential psychosocial and contextual factors influenced clinicians' appraisals of CSMR [25,26]. Appraisals included;

beliefs about the benefits of CS, women's reports of a traumatic labour and valuing maternal choice [25,26].

Aim

This systematic review aims to combine, summarise, and synthesise findings from all the available studies to date which report on attitudinal factors which influence obstetricians, gynaecologists, and midwives' decision-making to perform CSMR. Identifying what attitudes clinicians hold about CSMR would enable a greater understanding of how these factors may influence their decision-making as well as highlight any gaps in understanding. This in turn, may help to inform the development of health policies aimed at improving maternity care [27].

Method

Pre-registration

The review protocol was pre-registered with the International Prospective Register of Systematic Reviews (PROSPERO) registration number CRD42020160067.

Design

This systematic review and metasynthesis follows the guidance outlined by PRISMA [28]. It consists of four stages, modelled on Lucas et al. [29] framework.

Step 1: Data collection and independent review of studies which conformed to the research aim. Published studies were identified using an agreed strategy, via a scoping search followed by a systematic search of published articles.

Step 2: Findings of each study were used to identify emergent themes with the aim to combine them together to obtain broader themes to ensure accuracy and reliability of the final findings.

Step 3: Themes were clustered together to identify broad themes and to establish subthemes (where applicable) to describe and present clinicians' attitudes which influence their decision to perform CSMR.

Step 4: Synthesis and description of study findings to address the key issue of attitudinal factors that influence obstetricians, gynaecologists, and midwives CSMR decision-making.

Search strategy

Following numerous scoping searches, six databases (PsycINFO, Medline, PubMed, CINAHL Plus, Scopus and Web of Science) were chosen to enable a broad search and to facilitate the assessment of a comprehensive range of studies for their relevance. The databases were searched for published literature using keyword search terms and controlled vocabulary,

combined with Boolean operators, including: ("midwiv*" OR "midwif*" OR "obstetric*" OR "gynaecolog*" OR "clinician*" OR "specialist*" OR "professional*") AND ("experience*" OR "attitud*" OR "knowledge" OR "perception*" OR "opinion*" OR "view*" OR "perspective*" OR "belief*" OR "feeling*" OR "understanding") AND ("caesarean section" OR "caesarean delivery" OR "caesarean birth" OR "cesarean section" OR "cesarean delivery" OR "cesarean birth" OR "c-section" OR "surgical birth") AND ("maternal request" OR "elective" OR "planned" OR "patient preference" OR "maternal choice" OR "on demand"). The search strategy was developed using PsychINFO and adapted for each database as required. The complete PsychINFO search is presented in Appendix B.

The reference lists of all included studies were cross-checked for additional publications relevant to the review. Authors were contacted to request access to full texts, to seek clarification and to request additional papers that might meet the eligibility criteria (Appendix C). Table 1 provides a summary of the inclusion and exclusion criteria.

Table 1. *Inclusion and Exclusion Criteria*

Inclusion Criteria
<ul style="list-style-type: none">• Full texts available in English• Published peer-reviewed literature• Study design may include qualitative, quantitative, observational, retrospective, prospective, correlational, cross-sectional, surveys and mixed designs• Papers to report quantitative, qualitative, or mixed results• A study sample comprising of Obstetricians and/or Gynaecologists and/or Midwives at any level of experience; working in any setting• Assessment(s) of attitudes – general and/or specific validated measures. The measure may focus on different attitudes e.g. risk, maternal choice• Papers that look at all types of caesarean section but split analyses to ascertain attitudes towards CSMR• No restrictions on date or location of studies
Exclusion Criteria
<ul style="list-style-type: none">• Reviews, editorials, dissertations, textbooks, case studies/case series or letters• Attitudes of other healthcare professionals• Attitudes of women who are pregnant and/or women who have had a baby• Papers which look at all types of caesarean section but do not split analyses to ascertain attitudes towards CSMR• Examines attitudes regarding caesarean sections for specific clinical/medical/legal reasons i.e. pelvic floor disorders, health conditions, defensive practice.• Papers which report data from previous studies to compare results between healthcare professionals• Assessment or exploration of environmental factors which may influence clinicians' decision-making to perform a CSMR i.e. setting, pay grade• Assessment or exploration of clinicians' own preferences for birth• Assessment or exploration of willingness only e.g. yes/no to performing CSMR• Reports views regarding a randomised control trial

Study selection

A three-stage screening protocol was followed. Titles were screened; articles that were evidently inappropriate were excluded. Abstracts were then screened by the author (SH) and a Trainee Clinical Psychologist; articles were excluded where appropriate. Potentially relevant studies were then examined using full texts to determine inclusion in the synthesis. Consensus was sought regarding disagreements through consultation with VF. The search flow diagram is presented in Figure 1.

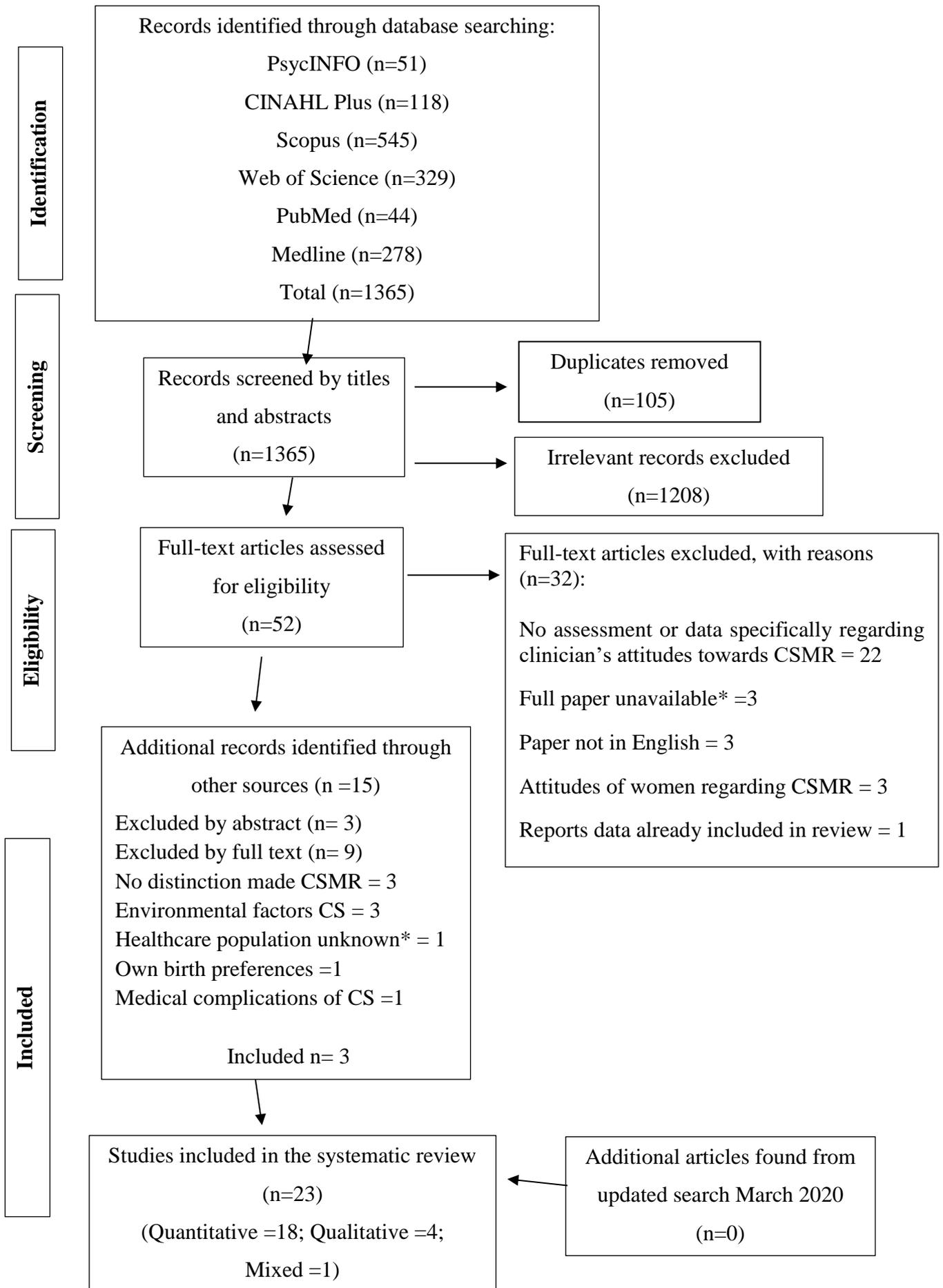


Figure 1. PRISMA flow diagram ²⁸

*Author contacted – no response

Quality Assessment

A risk of bias assessment was conducted to inform the interpretation of the findings from the included studies. Thomas et al.'s [30] 12-point checklist (Appendix D) was re-worded to ascertain the views of clinicians (as opposed to children). This tool is suitable for the assessment of quantitative, qualitative, and mixed-method studies. This allowed for all included studies to be assessed against the same criteria, which optimised the author's ability to synthesise and critique the quality of the evidence. It also enabled the author to evaluate the strengths and weaknesses of each paper consistently. Uncertainty was resolved through consensus with a Trainee Clinical Psychologist and with VF. If a criterion was not met '0' was scored; if a criterion was met '1' was scored. Three categories 'weak' (scores 0-6), 'moderate' (scores 7-9) or 'strong' (scores 10-12) were used to rate the overall quality.

Data Analysis

Lucas et al.'s [29] framework was followed to allow for thematic analysis and meta-synthesis of qualitative findings. Extracted themes were combined and grouped into emergent broader themes and subthemes, then synthesised. Quantitative data was 'qualitised' following the interpretive synthesis recommendations of Noyes et al. [31], so that extracted findings could be combined, and the frequency of themes counted. Cohesion of findings was monitored during research supervision. Meta-analysis was not possible due to large heterogeneity in the data (different populations and assessment measures were utilised).

Results

Study Selection

A total of 1365 records were retrieved from the electronic search, alongside 15 articles obtained through other sources. From which, 23 publications were identified for full text inclusion and quality assessment (Figure 1).

Quality Assessment

Table 2 provides the quality assessment results for each study. Overall, nine studies were rated as 'strong', 12 as 'moderate' and two as 'weak'. All studies reported an adequate description of study aims, context, data collection and analysis methods. The strong papers adequately described the reliability and/or validity of quantitative or qualitative data tools, methods and/or analysis. Four strong papers also reported involving participants in the design and conduct of the study.

The scoring of 10 papers to be of moderate quality, was due to limited or no information being provided about the reliability and/or validity of quantitative or qualitative data collection tools, methods and/or analysis. Moderate ratings were driven by unclear descriptions regarding the control of potential confounders, selection biases and no participant involvement information.

Two weak quantitative papers [32,33] were excluded from the final analysis due to no information being provided about the reliability or validity of the data collection tools and data analysis. Several published methods for the interpretive and thematic synthesis of studies advocate the exclusion of low-quality studies [34]. Subsequently, 21 papers remained in the review.

Table 2. Quality assessment findings^a

Author	Aims & objectives reported clearly	Adequate description of research context	Adequate description of sample and sampling method	Adequate description of data collection methods	Adequate description of data analysis methods	Good or some attempt to establish the reliability of data collection tools	Good or some attempt to establish the validity of data collection tools	Good or some attempt to establish the reliability of data analysis	Good or some attempt to establish the validity of data analysis	Use appropriate data collection methods to allow for expression of views	Used appropriate methods for ensuring the analysis was grounded in views	Actively involved participants in the design and conduct of the study	Total score (rating)
Aref-Adib et al. [36]	x	x	x	x		x	x		x	x			8 (moderate)
Arikan, et al. [37]	x	x	x	x	x		x	x	x				8 (moderate)
Bagheri et al. [38]	x	x	x	x	x	x	x			x	x		9 (moderate)
Bergholt et al. [39]	x	x	x	x	x			x	x				7 (moderate)
Bettes et al. [40]	x	x	x	x	x	x		x	x				8 (moderate)
Chigbu et al. [25]	x	x	x	x	x	x		x	x				8 (moderate)
Danerek et al. [41]	x	x	x	x	x	x	x	x	x	x	x		11 (strong)
Eide et al. [18]	x	x	x	x	x	x	x	x	x	x	x	x	12 (strong)

^a Papers presented alphabetically as per Boland et al. [35] recommendations.

Table 2. (Continued)

Author	Aims & objectives reported clearly	Adequate description of research context	Adequate description of sample and sampling method	Adequate description of data collection methods	Adequate description of data analysis methods	Good or some attempt to establish the reliability of data collection tools	Good or some attempt to establish the validity of data collection tools	Good or some attempt to establish the reliability of data analysis	Good or some attempt to establish the validity of data analysis	Use appropriate data collection methods to allow for expression of views	Used appropriate methods for ensuring the analysis was grounded in views	Actively involved participants in the design and conduct of the study	Total score (rating)
Fuglenes et al. [42]	x	x	x	x	x			x	x	x	x		9 (moderate)
Gonen et al. [43]	x	x	x	x	x			x	x		x		8 (moderate)
Gunnervik et al. [44]	x	x	x	x	x		x	x	x	x	x		10 (strong)
Gunnervik et al. [45]	x	x	x	x	x		x	x	x	x	x		10 (strong)
Habiba et al. [46]	x	x	x	x	x	x		x	x	x	x		10 (strong)
Indraccolo et al. [32]	x	x	x	x	x								5 (weak)
Karlström et al. [47]	x	x	x	x	x			x	x	x	x	x	10 (strong)
Kenton et al. [48]	x	x	x	x	x			x	x	x	x		9 (moderate)

Table 2. (Continued)

Author	Aims & objectives reported clearly	Adequate description of research context	Adequate description of sample and sampling method	Adequate description of data collection methods	Adequate description of data analysis methods	Good or some attempt to establish the reliability of data collection tools	Good or some attempt to establish the validity of data collection tools	Good or some attempt to establish the reliability of data analysis	Good or some attempt to establish the validity of data analysis	Use appropriate data collection methods to allow for expression of views	Used appropriate methods for ensuring the analysis was grounded in views	Actively involved participants in the design and conduct of the study	Total score (rating)
Kwee et al. [49]	x	x	x	x	x			x	x	x	x		9 (moderate)
Mancuso et al. [33]	x	x	x	x	x					x			6 (weak)
Prosen et al. [50]	x	x	x	x	x	x	x	x	x	x	x	x	12 (strong)
Rivo et al. [51]	x	x	x	x	x	x	x	x		x	x		10 (strong)
Sharpe et al. [52]	x	x	x	x	x	x				x	x		8 (moderate)
Sun et al. [26]	x	x	x	x	x	x			x	x	x		9 (moderate)
Weaver et al. [53].	x	x	x	x	x			x	x	x	x	x	10 (strong)

Study and participant characteristics

Table 3 summarises study and participant characteristics. The 21 papers were published during a 17-year period; 2002 to 2019. Data were gathered from 12 European (UK, Ireland, Denmark, Sweden, Norway, Italy, Spain, France, Germany, Netherlands, Luxembourg, and Slovenia) countries. Three studies were from the Middle East (Turkey, Israel, Iran), three were from the USA and individual studies were from Nigeria, China, and Argentina. Sixteen papers were quantitative [25,26,35,36,38,39-45,47,48,50,51], four were qualitative [18,38,47,50] and one used mixed-methods [53].

Sampling

All 16 quantitative papers adopted cross-sectional designs, of which 12 collected data using self-report questionnaires [26,36,37,39,40,42-45,48,49,51] and four used case-scenarios accompanied by a questionnaire [25,41,49,52]. Weaver et al. [53] used a combination of semi-structured interviews and questionnaires. Two qualitative papers gathered data from focus-group discussions [18,47] and two used semi-structured interviews [38,50].

Of the 16 quantitative papers, eight studies recruited via convenience sampling [25,26,42-45,48,51], five via voluntary response [36,39-41,49] one used systematic [37] and another used prospective and opportunistic methods [52]. Habiba et al. [46] quantitative paper reports on eight studies, of which, five used stratified sampling and two used census sampling. Weaver et al.[53] used a combination of convenience and purposive sampling methods. The four remaining qualitative papers used purposive sampling [18,38,47,50].

Sample sizes ranged from four to 845 participants. In total, the views of 8,035 clinicians were reported on. This included the views of; 4,284 obstetricians, 582 gynaecologists, 2,520 obstetricians and gynaecologists combined, and 648 midwives. Of the 14 papers which recorded clinicians' gender; 2,697 were female and 2,161 were male [18,25,26,36-38,40,41,

43-51] . In midwife only samples, where gender was recorded [41,45], three out of 435 were male. Where reported, the settings included academic premises, public and private hospitals, and specialist centres. The range of clinicians' experience varied from Speciality Training Level 1 up to 40 years. Participants' age ranged between 29 and 50 years.

Table 2. Characteristics of included studies

Author	Study Characteristics				Participant Characteristics				
	Year	Country	Design	Sampling Method	Participants & Sample Size (recruited) completed	Setting, n, (%)	Level of experience, n, (%) <i>unless stated otherwise</i>	Gender, n, (%)	Descriptives of age, n, (%) <i>unless stated otherwise</i>
Aref-Adib et al. [36]	2018	England	Cross-sectional	Voluntary All UK Deaneries sent an electronic survey O&G Trainees.	Trainee O&G: (239) 226 Reasons for attrition NS.	London: 47 (20.2) East of England: 46 (19.7) Wessex: 36 (15.5) East Midlands: 31 (13.3) Severn: 25 (10.7) Kent, Surrey, Sussex: 10 (4.3) NS: 12 (5.0)	ST1: 30 (12.6) ST2: 40 (16.7) ST3:41 (17.2) ST4: 45 (18.8) ST5: 26 (10.9) ST6:23 (9.6) ST7: 22 (9.2) NS: 12	Female: 184 (77.0) Male: 51 (21.3) NS: 4 (1.7)	30-34 years: 108 (45.2)
Arikan, et al. [37]	2011	Turkey	Cross-sectional	Systematic Random selection of Obs attending the 7 th Congress of Turkish Society of Gynaecology & Obstetrics	Obs: 500 (387) Reasons for attrition NS.	Public FT: 161 (41.6) Public & Private PT: 96 (24.8) Private: 130 (33.6)	1-5 years: 80 (20.7) 6-10 years: 95 (24.5) 11-15 years: 104 (26.9) 16-20 years: 53 (13.7) 20+ years: 55 (14.2)	Female:153 (39.5) Male: 234 (60.5)	40-44 years: 104 (26.9)
Bagheri et al. [38]	2012	Iran	Qualitative; case study	Purposive Obs identified from 3 hospitals in Kashan City.	Obs; 22 (18) Reasons for non-participation NS.	University of Medical Science Hospitals: 18 (100)	11 years (SD, NS) IQR: 2-32 years.	Female: 17 (94) Male: 1 (6)	43 years (SD, NS)
Bergholt et al. [39]	2004	Denmark	Cross-sectional	Voluntary O&G from Danish Society.	O&G; 455 (364) 17 dropped out. 20 did not comply. Further details NS.	NS	NS	NS	NS

Table 3. (Continued)

Author	Study Characteristics					Participant Characteristics			
	Year	Country	Design	Sampling Method	Participants & Sample Size (recruited) completed	Setting, n, (%)	Level of experience, n, (%) unless stated otherwise	Gender, n, (%)	Descriptives of age, n, (%) unless stated otherwise
Bettes et al. [40]	2007	USA	Cross-sectional	Voluntary O&G identified from American College of Obstetricians & Gynaecologists.	O&G; 1031 (591) Reasons for attrition NS.	Private: 104 (17.6) Obs/Gynae partnership: 294 (49.8) Multi-speciality: 65 (11.0) University Practice: 58 (9.8) HMO: 30 (5.1) Military: 12 (2.0) Other: 27 (4.6)	13.67 years (SD 9.73)	Female: NS (48.8) Male: NS (50.9)	46.5 years (SD 9.91)
Chigbu et al. [25]	2010	Nigeria	Cross-Sectional	Convenience Attendees of 41 st Annual Conference of the Society of O&G of Nigeria. Emails sent to Obs who did not attend.	Obs:300 (211) Attrition rates NS.	University hospital: 99 (46.9) Private: 57 (27.0) Federal Centre: 33 (15.6) State Hospital: 13 (6.1) Mission Hospital: 7 (3.3) Company Hospital: 2 (0.9)	0-5 years: 48 (22.7) 6-10 years: 66 (31.3) 11-15 years: 49 (23.3) 16-20 years:23 (10.9) 21-25 years:15 (7.1) 26-30 years:4 (1.9) 30+ years: 6 (2.8)	Female: 14 (6.6) Male :197 (93.4)	40-49 years: 108 (51.2)
Danerek et al. [41]	2011	Sweden	Cross-Sectional	Voluntary All midwives invited from 16 maternity units associated with a neo-natal unit	Midwives; 513 (259) 13/16 units agreed. Attrition due to non-compliance & non response (NS)	Delivery Ward: NS (85.7) Other: NS	0-1 years: 29 (12.1) 2-5 years: 30 (12.5) 6-40 years: 181 (75.4)	Female: 252 (98.8) Male: 3 (1.2)	50+ years: 117 (46.2)

Table 3. (Continued)

Author	Study Characteristics					Participant Characteristics			
	Year	Country	Design	Sampling Method	Participants & Sample Size (recruited) completed	Setting, n, (%)	Level of experience, n, (%) <i>unless stated otherwise</i>	Gender, n, (%)	Descriptive s of age, n, (%) <i>unless stated otherwise</i>
Eide et al. [18]	2019	Norway	Qualitative; case study	Purposive Midwives & Obs working in counselling, delivery, postnatal care.	Obs: 11 (11) Midwives: 9 (9)	University Hospital: 20 (NS)	≤ 5 years: 5 (25) 6-10 years: 6 (30) 11-20 years: 5 (25) >20 years: 4 (20)	Female: 16 (80) Male: 4 (20)	29-39 years: 7 (35) 40-49 years: 6 (30) ≥ 50 years: 7 (35)
Fuglenes et al. [42]	2010	Norway	Cross-sectional	Convenience All Obs on Norwegian Medical Association and Commercial Register invited.	Obs:732 (507) 12 Obs did not work in O&G, 4 addresses unknown, details regarding non-responders NS.	Hospital: NS (82.0) Private: NS (16.0) Other: NS	14.9 years (SD, NS)	NC	35-50 years: 140 (54.0)
Gonen et al. [43]	2002	Israel	Cross-sectional	Convenience All Obs on mailing list invited.	Obs:650 (257) Reasons for attrition NS.	Hospital: 186 (72.0) Managed Care Clinic: 52 (22.0) Private: 9 (4.0) NS: 40 (15.7)	Resident: 35 (15) Specialist: 208 (21) Other: NS.	Female: 61 (24) Male: 194 (75) NS: 2 (1.0)	<50 years: 370 (44.0) ≥50 years: 473 (56.0)
Gunnervik et al. [44]	2008	Sweden	Cross-sectional	Convenience O&G identified from register. .	O&G; 1280 (845) 66 questionnaires returned; wrong address; retired; no longer in O&G; deceased. Further attrition details NS.	Gynaecology: 332 (45) Obstetrics: 185 (25) Gynae & Obs: 228 (30)	≤ 10 years: 207 (25) >10 years: 629 (75)	Female: 517 (61) Male: 328 (39)	<50 years: 132 (47.5) ≥50 years: 146 (52.5)

Table 3. (Continued)

Author	Study Characteristics				Participant Characteristics				
	Year	Country	Design	Sampling Method	Participants & Sample Size (recruited) completed	Setting, n, (%)	Level of experience, n, (%) <i>unless stated otherwise</i>	Gender, n, (%)	Descriptives of age, n, (%) <i>unless stated otherwise</i>
Gunnervik, et al. [45]	2010	Sweden	Cross-sectional	Convenience All midwives in 2 counties in south-eastern Sweden invited.	Midwives 330 (278) Reasons for attrition NS.	Labour ward: 152 (54.9) Antenatal Clinic/Other: 125 (45.1)	≤ 10 years: 73 (26.4) >10 years: 204 (73.6)	NS	<50 years: 132 (47.5) ≥50 years: 146 (52.5)
Habiba et al. [46] ^b	2006	Multi-centred ^c	Cross-sectional	5 countries used random MU stratified by geographical area. 2 used all MU; census sampling ^d	Obs:1,978 (1,530) Reasons for attrition NS.	FT Hospital: 1,445 (NC) PT Hospital: 165 (NC) Private: 537 (NC)	<1 year: 38 (NC) 1-5 years: 386 (NC) 5+ years: 1,174 (NC)	Female: 714 (NC) Male: 875 (NC)	<30 years: 185 (NC) 30-39 years: 535 (NC) 40-49 years: 443 (NC) 50+ years: 417 (NC)
Karlström et al. [47]	2008	Sweden	Qualitative; case study	Purposive Recruited from known sites	Obs; 9 (9) Midwives: 16 (16)	3 County hospitals: NS Antenatal clinics: NS	NS	Obs: Female: 5 (56) Male: 4 (44) Midwives: Female: 16 (100)	NS

^b Within countries, discrepancies between totals and number of responding obstetricians due to missing values. Further information NS.

^c Italy, Spain, France, Germany, Netherlands, Luxembourg, UK, Sweden

^d Random stratified; Italy, Spain, France, Germany, UK. Census sampling; Netherlands, Luxembourg, Sweden

Table 3. (Continued)

Author	Study Characteristics				Participant Characteristics				
	Year	Country	Design	Sampling Method	Participants & Sample Size (recruited) completed	Setting, n, (%)	Level of experience, n, (%) unless stated otherwise	Gender, n, (%)	Descriptives of age, n, (%) unless stated otherwise
Kenton et al. [48]	2005	USA	Cross-sectional	Convenience Attendees of 2 O&G reviews.	O&G; 500 (304) Reasons for attrition NS.	Private: 216 (71) Academic: 36 (12) Hospital: 24 (8)	<5 years; 58 (19) ≥ 5 years; 246 (81)	Female: 219 (72) Male: 85 (28)	36 years (SD, NS) IQR; 29-63
Kwee et al. [49]	2004	Netherlands	Cross-sectional	Voluntary All members of the Dutch Society of Obstetrics and Gynaecology invited.	Gynae:900 (583) 13 did not comply. Further details NS.	NC	15.4 years (SD, 9,4)	Female: NC (32.0) Male: NC (68.0)	45.1 years (SD, 8.8)
Prosen et al. [50]	2018	Slovenia	Qualitative; Phenomenological	Purposive 4 maternity clinics. Participants invited colleagues to participate.	Obs: 4 (4) Midwives: 16 (16)	Maternity Clinics: 20 (100)	Obs: 12.75 years (SD, NS) Midwives: 10.38 years (SD, NS) IQR: 1-28 years	Obs: Female: 1 (25) Male: 3 (75) Midwives: Female: 16 (100)	Obs: 41.25 years (SD, NS) Midwives: 40.13 years (SD, NS)
Rivo et al. [51]	2018	Argentina	Cross-sectional	Convenience 2 public & 2 private hospitals with min. 1000 deliveries/ year.	O&G:NS (129) Midwives: NS (39) 187 enrolled, 19 declined. Information about non-responders NS.	Public: 46 (27.4) Private: 43 (25.6) Both: 79 (47.0)	In Training: NS (21.4) Years since degree: 12 years (IQR: 5-19)	Female:100 (59.5) Male: 68 (40.5)	≤35 years: 61 (36.3) >35 years: 107 (63.7)

Table 3. (Continued)

Author	Study Characteristics				Participant Characteristics				
	Year	Country	Design	Sampling Method	Participants & Sample Size (recruited) completed	Setting, n, (%)	Level of experience, n, (%) unless stated otherwise	Gender, n, (%)	Descriptives of age, n, (%) unless stated otherwise
Sharpe et al. [52]	2015	England	Cross-sectional	Prospective & Opportunistic 2 District Hospitals.	O&G: NS (52) Midwives: NS (31) Information about non-responders NC.	District Hospital: 31 (100)	O&G: NS Student Midwife: 11 (35.0) Qualified Midwife: 20 (65.0)	NS	O&G ^e ; 29 (IQR 24-62). Midwives: 33 years (IQR 19-51).
Sun et al. [26]	2019	China	Cross-sectional	Convenience Participants with ≥1yr experience from the Congress of Shanxi and Hainan Society of O&G.	Obs;649 (526) Reasons for attrition NS.	NS	Junior Title: 283 (53.8) Assistant Chief/Chief Physician: 243 (46.4)	Female: 412 (78.3) Male: 114 (21.7)	42.9 years (SD, 6.83)
Weaver et al. [53].	2007	UK & Ireland	Mixed-Methods; Retrospective	Convenience & Purposive 4 hospitals. Purposive sampling to obtain views of 5 known Obs. Questionnaires sent to Obs on UK & Ireland register.	Qualitative: Obs; 29 (29) Quantitative: Obs: 1344 (785) Reasons for attrition; refusal and invalid responses (NS).	Qualitative: 3 District Hospitals: NS 1 City Hospital: NS Quantitative: Setting: NS	NS	NS	NS

^e 5 (10.0) of O&G failed to answer.

Note. O&G; Obstetrician & Gynaecologist; Obs; Obstetrician, Gynae; Gynaecologist, FT; Full time, PT; Part time, NS Not stated; NC Not clear; SD Standard deviation, IQR interquartile range; ST Speciality training.

Summary of methodology and attitudinal findings

Table 4 summarises the methodology and main attitudinal findings from each study. Themes were derived by synthesising [29,31] the findings from 21 studies. Findings represent clinicians' views.

Table 3. Study findings

Author	Aim	Data Collection Method	Data Analysis	CSMR attitudinal findings
Aref-Adib et al. [36]	To explore Trainee O&G experience of and attitudes towards elective CSMR	Researcher developed, 18-item, electronic survey. Self-report.	Descriptive Statistics	Reasons for; maternal choice, psychological concerns of the mother, perineal injury, and pelvic floor (58.6%), safety, cultural reasons, convenience. Reasons against; risk to future pregnancy, damage to bladder/bowel, bleeding, pulmonary embolism/deep vein thrombosis, infection, hysterectomy, financial cost.
Arikan et al. [37]	To investigate the attitudes, practices and beliefs regarding CSMR amongst actively practising obstetricians in Turkey.	Researcher developed, 13-item, questionnaire. Self-report.	Chi-square, Mann-Whitney U, Kruskal-Wallis.	Women's right; 40.8% agreed, 59.2% disagreed. 3 most common reasons: anxiety, reduced anorectal trauma, reduced risk of prolapse.
Bagheri et al. [38]	To investigate the views of Obstetricians regarding women's choices about mode of delivery.	Semi-structured interviews.	Inductive qualitative content analysis	Factors relating to women; fear of pain, not considering CS as major surgery. Social/cultural beliefs; belief CS is more acceptable and valuable in the eyes of women, women believe CS is better than VB as doctors/educated women choose this mode , belief rich women choose CS, media impact. Financial income. Complications: progress in surgery has made CS safe; comparable with VB.
Bergholt et al. [39]	To assess Danish O&G personal preference and general attitudes towards CSMR in uncomplicated single cephalic pregnancies at term	Development of postal questionnaire NS. Self-report.	Multiple logistic regression analysis	Women's' right; 37.5% agreed, 56.6% disagreed. 20/206 (5.5%) who said no; would consider CSMR after discussion of risk/consequences.

Table 4. (Continued)

Author, Year	Aim	Data Collection Method	Data Analysis	CSMR attitudinal findings
Bettes et al. [40]	To examine obstetrician-Gynaecologists' knowledge, opinions and practice patterns related to CSMR.	Researcher developed, questionnaire. Based on Wu et al. [54] Self-report.	Descriptive Statistics. Independent 1 & 2 samples t-test.	Women's right; 54.6% agreed, 45.5% disagreed. Beliefs regarding the right to CSMR and compliance $p < 0.001$. Historical 3rd/4th degree tear; 98% agree. More risks than benefits; 7.28 (2.69) vs. 4.47 (2.92) $p < 0.001$. Intraoperative risk to mother; bleeding/damage to internal organs (93.7%). Benefits reduced risk of; perineal injury (76 %), trauma (63.4%), prolapse (56.8%), incontinence (54.8%), lacerations (53.9%), complications (49.6%). Factors related to women; previous delivery complications (83.9%), maternal anxiety (71.4%), maternal age (62.4%), plans for future childbearing (59.3%) and foetal size (54.4%). Media & Celeb culture; informed consent.
Chigbu et al. [25]	To determine obstetricians' attitudes to and factors predicting acceptance of CSMR in Nigeria	Researcher developed case scenarios & questionnaire. Based on Chigbu et al.[55] & Habiba et al.[46] Self-report.	Multiple Regression Analysis. Fisher's exact test.	Agree due to maternal choice; previous childlessness (60.2%), negative birth experience (57.3%), desire for male (55.5 %), no mitigating reason (53.1%). Reason considered to be an indication for CS; previous childlessness (19.9%), negative birth experience (17.5%), desire for male (3.8%), no mitigating reason (0.0%). Accept CSMR if request backed up by previous childlessness and negative birth experience than absence of mitigating circumstance $p < 0.001$. Reason not considered an indication for CS; previous childlessness (15.6%), negative birth experience (20.8%), desire for male (37.4%), no mitigating reason (43.6%). Fear of litigation; previous childlessness (4.3%), negative birth experience (4.3%), desire for male (3.3%), no mitigating reason (3.3%).
Danerek et al. [41]	To describe the attitudes of midwives in Sweden towards decision-making by obstetricians in relation to a women's refusal of an emergency CS and also to women's request for CS without medical indication	Researcher developed case scenarios and 32 questions. Based on Habiba et al.[46]. Adapted for midwives. Self-report	Descriptive Statistics. Chi-Squared. Mann-Whitney U.	Reasons for; history of traumatic VB (80%), previous intrapartum death (74%), first child disabled (71%) previous CS (64.5%), FOC (49%) respect for autonomy (76%) Refuse: only reason is women's choice (77%), a colleague (77%), FOC (51%)

Table 4. (Continued)

Author	Aim	Data collection method	Data Analysis	CSMR attitudinal findings
Eide et al. [18]	To provide a qualitative exploration of maternal requests for a caesarean section in Norway in the absence of obstetric indications	Focus-group discussion	Systematic text condensation; thematic cross-case analysis	Primary FOC; vulnerable, previous traumatic events, sense of alienation towards giving birth/ having children. Traumatic birth leading to fear; difficult balance of information provision, communication and misunderstanding, negative experiences Self-perceived risk; may agree or disagree with medical significance. Unknown reasons: without well-grounded reasons or significant fear, young, without understanding of surgical risk, From countries with high CS rates, media influences.
Fuglenes et al. [42]	To explore obstetricians' opinions on CSMR in the absence of medical indication and the potential to regulate CSMR through financial incentives such as patient co-payment.	Researcher developed, 7-page survey. Self-report	Chi Squared Mann-Whitney U Spearman's Rho Multivariate Regression	Reasons for; women's autonomy (68%), avoid lack of co-operation (35%), avoid complaints (14%), other (26%). Problematic from clinical viewpoint; 62% agree, 24% disagree, 14% neutral. Decision-making; Woman has absolute right (1.4%), women should be involved (68%), Doctor has final say (53%).
Gonen et al. [43]	To survey the opinions of Israeli obstetricians regarding their position on patient choice CS	Researcher developed, single-page, questionnaire. 3 case scenarios. Self-report	Chi Squared Multivariate Regression	VB preferable; agreed (91%), disagreed (9%) Women's right; agreed (45%), disagreed (48%), undetermined (7%).
Gunnervik et al. [44]	It is important to study attitudes to CS in a nationwide population of Swedish O&G in order to determine the possible concerns of this group	Researcher developed, questionnaire. Self-report.	Chi Squared Independent t-test	Women's right; agreed (28.5%), disagreed (71.5%) FOC; agree (12.1%), disagreed (87.9%); CS is as safe as VB for mother; agreed (52.6%), disagreed (47.4%); CS is as safe as VB for baby; agreed (52.6%), disagreed (47.4%); CS is safest mode for both; agreed (5.1%), disagreed (94.9%); Perineal injury; agreed (28.2%), disagreed (71.8%). Normal birth preferable; agreed 99.5%, disagreed (0.5%)

Table 4. (Continued)

Author	Aim	Data collection method	Data Analysis	CSMR attitudinal findings
Gunnervik et al. [45]	To investigate midwives' attitudes and opinions on mode of birth	Researcher developed questionnaire. Self-report.	Chi Squared Independent t-test	Women's right; agreed (21.9%), disagreed (78.1%) FOC; agree (6.1%), disagreed (93.9%); CS is as safe as VB for mother; agreed (22.9%), disagreed (77.1%); CS is as safe as VB for baby; agreed (31.2%), disagreed (68.8%); CS is safest mode for both; agreed (2.2%), disagreed (97.8%); Perineal injury; agreed (19.7%), disagreed (80.3%). Normal birth preferable; agreed (99%), disagreed (1%)
Habiba et al. [46]	To explore the attitudes of obstetricians to perform a CSMR in the absence of medical indications	Development of questionnaire NS. 8 case scenarios. Self-report	Multivariate logistic regression	Women's choice: agreement 15 -79%. FOC; agreement 10 -79%; Previous CS; agreement 38-98%, Previous traumatic delivery; agreement 38-99%, Previous intrapartum death; agreement 60-98%, First child is disabled; agreement 54- 96%, Colleague; agreement 26-78%. Respect for women's autonomy; most frequent reason for compliance; Fear of litigation; between 30-80% avoid legal consequences from VB.
Karlström et al. [47]	To describe obstetricians and midwives' attitudes towards CSMR.	Focus-group discussions	Content analysis: themes derived.	Factors relating to women; control, predictability, decide where and when; FOC; pain and injury, previous negative birth experience, dissatisfaction with intrapartum care. Factors relating to clinicians; fear of litigation; encourage natural birth, Risk; CS not best option for baby; women exposing themselves and babies to danger. CS understandable in context of previous traumatic birth. Primary FOC difficult for clinicians to understand Respect vs professionalism: did not favour women's right. Evidence-based medicine. Media & Culture; celebrities/promotion of societal attitudes as influencers.
Kenton et al. [48]	To determine the practice patterns and opinions of recently trained US obstetrician gynaecologists regarding repeat CS, primary elective CS, and elective CS for the prevention of pelvic floor disorders	Development of questionnaire NS. Self-report	Mann-Whitney, McNemar Test	Primary elective CS; 59% agree, 41 disagree. 67% would perform CSMR to prevent pelvic floor disorders. Reasons against; 30% report increased risk, 13% report CS is not standard practice.

Table 4. (Continued)

Author	Aim	Data collection method	Data Analysis	CSMR attitudinal findings
Kwee, et al. [49]	To determine the opinion of Dutch Gynaecologists on CS on request	Researcher developed survey. 8 case scenarios; no medical indication for CS. Self-report	ANOVA, Logistic Regression	Reasons for; woman's autonomy Refuse; higher maternal mortality, no medical indication.
Prosen et al. [50]	To explore the phenomenon of the medicalization of pregnancy and childbirth as perceived and experienced by healthcare professionals.	Semi-structured interviews	Phenomenological analysis	Factors related to women; belief that previous CS means VB not possible, FOC , prior negative birth experience, modern lifestyle, lack of communication, poor co-operation due to FOC , lack of understanding risk, Factors related to clinician; reasonable indication required therefore adjustments made to facilitate; anxiety should be managed not with CS; ethically questionable. Societal and Media influences
Rivo et al. [51]	To describe obstetrical providers delivery preferences and attitudes towards CS without medical indication including on maternal request.	Researcher developed survey. Self-report	Bivariate & Multivariate Analysis	Factors related to women; 35.7% believe women prefer CS; 74.4% women's choice. Refuse; 18.5% disagree with maternal choice. 92.3% prefer VB for women.
Sharpe et al. [52]	To explore the views of pregnant women, midwives and doctors using six hypothetical clinical scenarios and compare groups views on a) perceived appropriateness for CS request, b) the reasons underlying requests	Researcher developed, piloted, survey. 6 case scenarios. Nonexclusive response options. Self-report	Chi-Squared	Factors related to women; Uncomplicated first pregnancy; 2.4% agree with maternal choice, 97.6% disagree. Previous VB: 2.6% agree with maternal choice, 97.4% disagree; previous CS; 96.1% agree with maternal choice, 3.9% disagree. Fear of injury; 29.9% agree. FOC ; 4.2% midwives, 26.9% obs. Risk: CS safer for baby in uncomplicated first pregnancy; 3.4% agree, 96.6% disagree. One previous VB, 6.5% agree 93.5% disagree, one previous instrumental birth, 12.8% agree, 87.2% disagree.

Table 4. (Continued)

Author	Aim	Data collection method	Data Analysis	CSMR attitudinal findings
Sun et al. [26]	To examine Chinese obstetricians' attitudes and beliefs and clinical practices with regards to CSMR and to explore influencing factors associated with their practices of CSMR.	Researcher developed, piloted questionnaire. Non-exclusive response options.	Logistic Regression	Women's right; 35.9% agree, 64.1% disagree. Agree with CSMR following trial of VB 14.3%. CS: 88% endorsed more risks than benefits for both mother and baby. Fear of litigation; economic return; convenience.
Weaver et al. [53]	To examine whether and in what context, CSMR are made.	Semi-structured interviews. Researcher developed, questionnaire; based on data collected during interview phase. Self-report.	Thematic Analysis, Descriptive statistics.	Maternal request; educated, professional women. Absence of medical indication, reasons include: clinical history. Requests more likely by medical professionals. FOC; fear of VB, previous trauma, high anxiety re: safety of baby, fear of injury. FOC not seen as clinical indication. Importance to understand nature of request & explore options. Limitation of time.

Note. O&G; Obstetrician & Gynaecologist; VB; Vaginal Birth; FOC; Fear of Childbirth, NS; Not stated

Thematic Analysis and Meta-synthesis

Findings report on the attitudinal factors which influenced clinicians' CSMR decision-making (Table 4). Five themes emerged following thematic synthesis; 'clinicians' personal beliefs', 'clinicians' beliefs about the psychological reasons underlying women's requests', 'risk perception', 'societal culture' and 'healthcare systems'. Table 5 shows the frequency of themes and subthemes reported in each study. Figure 2 illustrates the themes.

Theme 1: Clinicians' personal beliefs

'Clinicians' personal beliefs' represents views which form part of a 'belief-system'. This includes thoughts and assumptions held about oneself, others, and the world. Personal beliefs are learned in early life, they may or may not be true and they are shaped by experience [56]. The influence of 'clinicians' personal beliefs' upon decision-making to perform a CSMR was discussed in 20 studies (Table 5). Three interlinking subthemes were identified; 'professional reasoning', 'ambiguous vs clinical justification' and 'vaginal birth preferable'.

Subtheme 1.i Professional reasoning

Professional reasoning in support of CSMR was reported in 16 studies (Table 5). Clinicians reported upon CSMR being a 'woman's right' [26,37,39,40,42-45,51] and 'maternal choice/autonomy' [25,36,41,42,46,47,49,52] as justifiable reasons to perform a CSMR. *"Beliefs regarding the rights to caesarean section on maternal request were strongly related to the likelihood of performing one"* (Bettes et al., p.59) [40].

Clinicians' attitudes towards CSMR were more supportive if a woman's clinical history [18, 25,41,46,47,50-53], or psychological concerns [36,46] were deemed significant as well as the patient being a colleague [41,46,53]. Convenience [26,36,52] and co-operation from women [42,49] were also given as reasons to perform a CSMR.

Professional reasoning in opposition to CSMR was reported in 17 studies (Table 5). Some clinicians also held beliefs which meant they disagreed with ‘maternal choice/autonomy’ [25,39-42,46,51-53] and ‘women’s right’ [26,37,39,40,42-45,47] as justifiable reasons to not perform a CSMR. *“Only 1.4.% of obstetricians indicated that a patient should have an absolute right...53% believe that the doctor should have the final decision” (Fuglenes et al., p.15840) [42].* Additionally, some clinicians viewed risk [45,49], clinical history [25,46,52] and requests from a colleague [41,46], as justifiable reasons against performing a CSMR.

Subtheme 1.ii Ambiguous vs clinical justification.

In some situations, clinicians reported uncertainty regarding the medical justifications for a CSMR. A Norwegian study, using a qualitative design, found a lack of *“well-grounded reasons or significant anxiety” (Eide et al., p.7) [18],* impacted upon clinicians’ willingness to comply with CSMR as well as the amount of time offered to women.

Alternatively, a qualitative study highlighted in Slovenia that some settings and/or clinicians were more perceptive and willing to comply in the absence of clear justifications [50]. *“... let’s say for one patient...one indication can be a little stretched... paperwork can stand up to everything just so you are covered. You work with a certain indication, you are hidden, but actually you were doing a caesarean on request” (Midwife, p.178) [50].*

Subtheme 1.iii Vaginal birth preferable

Five studies referenced clinicians’ preferences for vaginal birth [43-45,47,51]. Gunnervik et al.’s [44,45] cross-sectional studies found that nearly all clinicians believed vaginal birth to be preferable compared to CS. Similarly, Gonen et al.’s [43] cross-sectional study reported that the majority of Israeli obstetricians also preferred vaginal births for women.

Theme 2. Clinicians' beliefs about the psychological reasons underlying women's requests

'Clinicians' beliefs about the psychological reasons underlying women's requests' represents specific views held about purported psychological traits. These views form part of the 'belief-system' about 'others' [56]. This theme was reported in 13 studies (Table 5).

Some clinicians counselled a woman's CS request if it was believed to be driven by a previous negative birth experience [18,25,40,41,49,50,53] or FOC [18,41,44-47,50,52,53]. *"Yes, there are changes both from obstetricians' point of view and from the mother's point of view...Some of them have difficult delivery before or difficult experience..." (Obstetrician, p.370) [53].*

However, others viewed CSMR driven by FOC, to not be warranted [18,41,44-47,50,52,53] particularly during first pregnancy [18,46]. *"But this primipara who just declares "I'll have a CS" and I do not understand why... you get provoked and make a stand" (Obstetrician, p.60) [47].* According to Gunnervik et al. [45], the majority of Swedish midwives disagreed with CSMR being the best choice for women with FOC. Clinicians' attitudes towards women's anxiety [37,40,53], beliefs of CS not being risky [37,38,50], self-perceived risk [40,53], fear of pain [38,47] and wishes for control [47], also reduced their willingness to perform a CSMR.

Theme 3. Risk Perception

'Risk perception' represents clinicians' subjective judgements about the characteristics and severity of risk which affects the likelihood of adverse events occurring to the woman and/or baby (i.e. injury or death). Risk perception goes beyond the individual; it represents a social and cultural construct which reflects beliefs, values, history, and ideology [57].

Risk perception regarding CSMR, in relation to mother and/or baby's wellbeing, impacted upon clinicians' willingness to perform a CSMR in 11 studies (Table 5). Two subthemes emerged; 'more risks than benefits' and 'more benefits than risks'.

Subtheme 3.i More risks than benefits

Some clinicians believed CSMR posed more clinical risks to mother and/or baby than benefits [26,36,40,44,45,47,49,52]. In Bettes et al.'s [40] cross-sectional study, the majority of American clinicians considered "*bleeding and damage to internal organs*" (Bettes et al., p.61) as the greatest risk. In Aref-Adib et al. [36] cross-sectional study, UK trainee clinicians acknowledged risks regarding "*future pregnancy, damage to bladder/bowel, bleeding, pulmonary embolism/deep vein thrombosis, infection and hysterectomy*" (Aref-Adib et al., p. 369).

Subtheme 3.ii More benefits than risks

In contrast, some clinicians believed CSMR posed more gynaecological benefits than risks [36,37,40,41,48]. Despite clinicians citing a high degree of risk in Bettes et al. [40] they also reported performing CSMR to reduce gynaecological injury and birth trauma. Similarly, within Arif-Adib et al. [36], over half of clinicians stated they would grant a CSMR, as they believed CS reduced gynaecological injury compared to vaginal birth. Additionally, some Iranian clinicians believed that CS reduced the risk of birth complications and it saved time [38]."*The reality is the caesarean section is faster, better and I think with new methods it is even safer for children and women*" (Obstetrician, p.47) [38].

Theme 4. Societal Culture

Societal culture represents commonly held beliefs or values, agreed upon by a given population. Societal culture is shaped by language, religion, history, social and psychological constructs [58]. Ten studies reported upon clinicians' attitudes related to societal culture influencing CSMR decision-making (Table 5). Two subthemes emerged; 'media and celebrity culture' and 'societal norms'.

Subtheme 4.i. Media and celebrity culture

Clinicians' attitudes regarding the media and celebrity culture affected CSMR decision-making outcomes [18,38,40,47,50]. Eide et al.'s [18] qualitative study, found that Norwegian obstetricians did not view CSMR, based on media/celebrity trends, to be medically justifiable. "...you have the Hollywood version where you're admitted to the hospital and get a planned C-section, free from perineal tears, baby comes out newly washed. That's not a medical indication" (*Obstetrician, p.7*)[18]. Some clinicians believed that media influences led to 'high-tech childbirths' [50]. The medicalisation of childbirth (without justification) was predominantly viewed as "*ethically questionable*" (*Prosen et al., p.179*) [50].

Subtheme 4.ii. Social norms

Clinicians reported a range of views regarding social norms influencing CSMR practice [18,25,36,38,44,45,50,53]. For example, Turkish clinicians predominantly believed CS "*was more acceptable and valuable in the eyes of the people*" (*Arikan et al., p.47*) and that clinicians' "*preferred or experienced CS for their own birth*" (*Arikan et al., p.47*), subsequently affecting decision-making outcomes and the rates of CSMR [37]. Whilst social norms in Nigeria, meant that CSMR due to "*previous childlessness*" (*Chigbu et al., p.815*) was justifiable [25].

Theme 5: Healthcare systems

Healthcare systems represent the organisation, resources and policy which help meet the needs of target populations. Healthcare systems influenced clinicians' attitudes in seven studies (Table 5). Two subthemes emerged; 'litigation' and 'financial implications'.

Subtheme. 5.i. Litigation

Clinicians reported fears of litigation impacting upon CSMR decision-making outcomes [25,26,39,46,47]. Differing views regarding liability were found, for example, in Nigeria, Chigbu et al.'s [25] cross-sectional study reported that some "*obstetricians indicated fear of legal consequences in case of complications during surgery*" (Chigbu et al., p.816), which reduced their willingness to comply. This is in contrast to the majority of Spanish clinicians, who reported legal fears arising from vaginal birth, increasing the likelihood of CSMR compliance [46].

Subtheme 5.ii. Financial implications

Attitudes regarding financial implications also affected CSMR decision-making [26,36,38]. Differing views regarding financial implications were found. For example, Aref-Adib et al. [36] reported that UK trainee clinicians would not grant a CSMR due to financial cost, whereas Sun et al.'s [26] cross-sectional study, found an increased acceptance of CSMR due to economic return in China. "*Chinese doctors' incomes are directly related to this hospital's income... in this context, obstetricians would consent to implement CSMR for financial incentives*" (Sun et al., p.3)[26].

Table 4. Frequency of CSMR attitudinal themes and subthemes

Author	Theme 1: Clinicians' Personal Beliefs	Theme 2: Clinicians' Beliefs about Psychological Reasons Underlying Women's Requests	Theme 3: Risk Perception	Theme 4: Societal Culture	Theme 5: Healthcare Systems
	<p>Subtheme 1. i Professional reasoning (for CSMR); a. women's right, b. maternal choice/ autonomy, c. psychological concerns, d. convenience, e. clinical history, f. cooperation, g. colleague. Professional reasoning (against CSMR); h. maternal choice/autonomy, i. women's right j. risk, k. colleague, l. clinical history Subtheme 1.ii. Ambiguous vs. clinical justification Subtheme 1.iii. VB preferable</p>	a. FOC, b. anxiety, c. fear of pain, d. previous negative birth experience, e. CS not seen as risky, f. self-perceived risk, g. control	<p>Subtheme 3.i more risks than benefits Subtheme 3.ii more benefits than risks</p>	<p>Subtheme 4.i. Media and celebrity culture Subtheme 4.ii. Social norms</p>	<p>Subtheme 5.i. Litigation Subtheme 5.ii. Financial implications</p>
Aref-Adib et al. [36]	1.i.b; 1.i.c; 1.i.d,		3.i; 3.ii;	4.ii	5.ii
Arikan et al. [37]	1.i.a, 1.i.i	2.i.b; 2.i.e;	3.ii		
Bagheri et al. [38]		2.i.c; 2.i.e		4.i; 4.ii	5.ii
Bergholt et al. [39]	1.i.a; 1.i.h; 1.i.i.				
Bettes et al. [40]	1.i.a; 1.i.h; 1.i.i	2.i.b; 2.i.d; 2.i.f;	3.i; 3.ii.	4.i	
Chigbu et al. [25]	1.i.b; 1.i.h; 1.i.l	2.i.d;		4.ii	5.i
Danerek et al. [41]	1.i.b; 1.i.e; 1.i.h, 1.i.k; 1.i.l	2.i.a; 2.i.d;			
Eide et al. [18]	1.i.l; 1.ii	2.i.a; 2.i.d;	3.ii	4.i; 4.ii	
Fuglenes et al. [42]	1.i.a; 1.i.b; 1.i.f; 1.i.h; 1.i.i				
Gonen et al. [43]	1.i.a; 1.i.i; 1.iii.				

Table 5. (Continued)

Author	Theme 1: Clinicians' Personal beliefs	Theme 2: Clinicians' Beliefs about Psychological Reasons Underlying Women's Requests	Theme 3: Risk Perception	Theme 4: Societal Culture	Theme 5: Healthcare Systems
	<p>Subtheme 1. i Professional reasoning (for CSMR); a. women's right, b. maternal choice/ autonomy, c. psychological concerns, d. convenience, e. clinical history, f. cooperation, g. colleague. Professional reasoning (against CSMR); h. maternal choice/autonomy, i. women's right j. risk, k. colleague, l. clinical history Subtheme 1.ii. Ambiguous vs. clinical justification Subtheme 1.iii. VB preferable</p>	a. FOC, b. anxiety, c. fear of pain, d. previous negative birth, e. CS not seen as risky, f. self-perceived risk, g. control	<p>Subtheme 3.i more risks than benefits Subtheme 3.ii more benefits than risks</p>	<p>Subtheme 4.i. Media and celebrity culture Subtheme 4.ii. Social norms</p>	<p>Subtheme 5.i. Litigation Subtheme 5.ii. Financial implications</p>
Gunnervik et al. [44]	1.i.a; 1.i.i; 1.iii	2.i.a	3.i	4.ii	
Gunnervik et al. [45]	1.i.a; 1.i.i; 1.i.j; 1.iii.	2.i.a	3.i	4.ii	
Habiba et al. [46]	1.i.b; 1.i.c; 1.i.g; 1.i.h; 1.i.k; 1.i.l	2.i.a			5.i
Karlström et al. [47]	1.i.b; 1.i.e; 1.i.i; 1.i.l; 1.iii.	2.i.a; 2.i.c; 2.i.d; 2.i.g	3.i	4.i	5.i;
Kenton et al. [48]	1.i.j		3.ii		
Kwee et al. [49]	1.i.b; 1.i.f; 1.i.j; 1.ii		3.i		5.i
Prosen et al. [50]	1.i.l; 1.ii	2.i.a; 2.i.d; 2.i.e;		4.i; 4.ii.	
Rivo et al. [51]	1.i.a; 1.i.h; 1.iii				
Sharpe et al. [52]	1.i.b; 1.i.d; 1.i.h ; 1.i.l	2.i.a;	3.i		
Sun et al. [26]	1.i.a; 1.i.d;1.i.i		3.i		5.i; 5.ii
Weaver et al. [53]	1.i.g; 1.i.h; 1.i.k; 1.i.l	2.i.a; 2.i b; 2.i.d; 2.i.f		4.ii	
Papers, <i>n</i>	20	13	11	10	7

Note. VB; Vaginal Birth; FOC; Fear of Childbirth; CS; Caesarean Section

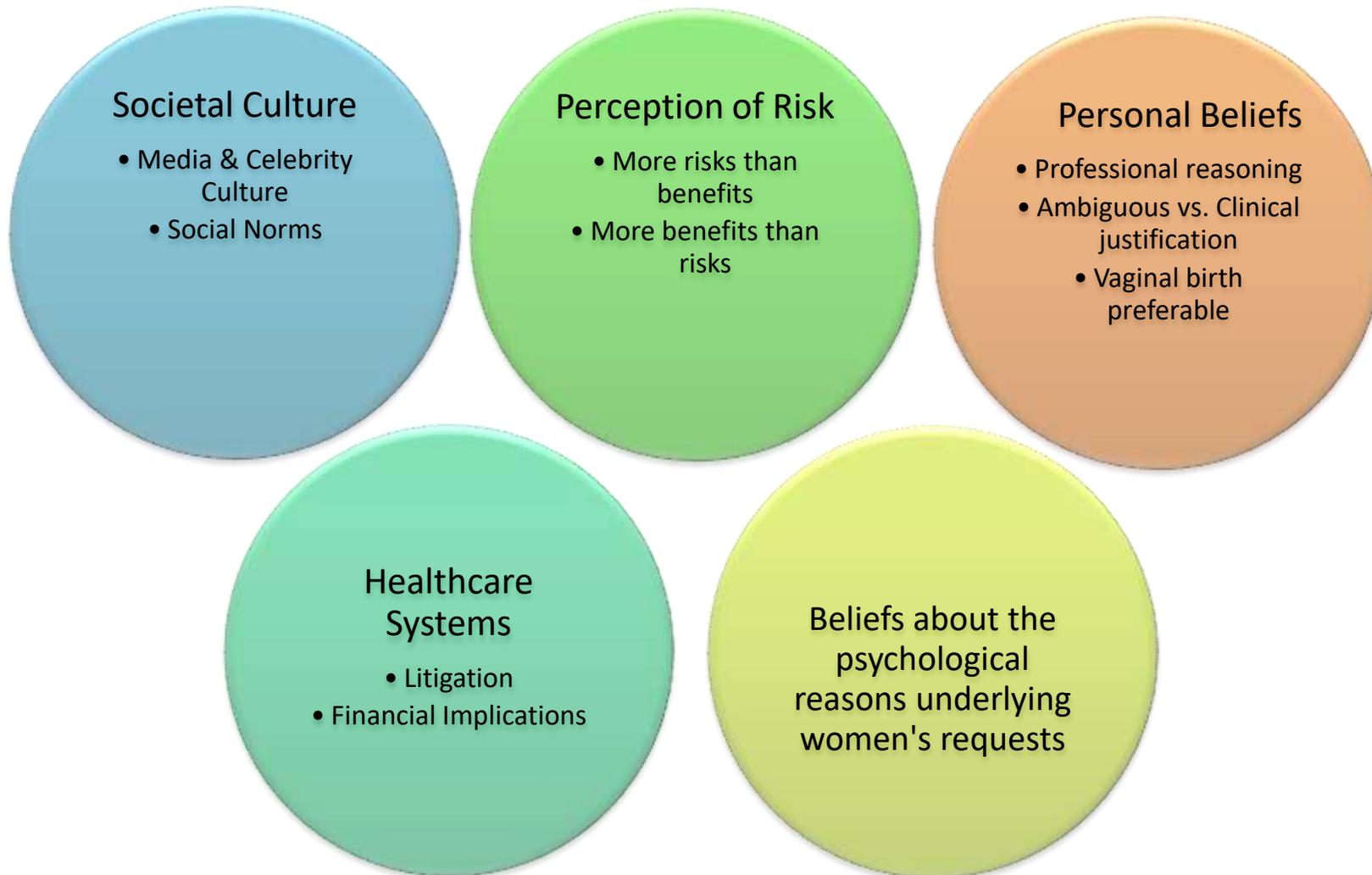


Figure 2: Themes and subthemes regarding clinicians' attitudes about CSMR

Discussion

This review thematically synthesised the findings from 21 studies, regarding attitudinal factors which influenced clinicians' CSMR decision-making. Five themes emerged; 'clinicians' personal beliefs', 'clinicians' beliefs about the psychological reasons underlying women's requests', 'risk perception, 'societal culture' and 'healthcare systems'.

Attitudes related to healthcare behaviours can be notoriously difficult to change from a social, political, and economic perspective [59]. However, it is essential to take account of their impact, when planning and reviewing women-centred childbirth. The main finding of this review was that clinicians held a wide range of attitudes which bidirectionally impacted CSMR decision-making outcomes. Responses within countries were also non-uniform [40,41], highlighting the role of clinicians at an individual level as well as possible ambiguity relating to guidance (Table 5).

The most common examples of divided 'personal beliefs' and 'beliefs about the psychological reasons underlying women's requests', were about CSMR being a 'woman's right' [26,37,39,40,42-45,47,51] and whether CSMR for FOC was medically justified [18,41,44-47,50,53,53]. Clinical uncertainty led to some clinicians reporting reduced willingness to comply [18,49] whereas for others, uncertainty led to increased flexibility [50]. This highlights that in order to support clinicians' decision-making, they need to be orientated to and implement up-to-date guidance [20,60].

A debate exists within maternity care settings, surrounding women having the right to choose their mode of birth [61]. Medical ethics states that clinicians should 'respect autonomy' [16]. Yet, there are differing opinions regarding whether clinicians should prioritise free choice at an individual level or highlight the demands of the healthcare system [62]. Whilst support and

control are important determinants of women's birth satisfaction [63], fulfilment of CSMR does not guarantee a positive birth experience [64].

The Birthrights document [20] reported that CSMR have been met with judgment from clinicians. This review found that some clinicians were more predisposed to supporting women's requests through an appreciation of her history and/or psychological needs [18,36,41,46,47,50-53]. However, clinicians who held firm beliefs regarding risk [26,36,40,44,45,47,49,52] and/or underlying psychological needs [18,37,38,40,47,50,53] were less willing to comply. How clinicians portray their decisions has important implications for women's experience of maternity care.

Research suggests lower levels of perceived care can lead to increased negative birth appraisals, FOC and reduced birth satisfaction [65]. It is therefore important to recognise how iatrogenic factors, such as clinicians' attitudes, may contribute towards these associations and increase women's demands for CSMR. By further understanding clinicians' attitudes and the portrayal of clinical opinion, services can embark upon improving women's birth satisfaction and the delivery of safe, effective care.

Importantly, five studies [41,44-47] which reported CSMR for FOC not being recommended, were Swedish. Sweden is one of the few countries which offers counselling to women with FOC [66]. The findings of the effectiveness of psychological support on birth mode are equivocal. However, counselling has been found to help women who request a CSMR due to FOC, have an acceptable birth experience [67]. In comparison to untreated fear, which was shown to have a negative impact on the birth experience, regardless of mode of delivery [67].

Sweden's approach to perinatal care has progressed from somatic management towards a more public health and psycho-social perspective. Their model aims to support a positive birth

experience and a good start to parenthood [68]. This demonstrates how attitudes underpin the antenatal care offered to women at an individual and systems level. Antenatal care has been shown to be one of the most effective forms of preventative care, when it comprehensively offers a biopsychosocial informed approach [69].

Clinicians' views on risk were also divided. Clinicians were less willing to perform a CSMR when they viewed surgical and clinical complications to outweigh any perceived benefits to women [26,36,40,44,45,47,49,52]. Others viewed CSMR to have gynaecological [36,37,40,41,48] and time [38] benefits which increased compliance. This reflects the dilemma clinicians' face regarding respecting 'autonomy' versus valuing 'clinical expertise' [16]. It also highlights the uncertainty around the availability of clear guidance to inform practice. Some obstetricians consider the evidence to be lacking about whether VB or CS is the safest mode of birth [69-71]. Subsequently, the evidence is limited to justify whether women are making 'informed', autonomous, decisions about birth [70-72].

Not only did attitudes vary within countries, views differed across countries. Societal culture represents a complex interplay of factors which include attitudes [58]. Interpreting the attitudinal findings in the context of sociocultural factors, illustrated that clinicians' CSMR decision-making was influenced by their views about the media [18,38,40,47,50] and social norms [18,25,36,38,44,45,50,53]. Each country may hold differing positions regarding CSMR based on their culture, their knowledge of up-to-date research as well as reasons related to their healthcare systems. Across countries, contrasting views related to the healthcare system were also identified. For example, fears of litigation arising from VB [25] versus fears of litigation due to surgical complications [46], or financial implications incentivising [26,38] or hindering [36] CSMR practice.

Strength of the studies

Participants reported upon included male and female clinicians, expertise ranged from Speciality Training Level 1 up to 40 years, and European, Asian, African, Middle-Eastern, American and South-American cultures were represented. Data were collected from over 8,000 clinicians, from 19 different countries, spanning a 17-year time period. Consistent themes were found, albeit with some dispersed views being embedded within them. Attitudes within childbearing professions may change over time, however collation of this data provides a useful benchmark for future studies to evaluate attitudinal change and compare rates of CSMR.

The methodological quality across the studies was moderately-strong, indicating that the studies are acceptable. All the studies had clear research questions and adequate descriptions of the data collection and analysis methodology. All the qualitative studies and Weaver et al's. [53] mixed-methods study justified their sample sizes and referenced data saturation during analysis.

Limitations of the studies

There was heterogeneity of measures used to gather attitudinal data reported in the quantitative papers. Subsequently, the scales may not be comparable, and they may not access the full scope of clinicians' attitudes as hoped. Three papers did not state how the measures were developed [39,46,48], four papers referenced previous work [25,26,40,41,53], and two papers piloted their data gathering tools [26,52].

Heterogeneity could be improved through the development of a Core Outcome Set (COS) [73]. This would standardise outcome reporting as well as improve the reliability and validity of knowledge synthesis [74]. The COS should collate CSMR knowledge, attitudes, and practice to identify knowledge gaps, cultural beliefs, and behavioural patterns. This would allow for the

identification of needs, problems, and barriers to help develop interventions. A COS using quantitative measurement, would enable a meta-analysis strengthening the evidence base, due to reduced bias and increased objectivity of findings. Meta-analysis are considered to be evidence-based. A meta-analysis would help to establish statistical significance across studies that might otherwise seem to have conflicting results. It would also provide greater statistical power and an improved ability to extrapolate findings to the greater population.

Some studies omitted demographic information; setting [26,39,53], experience [39,47,53], gender [39,42,45,52,53] and age [39,47,53]. This has implications for the determination of sample representativeness and generalisability. Within all papers, due to recruitment methodology comprising of convenience and voluntary response samples there is a risk of unrepresentative sampling. The samples surveyed may not accurately represent the population. As a result, an unrepresentative sample may be affected by selection biases including voluntary response and nonresponse bias. Both reduce the generalisability and transferability of findings.

Strengths of review

This is the first mixed-methods review, which thematically synthesised findings regarding the attitudinal factors which influence clinicians' CSMR decision-making. This flexible approach provided rich information as numerical data alongside exploratory information, pertinent in understanding attitudes, were reviewed. A comprehensive search strategy was also used to maximise the identification of relevant, published papers, to ensure quality. However, this may have introduced a publication bias [75].

Research suggests that barriers to practice must be recognised before the implementation of new guidelines [76]. This review offers insight about attitudinal barriers, which may prevent change and evidence-based practice within maternity settings. Clarification is needed regarding

the prioritisation of ‘women’s autonomy’ versus ‘clinical expertise’ and as well as clinicians being more transparent with women about the proposed lack of clear evidence regarding ‘the safest’ mode of birth [70-72]. The review’s findings also emphasise the role of clinicians’ opinions potentially impacting upon women’s birth satisfaction.

Coherent themes were identified across different maternity staff which suggests that clinicians’ attitudes could be targeted as a whole. It also demonstrates the importance of ‘cultural competency’ and the need for a better understanding of how healthcare is delivered, whilst responding to the needs of diverse populations [77]. Cultural competence is imperative for the provision of safe, high quality care [77].

Limitations of review

Despite attempts to synthesise the mixed-methods data in a coherent theory-driven way, this posed a challenge due to a variance in qualitative and quantitative information. There is the potential for researcher bias during the development of the themes. However, attempts to monitor cohesion and consistency were made during research supervision.

Due to the heterogeneity of the data, a meta-analysis was not feasible. Also, given the exclusion criteria some papers may have been missed, despite rigorous and extensive searches. For practical reasons, non-English studies were omitted; these may have offered information about other cultural norms.

This review synthesised the views of clinicians from different maternity occupations. Whilst relevant for this review, this may have skewed the findings as proportionally more obstetricians were surveyed. However, homogenous themes were identified which encapsulated a variety of attitudes/views.

Implications and recommendations

Due to clinicians having clinical responsibility for women, substantial expectations are placed upon them to support women transition to motherhood safely and in a satisfactory manner. Birth satisfaction is an important outcome in assessing women's experience as well as having implications for their post-natal wellbeing and maternal-infant bonding [78]. This review serves to highlight to maternity providers that clinicians' attitudes regarding CSMR can influence their decision-making outcomes, and that these decisions, have important implications for both women and their babies [78].

To contribute towards improved birth satisfaction for women [27], maternity care should move away from the traditional medical model perspective towards a more holistic approach which covers physical, emotional, social, spiritual and psychological care [69]. Clinicians could also benefit from increased reflective practice, as reflection is an important component of learning and development [79]. This would provide opportunities to challenge assumptions and to evaluate clinicians' responses. To help navigate the ethics of CSMR decision-making, group ethics rounds should also be considered. These can be beneficial for healthcare clinicians, in a variety of settings, in developing advanced insight about ethical issues as well receive advice and support from professional peers, using a moral responsibility framework [80].

Clinicians should also be encouraged to spend more time with women to discuss their requests and to consider the risks and benefits of various modes of birth [16]. More time with women would help to reduce clinicians' subjective bias and allow for greater awareness of how they share clinical recommendations, which in turn could improve women's childbirth experience and reduce unnecessary CSMR. These recommendations are in support of personalised birth plans, women's rights, and professional integrity [27].

Maternity organisations in the UK, USA, Scandinavia, and Hong Kong have statements regarding the involvement of women in birth planning alongside recommendations for women-centred care [81]. In order to offer effective, women-centred care, these services should implement guidance adherence monitoring to ascertain whether policies are being followed, as currently this information is unknown [82]. This is important because unfavourable attitudes and social norms adopted by professional peers, can prevent the implementation of evidence-based practice [83].

Cultural differences should be considered when reviewing the rates and reasons for CSMR [12,13]. The cultural variations across countries highlight the complex interaction of factors which influence CSMR decision-making. Clearer, culturally relevant guidance is recommended to support clinicians' CSMR decision-making. Culturally grounded CSMR practice should consider values, norms, and behaviours to incorporate an ecological perspective.

Functional theories suggest that before attitudinal change can occur, motivational drivers need to be understood. Only by understanding an attitude's function can attitude change efforts be successful [84]. Therefore, future research should explore clinicians' values and other aspects of self-concept to further understand motivational drivers underlying the attitudes held regarding CSMR.

However, it is important to recognise that despite attitudes being involved in a variety of meta-assessments which influence clinicians' choice, attitudes do not solely determine CSMR decision-making outcomes. Future qualitative research is warranted to explore the other constructs involved in clinicians' CSMR decision-making alongside quantitative studies to identify any significant cultural predictors. Research should also explore which attitudes lead

to better or worse outcomes for women. Longitudinal studies could also demonstrate how attitudes may change over time and whether changes in attitudes predict changes in the rates of CSMR. Finally, further exploration of how maternity clinicians navigate responding to women's requests, expectations from society and professional standards are justified.

Additionally, in line with women-centred childbirth [73], women and/or maternity care providers should have a more active role in perinatal research and design. Their involvement is imperative for the identification of relevant questions to ask and the outcomes to assess. For example, co-designing a CSMR related attitude measure. Increased participation in research could also help to achieve more relevant results, whilst at the same time improve recruitment and retention and to promote the emergence of experts by experience. Leading on co-designed research would also embrace the ethical principles of autonomy and non-maleficence in the realm of clinical research, as traditionally it has been carried out on participants rather than with them [85].

Conclusion

This is the first review and meta-synthesis which integrates quantitative, qualitative, and mixed-method findings reporting on the attitudinal factors which influenced maternity clinicians' decision-making to perform a CSMR. Five themes emerged; clinicians' personal beliefs, clinicians' beliefs about the psychological reasons underlying women's requests, risk perception, societal culture and healthcare systems. It evidenced that CSMR decision-making processes were multifactorial and that clinicians held a variety of different beliefs.

This review offers insight into the role of maternity clinicians' attitudes in CSMR appraisal as well as highlighting from an attitudinal perspective 'why' clinicians may accept or decline CSMR from a range of different countries. It is recommended that maternity clinicians have access to clearer, culturally relevant, CSMR guidance as well as increased opportunities for reflective practice, to increase their awareness of how their opinions can affect women's childbirth satisfaction.

So that services and clinicians can uphold better births for women [27] additional research is required. Research should seek to identify the other constructs involved in CSMR decision-making as well as explore how maternity clinicians can be supported to maintain women's rights, reduce FOC and increase the number of preventable CSMR.

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*The acceptability of a single
Acceptance and Commitment Therapy (ACT) session to
support women to cope with the uncertainties of
childbirth
in a first pregnancy*

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Abstract

Objectives: Women who fear childbirth during first pregnancy often experience worry about birth due to intolerance of uncertainty (IOU). Services often fail to recognise fear of childbirth (FOC) and women's support needs are not always met. Findings on the efficacy of psychotherapeutic interventions to help women with FOC are equivocal as the benefits have been reported but resource constraints highlight the need for briefer interventions. The acceptability of a single-session Acceptance and Commitment Therapy (ACT) intervention to help women cope with FOC during first pregnancy has not yet been explored. **Design:** A mixed-methods study was designed using qualitative feedback and self-report measures to assess FOC, wellbeing, functional impairment, IOU, anxiety, and values in primigravidae. **Method:** Women were recruited via the UK National Health Service to attend an informal single-session ACT intervention outside of antenatal care. Data were analysed using descriptive and inferential statistics alongside content analysis. **Results:** Over eight-months, seven single-session ACT sessions were delivered. Thirty-three expressions of interest were received, with 21 women signing up. Fifteen women participated and 11 remained at follow-up. Preliminary treatment signals demonstrated clinical and statistical reductions in FOC and anxiety. Women's feedback highlighted the ACT session to be helpful. At baseline, IOU was relatively uncommon and this remained unchanged. **Conclusions:** A single session ACT intervention is acceptable to first-time expectant mothers. Elements of feasibility were also determined regarding the recruitment and retention of participants as well as ascertaining the suitability outcome measures. A pilot RCT is now warranted. The findings also question whether IOU is the mechanism of change. Future studies should explore how ACT reduces perinatal distress as well as explore efficacy.

Introduction

Fear of Childbirth (FOC)

Women's experience of pregnancy and their appraisals about birth can be negative if they fear childbirth (Wigert et al., 2020). It is not uncommon for pregnant women to have fears about giving birth, and some level of worry about childbirth is to be expected (Rouhe, Salmela-Aro, Halmesmäki, & Saisto, 2009). However, for some women fears exist so intensely that decision-making about pregnancy and childbirth is affected in problematic ways, including duplicating contraception and requesting caesarean sections (Hofberg & Brockington, 2000).

Research suggests that fears are more common during first pregnancy and that they increase during the third trimester due to the approaching birth (Hofberg & Ward, 2007). High levels of fear specifically about giving birth have been likened to a phobic response (O'Connell, Leahy-Warren, Khashan, Kenny, & O'Neill, 2017). Fear-related distress has been shown to persist beyond giving birth, continuing up to one year postpartum and during subsequent pregnancies (Nilsson, Lundgren, Karlström, & Hildingsson, 2012).

A recent meta-analysis estimated 14% of women worldwide experience childbirth related fear (O'Connell et al., 2017). However, several definitions are used within the literature to define this construct. Multiple definitions impact upon the estimation of prevalence rates as well as the measurement of outcomes for women (Rondung, Thomtén, & Sundin, 2016). For the purpose of this study, fears experienced by women relate to the notion of giving birth and the term 'fear of childbirth' (FOC) is used (Nilsson et al., 2018).

Distress associated with FOC has wide reaching implications for women, babies, and health services. Veringa et al., (2016) report that FOC can lead to increased healthcare usage and medical interventions as well as negative experiences of childbirth, postnatal depression, birth

trauma and low rates of breastfeeding. Ayers and Ford (2016) have also shown that women with FOC are more at risk of post-natal post-traumatic stress disorder (PTSD). The events of birth are critical in determining a diagnosis of post-natal PTSD, with women needing to have perceived a threat of serious injury or death during birth (American Psychiatric Association, 2000). Boorman, Devilly, Gamble, Creedy, and Fenwick (2014) however argue that experiencing intense fear during birth may be more accurate than perceiving a threat of injury or death with regards to risk of experiencing post-natal PTSD.

Although FOC is more common during first pregnancy, women who experience birth to be negative or traumatic are five times more likely to report FOC in a future pregnancy (Størksen, Garthus-Niegel, Vangen, & Eberhard-Gran, 2013). Consequently, women who experience FOC are more at risk of developing postpartum PTSD, which ultimately leaves them vulnerable to increased psychological distress during a subsequent pregnancy and after birth. This suggests that as with most psychological problems, the purported cause is multifactorial (Ayers, 2014).

Pregnancy and birth can involve strength and suffering from both a physical and existential perspective, as they carry deep and unique meanings for women (Lundgren, 2017). Subsequently, existential suffering and the lack of trust in maternity care, can have a major impact on women's fear (Dencker et al., 2019). Maternity care traditionally objectifies childbirth and psychological problems have frequently been responded to with medical interventions (e.g. caesarean sections without medical indications), which often leaves existential issues unaddressed. For women with FOC, this can lead to a deeply felt loss of meaning in relation to pregnancy, labour and birth (Crowther & Hall, 2017). Additionally, with increased obstetric interventions women have reported lower levels of birth satisfaction (Walsh, 2002). FOC, increased medical interventions and reduced birth satisfaction, subsequently incur greater costs, risks and implications for both services, women and their

babies (Goodman, Mackey, & Tavakoli, 2004). It is therefore imperative that maternity care seeks to meet the needs of its stakeholders by gathering information about current experience and to work towards offering a biopsychosocial model of care (Mathibe-Neke & Masitienyane, 2018).

Increased maternal distress during pregnancy can lead to detrimental outcomes for maternal postpartum wellbeing and children's development (O'Connor, Heron, Glover, & Alspac Study Team, 2002). Research suggests that women with FOC receive significantly more psychotropic medication (Nordeng, Hansen, Garthus-Niegel, & Eberhard-Gran, 2012), experience greater difficulties with attachment to their baby (NHS London Clinical Networks, 2018), and are more likely to delay or not become pregnant again (Sydsjö et al., 2013). For children, being exposed to maternal distress can negatively impact their learning, behaviour, motor development and emotional regulation (Schetter & Tanner, 2012).

Despite this research, care pathways in the United Kingdom are not currently required to ask women about their childbirth fears (Richens, Hindley, & Lavender, 2015). The guidelines only recommend enquiring about anxiety and depression (National Institute for Health and Care Excellence [NICE], 2014). Subsequently, the identification of FOC and the provision of support varies (O'Brien, Garbett, Burden, Winter, & Siassakos, 2017).

In order to clarify and effectively measure FOC, Sheen and Slade (2018) carried out a meta-synthesis to identify the key constructs underpinning women's fears. Women described "fears of the unknown, potential for injury, pain, capacity to give birth, losing control and adequacy of support from care providers" (Sheen & Slade, 2018, p. 6). The single overarching theme linking these six elements was 'the unpredictability of childbirth', with the mechanism best understood to drive FOC being the intolerance of uncertainty (IOU).

Further evidence in support of Sheen and Slade (2018) has been provided by Rondung, Ekdahl and Sundin's (2018) findings. Hierarchical multiple linear regression illustrated that IOU, measured using the Intolerance of Uncertainty Inventory part B (IOU-B; Gosselin et al., 2008), is a significant predictor of FOC alongside pain catastrophizing.

IOU is described as a type of cognitive bias that can affect how a person perceives and interprets uncertain situations. It can affect how a person responds to uncertainty at a cognitive, emotional, and behavioural level (Dugas & Robichaud, 2007). IOU can lead to individuals seeking control and/or avoiding difficult emotions, thoughts, and sensations (Birrell, Meares, Wilkinson, & Freeston, 2011). IOU has also been shown to facilitate the development and maintenance of worry (Khodayarifard, Mansouri, Besharat, & Lavasani, 2017).

FOC Interventions

The systematic review by Striebich, Mattern and Ayerle (2018) highlights that the findings on effectiveness of interventions to support women with FOC are still equivocal. The preliminary findings suggest single and/or group psychoeducation sessions and/or therapeutic conversations during pregnancy are beneficial.

A randomised control trial (RCT; $n=131$) of six psychoeducation with added relaxation group sessions, led by a qualified psychologist, was evaluated by Rouhe et al., (2015). The intervention group reported a higher number of vaginal births, less fear, and cost-savings to services due to fewer medical interventions being required, balancing out the expense of the psychoeducational group (Striebich et al., 2018).

Nieminen, Andersson, Wijma, Ryding and Wijma (2016) investigated the effects of internet-based cognitive behavioural therapy (ICBT) for FOC (cohort study; $n=24$). The individual programme offered eight weekly modules, consisting of guided self-help and therapy from a

CBT therapist, alongside between two and three hours of homework. The findings reported a significant decrease in women's levels of FOC.

Larsson, Karlström, Rubertsson and Hildingsson (2015) investigated the effect of counselling on FOC. Individual counselling sessions, led by trained maternity staff, were offered to a small number of women. Although it has not been systematically evaluated, the findings suggested that some women reported short-term benefits ($n=56/70$). However, counselling may be ineffective in reducing FOC in the long-term as at one-year follow up, some women ($n=24/59$) still experienced a 'great deal' of FOC.

Byrne, Hayck, Fisher, Bayes and Schutze (2014) evidenced that Mindfulness Based Childbirth Education (MBCE), which blends mindfulness and skills-based childbirth education, was acceptable and helpful for pregnant women. Women have also reported benefits of 'mind-body' interventions such as yoga, hypnotherapy, and relaxation techniques (Ryan, 2013).

Cognitive Behavioural Therapy (CBT) is the recommended intervention for anxiety and depression, during the antenatal and postpartum period (NICE, 2014). CBT has been shown to help women develop more supportive beliefs, confidence and coping strategies relating to childbirth (Nieminen et al., 2016).

Suggestions from Striebich et al.'s (2018) review regarding psychological interventions include the prioritisation of perinatal mental health with theory-based interventions based on cognitive factors for overcoming fear, as well as group-based therapy for primigravidae. The resource constraints of the reviewed studies highlight the need for cheaper and briefer interventions to be offered within the healthcare system.

Single-Session Therapy (SST)

Talmon (1990) suggests that the modal number of sessions (across a range of psychological therapies and settings) most patients attend is one with 70–80% of individuals reporting satisfaction with their outcomes. The general goal in any setting of SST is not to ‘cure’ in a single session but to offer solutions to harness clients’ strengths and autonomy in implementing immediate change. Opportunities are made available to individuals to work collaboratively in a single session, with the knowledge that additional support can be made available when necessary (Young & Dryden, 2019).

Young (2018) suggests that SST is best understood as a service delivery model, which can influence how a model of therapy is conveyed. SST offers a cost-effective, low-intensity, stepped-care approach offering least intrusive interventions first. Young and Dryden (2019) note that the SST literature has grown over the past 20 years, although SST specific outcomes have been suggested to be difficult to obtain because of situating SST as a service delivery model. More rigorous outcome research is required.

There have been no evaluations of the effectiveness of SST to support women during the perinatal period. Smith, Howell, Wang, Poschman, and Yonkers (2009) suggest that women’s engagement with mental health services during the perinatal period is low. Their findings report that only 38.1% of women who were screened for depression and offered a mental health referral, attended at least one visit. Albaugh, Friedman, Yang, and Rosenthal (2018) report similar findings; half of the women who were identified as having risks related to mental health accepted a referral and attended their first appointment.

The Long-Term Plan (NHS England, 2019) emphasises prevention and the provision of brief behavioural interventions to empower people to manage and improve their own health and

wellbeing. Perinatal mental health is a national priority (NHS England, 2019). Brief interventions that may prevent or reduce perinatal mental distress not only have beneficial outcomes for mothers and their children, but can also lead to considerable economic savings (Bauer, Knapp, & Adelaja, 2016).

Acceptance and Commitment Therapy (ACT)

ACT is a ‘third-wave cognitive behavioural therapy’ that focuses on an individual’s relationship to their thoughts and emotions rather than content and thinking styles (Hayes & Hoffman, 2017). ACT aims to foster ‘psychological flexibility’ which can be understood as one’s ability to be in contact with the present moment, as a conscious human being, and to change or continue in value-driven behaviour (Hayes, Strosahl, & Wilson, 2011). ACT uses mindfulness and value-based approaches to help individuals become more present with their current-moment experiences, be open to these experiences, and do what matters (Hayes, Strosahl, & Wilson, 1999). It offers techniques to help individuals relate to difficult thoughts and emotions in more helpful ways. Individuals are also invited to consider whether avoidance prevents them from behaving in line with their values.

ACT provides an alternative approach for addressing intolerance of uncertainty compared with CBT. The latter primarily focuses on trying to modify unhelpful thoughts and behaviours, as these are seen to be causally linked to emotional distress (Hoffman, Sawyer, & Fang, 2010). In contrast, ACT proposes a courageous willingness to be present with feelings of uncertainty, combined with committed actions aimed at putting one’s effort into living a rich and full life via meaningful activity (Hayes & Smith, 2005). This is important, as the health literature highlights that greater levels of acceptance are related to improved adjustment and quality of life (Pakenham & Fleming, 2011).

Meta-analyses of ACT interventions demonstrate small to moderate effect sizes in favour of ACT compared with control conditions (Powers, Zum Vörde, Sive Vörding, & Emmelkamp, 2009; Öst, 2014; Roche, Kroska, & Denburg, 2019). A-Tjak et al.,'s (2015) meta-analysis of the efficacy of ACT for mental and physical health problems, indicates that ACT may be as efficacious as established psychological interventions for a range of difficulties, including anxiety, depression, addiction, and somatic health difficulties.

Current Study

Thus far there is limited extant research exploring the use of ACT during the perinatal period. In response, this study proposes using a single-session ACT intervention, to support women with FOC during first pregnancy, and to help them cope with the uncertainties of childbirth. It is hypothesised that ACT will be beneficial for women expecting their first child, as women's priorities and values can change during pregnancy (Olander, Smith, & Darwin, 2018).

An ACT informed approach may be appropriate as these characteristics are deemed to represent less of a symptom-based view of wellbeing. This will be determined by reviewing the acceptability of the single session ACT intervention; the extent to which first time expectant mothers consider the intervention to be appropriate, based on their experienced cognitive and emotional responses. Guided by Sekhon, Cartwright, and Francis's (2017) Theoretical Framework of Acceptability (TFA), this includes ascertaining; affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy.

Aim

The primary aim is to assess the acceptability of a single session ACT intervention to support the mental wellbeing of women coping with the uncertainties of childbirth in a first pregnancy. Secondly, elements of feasibility will be determined by reviewing recruitment and retention data as well as the assessment of outcome measures to detect treatment signals.

Objectives

This study intended to explore whether a future pilot-RCT would be warranted to assess the effectiveness of ACT during first pregnancy. The objectives were developed using the PICO framework (Richardson, Wilson, Nishikawa, & Hayward, 1995) and recommendations from Eldridge et al., (2016). This approach is consistent with the scope of other studies which design, evaluate and implement healthcare interventions (National Institute of Health Research [NIHR], 2015).

PICO stands for:

Population: *Determine if an appropriate group of women expecting their first child can be recruited and retained.* This will be ascertained by whether a) women are recruited, b) referrals are received from midwives and c) women consent to participate.

Intervention: *Determine if a single ACT informed session is acceptable to this population.* This will be ascertained by reviewing session attendance, attrition rates, analysing outcome measures and reviewing evaluation forms.

Control: This study will be uncontrolled. It intends to determine the viability of conducting a future pilot-RCT.

Outcomes: *Determine if suitable measures can be identified to explore the impact of a single ACT-session to changes in psychological distress, FOC, and value-driven behaviour.* This will be ascertained by reviewing the utility of the measures, standard deviations, estimation of sample size, and whether there are any preliminary treatment signals between pre and post-follow-up scores.

Method

Design

When developing complex interventions, the Medical Research Council (MRC; 2008) recommends the completion of significant design and evaluation work to help identify any problems that might occur during a RCT. The MRC (2008) and NIHR (2015) suggest the inclusion of a literature review, mixed-methodology, procedures for testing acceptability, estimation of sample size and the expected rates of recruitment and retention. These guidelines alongside Sekhon et al.,'s (2017) TFA, informed the parameters and design of this study. A mixed-methods approach was used that included simple process evaluation via qualitative feedback and quantitative information via standardised outcome measures.

Ethics

University of Liverpool Sponsorship (UoL001437), NHS ethics (19/LO0269), and HRA approval were granted prior to data collection (Appendix F).

Session Materials

The researcher developed bespoke ACT session materials. To inform development, the researcher reviewed a guide to ACT delivery for professionals (Harris, 2009) and they attended five days of ACT skills training led by *Association of Contextual Behavioural Science (ACBS)* peer-reviewed trainers Dr Ray Owen and Dr Ross White.

Materials included a 'coping with the uncertainties of childbirth' presentation (Appendix G) and a self-help tool kit (Appendix H). These materials provided women with ACT informed psychoeducation, skills, and opportunities for self-reflection to help them cope with the uncertainties of childbirth. Materials were modelled on the 'be present, be open and do what matters' approach (Hayes et al., 1999). Dr White provided input regarding material development.

Service User Consultation

The Hospital's Maternity Voices Partnership^a was contacted to recruit service user advisors to help inform this study. Two women (who had given birth in the last two years) took part. Service user advisors met with the researcher and primary supervisor to feedback on the ACT presentation and self-help tool kit. Recommendations were sought regarding making these materials acceptable and helpful for women expecting their first child.

Service user advisors felt that psychological support for women with FOC during first pregnancy was limited. Feedback regarding the provision of the ACT session was promising. Based on their suggestions, amendments to the ACT presentation included increased opportunities for women to reflect upon their experience. This involved inviting women to hold in mind what prompted them to attend the session and to use an identified worry during experiential exercises. Normalisation of women's FOC was also discussed. Examples of common worries related to birth (as informed by the literature) were also suggested. Recommendations were made to encourage women to apply the information presented to their own personal experiences. Service user advisors were very complementary towards the self-help tool kit. This was seen to be of great benefit for women. Amendments included extra resources for women to note their reflections.

Setting

The recruitment catchment area was from a large, inner-city teaching hospital which offers maternity care to women across the region. During 2018, 20% of the Consultant Midwife's annual caseload consisted of women who expressed FOC during first pregnancy ($n=90$; internal audit findings).

^a A forum for maternity service users, providers, and commissioners to collaboratively design and input into maternity services, so they meet the needs of local women and families in the catchment area.

Eligibility Criteria

Women were recruited if they expressed worries about childbirth, they were in receipt of care from the hospital with their first baby, had a single pregnancy, were between 11-38 weeks pregnant, were aged 18 years and over, and had a good understanding of English.

Women who were carrying more than one baby or had known medical complications affecting their pregnancy/birth status were excluded. Women who were in receipt of care from the perinatal mental health team were also excluded.

Recruitment

Expression of interest (EOI; Appendix I) forms aimed at recruiting women, were distributed to 79 community midwives. The midwives were asked to share the EOI form with eligible women. No formal screening of FOC was requested. Women who self-expressed FOC, were to be identified by their midwife.

If interested, women were asked to complete the 'consent to contact' slip and return this to their midwife. Completed forms were returned by the midwives to the community office. The researcher checked for completed forms on a regular basis.

The EOI form was also advertised on the hospital's social media accounts. Women could self-refer in response to the advertisement by contacting the researcher. Women's eligibility was confirmed in liaison with the midwives.

On receipt of an EOI, the researcher contacted women via email or telephone. Women were invited to attend an ACT session. Information discussed included session format, dates, and the research component. Women who wished to attend were sent a participant information sheet (Appendix J). The researcher contacted women two to four days before the session, to confirm attendance.

Participants

The study aimed to recruit 36 women, with an estimated attrition rate of 25% (based on internal communication of post-natal studies) resulting in an estimated 27 women at follow-up. The review of other feasibility and pilot studies in FOC populations illustrated a variation in participant numbers. These ranged from 18 (Byrne et al., 2014) to 28 participants (Nieminen et al., 2016). ACT feasibility studies utilised samples of 12 (Saracutu, Edwards, Davies, & Rance, 2018) and 16 (Márquez-González, Romero-Moreno, & Losada, 2010).

Measures (Appendix K)

Demographic data

Demographic information included; date of birth, age, ethnicity, marital status, education level and pre-pregnancy employment status.

Fear of Birth Scale (FOBS; Haines, Pallant, Karlström, & Hildingsson, 2011).

Women rated how they felt about birth using a two-item visual analogue scale, regarding the constructs of worry and fear. Women rated “how do you feel right now about the approaching birth,” using a range of ‘calm/worried’ and ‘no fear/strong fear’ on two 100 mm scales. The two values are averaged to form one score. The cut-off to identify fear of childbirth is 50. The FOBS has proven to be a valid measure for assessing FOC in antenatal contexts with 89% sensitivity and 79% specificity. This scale has demonstrated high internal consistency ($\alpha = .91$; Haines et al., 2011). Internal consistency was high in the current study ($\alpha = .93$).

The World Health Organization Well-being Index (WHO-5; 1998).

Women rated their current (previous two weeks) subjective psychological wellbeing on a five-item scale. The scale ranges from 0 (at no time) to 5 (all the time). Total scores range from ‘0-25’. Higher scores indicate greater wellbeing and quality of life. Topp, Østergaard, Søndergaard and Bech (2015) evidenced the WHO-5 having sufficient validity as

a screen for depression and as an outcome measure, with a cut-off score of ≤ 50 . A 10% difference in scores indicates a significant change to wellbeing (Ware & Davies, 1995). The scale has demonstrated good internal consistency for the assessment of maternal wellbeing ($\alpha = .85$; Mortazavi, Mousavi, Chaman, & Khosravi, 2015). In the current study internal consistency was poor ($\alpha = .50$).

Sheehan Disability Scale (SDS; Sheehan, 1983).

The SDS is a three-item self-report tool which assesses functional impairment in three domains: work/school, social and family life. Women rated how much their symptoms disrupt each domain using a 10-point visual analogue scale, ranging from 0 (not at all), 1-3 (mildly), 4-6 (moderately), 7-9 (markedly) and 10 (extremely). Higher scores indicate increased difficulty. For anxiety and depression, sensitivity is 83% and specificity is 69% (American Psychiatric Association & Rush, 2000). Internal consistency was adequate in the current study ($\alpha = .68$).

Intolerance of Uncertainty Scale (IUS-12; Carleton, Norton, & Asmundson, 2007).

The IUS-12 is a 12 item self-report tool which measures responses to uncertainty, ambiguous situations and the future using a five-point Likert scale. The scale ranges from 1 (not characteristic of me) to 5 (entirely characteristic). Total scores range from '12-60'. Higher scores indicate greater difficulty tolerating uncertainty. Scores ≥ 35 represent significant IOU. IUS-12 has demonstrated good convergent and discriminant validity, as well as internal consistency ($\alpha = .85$; Carleton et al., 2007). In the current study internal consistency was good ($\alpha = .85$).

Generalized Anxiety Disorder Scale (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006.)

The GAD-7 is seven-item questionnaire, which measures anxiety levels during the past two weeks. The scale ranges from 0 (not at all) to 3 (nearly every day). Total scores range from '0-21'. Higher scores indicate increased symptom severity. Scores between 0-5 indicate 'no'

anxiety, 6-10 indicates 'mild' levels, 11-15 indicates 'moderate' levels and 16-21 indicates 'severe' levels of anxiety. An additional question asks, "how difficult has it been to carry out daily routines" ranging from 0 'not at all difficult' to 3 'extremely difficult'. A score of >10 represents clinical levels of anxiety. Sensitivity is 89% and specificity 82% (Spitzer et al., 2006). The scale has demonstrated good internal consistency among pregnant women ($\alpha = .89$; Zhong et al., 2015). Internal consistency was good in the current study ($\alpha = .81$).

Valued Living Questionnaire (VLQ: Wilson & Groom, 2002).

The VLQ is a two-part questionnaire that measures valued living, which is a core process of ACT (Wilson, Sandoz, Kitchens, & Roberts, 2010). Firstly, women were required to rate their levels of importance of 10 life domains using a 1-10 scale. Secondly, using the same scale they were asked to rate the extent to which they had been living consistently with these values. Higher scores indicate higher levels of importance and value driven behaviour. Life domains include; Family, Marriage/Couples/Intimate relations, Parenting, Friendship, Work, Education, Recreation, Spirituality, Citizenship and Physical Self-Care. A total score is calculated for both importance and consistency (10-100). The measure has demonstrated adequate internal consistency ($\alpha = .74$; Wilson et al., 2010). In the current study, the internal consistency was adequate on the importance subscale ($\alpha = .67$) and good on the consistency subscale ($\alpha = .83$).

ACT-Session Evaluation Form

A bespoke feedback form was developed. Feedback was sought regarding clarity, organisation, interest, and usefulness via a Likert scale ranging from 0 (not at all) to 10 (extremely). The Likert scale was also used to seek feedback about how clearly the ACT elements ('be present, be open, do what matters') were explained. Women were asked to tick which strategies appealed to them as well as rate how confident they felt about using the skills and self-help tool kit. Finally, qualitative feedback sought suggestions for improvement and any other comments.

Procedure

Dates, Time, and Location

Seven ACT sessions took place. They ran on weekday evenings, starting at 6pm. The session lasted up to three hours and it was held in the Hospital Training Room.

Attendance

The session was made available to a maximum of 12 women per session (accompanied by a guest). If only one woman signed up, the session still ran.

Session Delivery

The researcher used a plan (Appendix L) to lead the session, with support from the Consultant Midwife. To begin, consent was obtained (Appendix M) and paper-based questionnaires were completed to gather information about how women were feeling (Appendix K). The researcher subsequently guided women through the ACT presentation. Throughout, the researcher provided space for discussion, opportunities for questions and for women to share reflections (if willing).

Towards the end, the researcher discussed the self-help tool kit which offered additional ACT coping strategies. Opportunities were also provided to discuss the application of ACT skills into women's daily lives.

To finish, women completed the ACT session evaluation form (Appendix K) and the researcher offered a debrief. Information about the next steps of the study were discussed, women were thanked for their participation and final queries were responded to. Women were also provided with a copy of the presentation and self-help tool kit. If women requested further help, the Consultant Midwife offered additional support.

Two weeks after the session, the researcher contacted women to request the completion of follow-up questionnaires. On receipt of the questionnaires, women were given an e-voucher as compensation for their time.

Data Analysis

Data analysis was performed using SPSS v.25. Demographic information was collated using descriptive statistics. No individual missing data occurred. Four women did not return follow-up questionnaires, subsequently their data sets were omitted from inferential analysis.

Data were assessed for normality using skewness and kurtosis as well as the examination of histograms. Due to the small sample size and normality assumptions not being met, non-parametric tests were performed. Descriptive statistics and the Wilcoxon Signed-Rank test were conducted to perform within-group analyses between pre-session and post-two-week outcomes.

Analysis of reliable change and clinical significance were reported using Jacobsen and Truax's (1991) methodology assisted by 'How to do it V3.1 with graph.xlsm' (Morley, 2013). Cut-off b (following the ACT session women's levels of functioning should fall within the range of the normal population; the range beginning at two SD below the normal population mean) was chosen due to the distributions of normative and study data being non-overlapping.

The data from the ACT session evaluation form was collated using descriptive statistics alongside summative content analysis of qualitative feedback. Key words and content from women's responses were quantified, then grouped and thematically coded. Codes were developed and verified during supervision with illustrative quotes. Latent content analysis was used to discover and interpret underlying meanings (Hsieh & Shannon, 2005).

Results

Recruitment

As described in Table 1, 33 expressions of interest were received; 22 by midwife referral (MWR) and 11 by self-referral (SR). Of these, 21 women signed up to attend (11 MWR; 10 SR). Fifteen women participated (9 MWR; 6 SR) and 11 completed follow-up questionnaires (8 MWR; 3 SR).

Table 1 *Recruitment Data*

Source	Expression of Interest (%)	Proportion of women who signed up (%)	Proportion of women who attended (%)	Proportion of women who completed >2week follow-up (%)
Midwifery Referral	22 (67)	11 (50)	9 (41)	8 (89)
Self-referral	11 (33)	10 (91)	6 (55)	3 (60)
Total (%)	33 (100)	21 (64)	15 (71)	11 (73)

Attendance

Over eight months, seven out of 10 sessions took place due to three sessions being cancelled due to non-attendance. The number of women who attended each session ranged from 1-5, with an average of two women per session. Table 2 illustrates the number of women who did not attend and their reasons. Thirteen out of 22 women (59%) referred by their midwife did not attend in comparison to five (45%) of eleven women who self-referred. Reasons for not attending included: work commitments, feeling okay about birth, miscarriage and not stated. There was no significant difference between the two referral groups in non-attendance rates ($p = .49$; Fisher's Exact Test).

Table 2. Reasons for not attending

Reason	Midwife referral	Self-referral	Total (%)
Not Stated	8	2	10 (30)
Work	3	1	4 (12)
Gave Birth	1		1 (3)
Miscarriage	1		1 (3)
Family Bereavement		1	1 (3)
Feeling OK		1	1 (3)
Non-attendance (%)	13 (59)	5 (15)	18 (55)

(Referral $n= 33$)

Participants

Table 3 describes the demographic data ($n=15$). The mean age of the women was 30.3 ($SD =6.03$) years and the mean pre-session gestation was 30.3 ($SD =4.99$) weeks. The age of women and the proportion of women who were of White-British ethnicity, were comparable to English antenatal data (The Office of National Statistics, 2011; 2017). However, unlike the comparative data, fewer women in the sample were married and more reported being in a relationship. The women in the sample also had higher rates of employment and education compared to the general population. The demographic data of those who expressed an interest but did not attend is unknown.

Table 3. *Participant characteristics (n=15)*

	Range	Mean (<i>SD</i>)	Normative mean	
Age of first pregnancy (years) ^b	20-40	30.3 (6.03)	28.8	
		Total, <i>n</i> (%)	%	
Marital Status ^c				
Married		5 (33.3)	50.5	
In a relationship		7 (46.7)	10.4	
Single		3 (20.0)	35.0	
Educational attainment ^d				
Low education (no qualifications/GCSEs)		0 (0)	51.3	
Mid education (A Levels / Vocational)		2 (13.3)	21.6	
High education (graduate/post-graduate)		13 (86.6)	27.2	
Pre-pregnancy employment ^e				
Employed (full time/part time)		14 (93.3)	72.3	
Unemployed (out of work/student/voluntary)		1 (6.7)	27.7	
Ethnic Origin ^f				
White British		13 (86.7)	85.4	
White Other		1 (6.7)	4.6	
Mixed Other		1 (6.7)	0.8	
	Range	Mean (<i>SD</i>)	-	
	Pre-session	Follow-up (>2weeks)	Pre-session	Follow up (>2weeks) ^g
Gestation (weeks)	17-36	19-39	30.3 (4.99)	32.5 (5.32)

^b The Office of National Statistics (2017)^c The Office of National Statistics (2018)^{d, f} The Office of National Statistics (2011)^e The Office of National Statistics (2020)^g *n*=10 (1-woman completion date unknown).

Descriptive Statistics

Table 4 illustrates ‘clinical caseness’ scores ($n=11$). Eight (73%) women reported clinical levels of FOC at baseline with four (36%) women still reporting clinical levels at follow-up. Six (55%) women reported at least ‘moderate’ levels of anxiety at baseline with three (27%) still reporting clinical levels at follow-up. Nine (82%) women had wellbeing scores ≤ 50 and three (27%) women had IOU scores of ≥ 35 before the session, with no reported change at follow-up. Table 5 provides descriptive data for both 15 and 11 women at baseline, and 11 women only at follow-up.

Table 4. *Questionnaire cut-off scores ($n=11$)*

Scale ^h	Pre-Session, <i>n</i> (%)	Follow-up (> 2 weeks) <i>n</i> (%)
FOBS score of ≥ 50	8 (73)	4 (36)
GAD-7 score of ≥ 10	6 (55)	3 (27)
WHO-5 score of ≤ 50	9 (82)	9 (82)
IUS-12 score of ≥ 35	3 (27)	3 (27)

Note: Clinical cut-off not applicable for VLQ; Valued Living Questionnaire.

FOBS; Fear of Birth Scale; GAD-7; Generalized Anxiety Disorder-7; WHO-5; World Health Organisation five wellbeing index; IUS-12; Intolerance of Uncertainty Scale-12..

^h The scoring methods (as detailed in Method Section) were used to establish a ‘clinical caseness’ score for each measure.

Table 5. Pre- and post-session descriptive statistics

Variable	Pre-session scores of women who attended (n =15)		Pre-session scores of women who attended and completed follow-up (n=11)		Post-session scores of women who attended and completed >2-week follow-up (n=11)		Range of Scores
	Mean (SD)	Median	Mean (SD)	Median	Mean (SD)	Median	
<i>Fear of Birth (FOBSⁱ)</i>							
Calm-Worried	61.1 (21.5)	67	61.7 (18.5)	66	40.0 (22.5)	30	0-100
No Fear – Fear	64.3 (23.6)	70	68.2 (21.2)	70	47.4 (23.9)	43	0-100
Average score	62.9 (22.0)	70	65.2 (19.4)	69	44.0 (22.2)	34	0-100
<i>Anxiety Symptoms (GAD-7^j)</i>							
How difficult have symptoms made daily life	1.07 (0.80)	1	1 (0.63)	1	0.82 (0.87)	1	0-3
<i>Wellbeing (WHO-5^k)</i>							
	43.5 (11.9)	40	43.6 (9.17)	40	44.2 (12.8)	44	0-100
<i>Functional Impairment (SDS^l)</i>							
Symptoms disrupted work	3.00 ^m (2.75)	2	3.43 ⁿ (3.26)	2	2.00 ^o (2.07)	2	0-10
Symptoms disrupted social	3.60 (2.72)	3	3.64 (2.78)	3	3.09 (2.07)	2	0-10
Symptoms disrupted home	3.13 (2.39)	2	3.36 (2.62)	2	3.00 (2.65)	3	0-10
Days lost	.87 (1.55)	0	.45 (.93)	0	.36 (.67)	0	0-7
Days unproductive	1.00 (1.25)	0	1.18 (1.33)	1	2.36 (2.06)	2	0-7
Total Score	32.2 (10.7)	31	32.0 (9.63)	31	28.6 (10.2)	25	12-60
<i>Intolerance of Uncertainty (IUS-12^p)</i>							
Prospective uncertainty	20.2 (6.80)	22	20.0 (6.65)	19	19.2 (6.88)	17	7-35
Inhibitory uncertainty	11.3 (4.85)	10	11.1 (3.96)	10	9.45 (3.56)	9	5-25
Total Score	32.2 (10.7)	31	32.0 (9.63)	31	28.6 (10.2)	25	12-60

^{i, j} Reduction in scores demonstrates improvement

^k Increase in scores demonstrates improvement

^{l, p} Reduction in scores demonstrates improvement

^m n= 10. Five women the subscale was not applicable (NA); not working for reasons unrelated to symptoms.

ⁿ n=7. Four women the subscale was NA.

^o n=8. Three women the subscale was not NA.

Table 5. Continued

Variable	Pre-session scores of women who attended (n=15)		Pre-session scores of women who attended and completed follow-up (n=11)		Post-session scores of women who attended and completed >2-week follow-up (n=11)		Range of Scores
	Mean (SD)	Median	Mean (SD)	Median	Mean (SD)	Median	
<i>Values Importance (VLQ^a)</i>							
Family	9.07 (1.44)	10	8.73 (1.56)	10	8.91 (1.51)	9	1-10
Marriage/Intimate relations	9.20 (1.74)	10	8.91 (1.97)	10	8.64 (2.34)	10	1-10
Parenting	9.47 (0.74)	10	9.36 (.81)	10	9.36 (1.57)	10	1-10
Friends/Social life	8.27 (1.44)	9	8.73 (1.19)	9	8.91 (1.38)	9	1-10
Work	7.67 (1.45)	8	7.82 (1.17)	8	7.36 (1.43)	7	1-10
Education	7.87 (1.96)	8	8.36 (1.50)	8	7.73 (2.10)	8	1-10
Recreation/Fun	7.93 (1.71)	8	8.18 (1.60)	8	8.09 (1.81)	8	1-10
Spirituality	5.53 (2.90)	5	5.91 (3.27)	6	6.00 (3.19)	6	1-10
Citizenship	5.53 (2.88)	5	6.45 (2.73)	6	6.45 (1.75)	7	1-10
Physical self-care	7.87 (2.23)	8	8.36 (1.80)	8	8.27 (1.27)	8	1-10
Importance Total	78.1 (9.99)	77	80.8 (10.1)	79	79.7 (9.01)	78	10-100
<i>Values Consistency (VLQ^b)</i>							
Family	7.71 (2.05)	8	7.36 (2.06)	8	8.27 (1.62)	8	1-10
Marriage/Intimate relations	7.21 (3.22)	9	6.73 (3.41)	8	6.64 (2.94)	7	1-10
Parenting	7.64 (2.98)	9	7.36 (3.26)	9	8.55 (1.86)	9	1-10
Friends/Social life	5.57 (2.59)	6	5.82 (2.75)	6	6.73 (2.49)	7	1-10
Work	5.00 (3.14)	6	4.64 (3.33)	6	4.91 (3.02)	6	1-10
Education	4.64 (3.61)	5	4.73 (3.66)	6	5.27 (2.80)	6	1-10
Recreation/Fun	5.57 (2.44)	6	5.64 (2.11)	6	6.09 (2.17)	7	1-10
Spirituality	4.43 (2.98)	4	4.36 (2.66)	4	5.91 (3.33)	6	1-10
Citizenship	4.29 (2.87)	4	4.18 (2.48)	5	4.82 (2.36)	5	1-10
Physical self-care	4.57 (2.93)	4	4.91 (3.05)	5	6.09 (2.43)	6	1-10
Consistency Total	56.9 (18.2)	58	55.7 (18.2)	61	63.3 (14.0)	63	10-100

Note: FOBS; Fear of Birth Scale; GAD-7; Generalized Anxiety Disorder-7; WHO-5; World Health Organisation five wellbeing index; SDS; Sheehan Disability Scale; IUS-12; Intolerance of Uncertainty Scale-12; VLQ; Valued Living Questionnaire

^{a, b}, Increase in scores demonstrates improvement

The Wilcoxon Matched-Pairs Signed-Ranks Test; Pre-Post Session ($n=11$)

Women's pre-session and post-two-week follow-up fear of birth scores were compared. On average, their levels of FOC were lower at follow-up ($Mdn = 34$) than before ($Mdn = 69$). The Wilcoxon signed-rank test indicates that this difference is significant, $T= 5.00$, $Z= -2.49$, $p= .01$. Women's anxiety scores were also compared. On average, their anxiety levels were lower at follow-up ($Mdn = 8$) than before ($Mdn = 11$). The Wilcoxon signed-rank test indicates this difference is significant, $T= 4.00$, $Z= -2.41$, $p= .02$. No other significant differences were found (Table 6). Hedges' g suggests large effect sizes for FOBS and GAD-7.

Table 6. *Within-Group Analysis*

Measures	T -score	Z -score	p -value	Effect Size (g)	95% Confidence Interval
FOBS Ψ	5.00	-2.49	.01*	1.02	[-38.0, - 5.00]
GAD-7 Ψ	4.00	-2.41	.02*	.79	[-7.00, -.50]
WHO-5 Ψ	29.0	.15	.88	.05	[-4.00, 6.00]
IUS-12 Ψ	15.5	-1.56	.12	.34	[-7.50, 1.00]
VLQ importance Ψ	29.0	.15	.88	.10	[-8.50, 4.50]
VLQ consistency Ψ	46.5	1.20	.23	.47	[-5.00, 19.0]

$n=11$; * $p\leq 0.05$

Ψ Non-parametric test; medians analysed

Note: SDS not statistically analysed; unable to calculate total score for inferential analysis due to NA subscale; FOBS; Fear of Birth Scale; GAD-7; Generalized Anxiety Disorder-7; WHO-5; World Health Organisation five wellbeing index; IUS-12; Intolerance of Uncertainty Scale-12; VLQ; Valued Living Questionnaire.

Sample Size Calculation for a Future Trial

To detect a statistically significant difference in mean scores, using the FOBS (Haines et al., 2011) for pre-post follow up, it is estimated that 10^s women are needed in the control and experimental groups (α level $p=.05$, power 90%).

^s G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007)

Reliable Change Index (RCI) and Clinically Significant Change (CSC)

Table 7 illustrates the degree of reliable and clinically significant change on each of the pre-post measures for the 11 women. Pre-session mean FOBS scores indicate a ‘moderate’ degree of FOC ($M= 65.2, SD= 19.4$). The mean post-session FOBS scores indicate a normative degree of FOC ($M= 44.0, SD= 22.2$). The RCI shows that six women (54.5%) reliably improved with the CSC analysis indicating they all had clinically significant reductions in their levels of FOC.

Pre-session mean GAD-7 scores indicate a ‘moderate’ degree of anxiety ($M= 11.6, SD= 5.07$). The mean post-session GAD-7 scores indicate a ‘mild’ degree of anxiety ($M= 8.15, SD= 3.49$). The RCI shows that two women (18.1%) reliably improved, with the CSC analysis indicating they both had a clinically significant reduction in anxiety levels.

Pre-session mean WHO-5 scores indicate relatively low levels of wellbeing ($M= 43.6, SD =9.17$). The mean post-session WHO-5 scores indicate little change ($M= 44.2, SD= 12.8$). The RCI shows eight women had no change, one deteriorated and two improved. No clinically significant changes in wellbeing occurred.

Pre-session mean IUS-12 scores indicate relatively low levels of intolerance of uncertainty ($M= 32.0, SD=9.63$). The mean post-session IUS-12 scores indicates little change ($M= 28.6, SD= 10.2$). The RCI and CSC analysis shows that no reliable or clinically significant changes occurred regarding IOU levels.

Pre-session mean VLQ-Importance scores indicate relatively high levels of importance placed on valued life domains ($M= 80.8, SD= 10.1$). The mean post-session VLQ-Importance scores indicate little change ($M= 79.7, SD= 9.01$). The RCI shows 10 women had no change and one woman deteriorated. No clinically significant changes to value importance levels occurred.

Pre-session mean VLQ-Consistency scores indicate moderate levels of value driven behaviour ($M= 55.7, SD= 18.2$). The mean post-session VLQ-Consistency scores indicate a small increase ($M= 63.3, SD= 14.0$). The RCI shows two women reliably improved, with the CSC analysis indicating one woman having a clinically significant increase in her value driven behaviour.

Table 7. RCI and CSC for pre-post outcome measures ($n=11$)

Variable	Pre-session mean (SD)	Post-session mean (SD)	Reliability Co-efficient (α)	Normative Mean (SD)	RCI	No change, $n, (%)$	Improved, $n, (%)$	Deteriorated, $n, (%)$	CSC, $n, (%)$
FOBS	65.2 (19.4)	44.0 (22.2)	.91 ^t	41.0 ^u (21.0)	16.6	5 (45.5)	6 (54.5)	-	6 (54.5)
GAD-7	11.06 (5.07)	8.15 (3.49)	.89 ^v	3.20 ^w (3.50)	6.12	9 (81.8)	2 (18.1)	-	2 (18.1)
WHO-5	43.6 (9.17)	44.2 (12.8)	.85 ^x	59.8 ^y (20.2)	10.4	8 (72.7)	2 (18.1)	1 (9.09)	0 (0)
IUS-12	32.0 (9.63)	28.6 (10.2)	.85 ^z	49.9 ^{aa} (17.2)	10.4	11 (100)	-	-	0 (0)
VLQ-imp	80.8 (10.1)	79.7 (9.01)	.74 ^{bb}	87.2 ^{cc} (8.69)	14.3	10 (90.9)	-	1 (9.09)	0 (0)
VLQ-cons	55.7 (18.2)	63.3 (14.0)	.74 ^{bb}	87.2 ^{cc} (8.69)	25.7	9 (81.8)	2 (18.1)	-	1 (9.09)

Note: SDS not statistically analysed; unable to calculate total score due to NA subscale.

^{t, u} Haines et al. (2011)

^v Zhong et al. (2015)

^w Löwe et al. (2008)

^x Mortazavi et al. (2015)

^y Ellervik, Christensen and Vestergaard (2014)

^{z, aa} Carleton et al. (2007)

^{bb, cc} Wilson and Groom (2002)

ACT-Session Feedback

Descriptive statistics regarding session delivery, content ratings and levels of understanding are presented in Table 8. Overall, the feedback was positive with women rating the session as highly useful, easy to follow and learning outcomes being achieved. All 15 women reported an interest in at least one of the ACT strategies; with a third reporting an interest in all three strategies. Women indicated that they felt very confident in applying the techniques into their daily lives as well as using the self-help tool kit.

Table 8. ACT-session evaluation form data (n=15)

Session content, understanding and skills.	Median	Mode	Possible scores
How clear were the session objectives?	10	10	0-10
How well organised was the session?	10	10	0-10
How interesting was the session?	10	10	0-10
How useful was the session?	10	10	0-10
How clearly was “be present” explained?	10	10	0-10
How clearly was “be open” explained?	10	10	0-10
How clearly was “do what matters” explained?	10	10	0-10
Which Strategies appealed the most?	Number of women		
Value driven behaviours	1		
Mindfulness & Value driven behaviours	1		
Mindfulness & Observing self	4		
Observing self & Value driven behaviours	4		
Mindfulness, Observing self & Value driven behaviours	5		
Confidence and utility of skills	Median	Mode	Possible scores
How confident do you feel about applying the strategies into your daily life?	9	8	0-10
How confident do you feel about using the self-help tool kit?	10	10	0-10

Table 9 illustrates the interpretation and description of women's qualitative feedback, extracted from the evaluation form. Women's feedback was very positive, with comments regarding the material being effectively presented and helpful.

Table 10 summarises additional feedback, which was voluntarily received from six women, during follow-up contact. This feedback was also very positive, with women referencing gratitude for being able to attend as well as the ACT techniques being helpful for coping with birth-related worries pre and during labour.

Table 9. *Content analysis of ACT-session evaluation form (n=15)*

Recommendations			
Content (code)	Description	Quotes	Frequency
No suggested improvements	No changes required	<i>"I don't think anything needs to be improved"</i>	1
Birth plans	Include more information about the contextual factors affecting birth	<i>"More emphasis on birth and birthing worries rather than being general sessions would be great".</i>	1
Other Comments			
Techniques/Skills	The learning of new techniques	<i>"Pleased to learn some new skills"</i> <i>"The mindfulness and observing parts were really helpful"</i>	9
Helpful	The session/information being helpful	<i>"It was very helpful"</i> <i>"...I feel like I can take away a lot ..."</i>	7
Accessible	The session/information being user friendly	<i>"Clear and well explained"</i> <i>"The right amount of information made it comfortable to process"</i>	6
Intention	An intention to use the information	<i>"I will definitely use these to cope"</i> <i>"... I will use the methods discussed to help this"</i>	5
Pregnancy/Childbirth	The information being helpful for pregnancy/childbirth worries	<i>"Useful tools for people with pregnancy fears and uncertainties"</i> <i>"...Hopefully [I will] use the techniques during labour"</i>	4
Gratitude	Thankfulness	<i>"Thank you very much"</i>	2
Enjoyment	Pleasure and satisfaction	<i>"I really enjoyed the session and it's delivery"</i>	2
Generalisability	The information being generalizable	<i>"Pleased to learn some new skills to apply to life in general as well as during childbirth"</i>	2
Relaxing	Reduced arousal	<i>"I found the session very relaxing ..."</i>	1

Table 10. *Content analysis of additional feedback received at follow-up (n=6)*

Content (code)	Description	Quotes	Frequency
Gratitude	Appreciation and thankfulness	<i>“Thanks again for a wonderful session”</i> <i>“Thank you for letting me take part”</i>	5
Techniques/Skills	Techniques and skills	<i>“...I’ll use some of the techniques pre and whilst in theatre”</i>	2
Helpful	The session/information being helpful	<i>“... I was in labour all of last week, I did use some of your techniques to help”</i>	2
Intention	An intention to use the information/skills	<i>“... I know I’ll use ...”</i>	1
Caesarean Section	Birth plans	<i>“... although I’ve decided to continue with the c-section ...”</i>	1
Approval	The information/session being suitable for others	<i>“...I would highly recommend”</i>	1

Discussion

To the best of the researcher's knowledge, this is the first study which uses a mixed-methods design to explore the acceptability of a single session ACT intervention to help women cope with the uncertainties of childbirth during first pregnancy. As acceptability is a multi-faceted construct, recruitment and retention data as well as the assessment of outcomes also contributes, in part, to the assessment of feasibility when evaluating whether a future pilot-RCT would be warranted.

Acceptability and elements of feasibility, were explored through the use of quantitative outcomes and feedback alongside qualitative information regarding women's views, experiences and recommendations. Each of the seven elements of Sekhon et al.'s (2017) TFA, have been reported upon. Preliminary information about treatment signals and possible mechanisms of change were also explored through analysis of quantitative measures at two time points.

Acceptability

The identification of an appropriate group of women expecting their first child was not overly difficult as women self-referred and women were signposted via midwives. Plus, the recruitment site was amenable to the running of the ACT session in their service.

Thirty-three women expressed an interest in the ACT session with two-thirds signing up to attend. Fifteen out of 21 women attended the ACT session, with two-thirds completing follow-up questionnaires. Importantly, women who did not complete follow-up questionnaires were not more distressed at base-line than those who did complete them. Table 5 illustrates pre-

session means to be nearly identical for completers and non-completers. No difference was found when women who were lost to follow-up were excluded, reducing the potential for bias.

The sample size is smaller than anticipated but it is similar to that of Saracutu et al.'s (2018) feasibility study which used a brief ACT intervention for pain. The sample was very supportive of the development of an intervention to help with FOC, however a key challenge was the recruitment of women. Nearly a third of women expressing an interest did not go on to attend a session, even after signing up. For the majority of non-attenders, a reason was not reported. Subsequently, there are unknown barriers to participation or burden associated with participating in the intervention, which has implications for future research.

This study is consistent with Albaugh et al.'s (2018) findings regarding perinatal attendance rates at first appointments for psychological support; approximately half of the women identified engaged with the ACT intervention. Although non-significant, in the current study a greater drop-out of women occurred following a midwifery referral in comparison to women who self-referred.

This difference in uptake between referrals might be explained by 'psychological reactance'. The literature highlights that when people are asked to do something, the opposite often occurs, due to an over-riding sense of threat to one's freedom of choice (Dillard & Shen, 2005). This is important for future FOC research, as receiving the suggestion of psychological support from a midwife, might feel threatening to women.

Additionally, it is unknown whether women experienced any negative emotions about attending a group session to help with the uncertainties of childbirth. This has implications for future FOC as there may be emotional barriers for women to attend group-based interventions. However, group-based CBT for anxiety during pregnancy has been well-evidenced (Green,

Haber, Frey, & McCabe, 2015) as well as group antenatal classes being relatively common and helpful (Kacperczyk-Bartnik et al., 2019) which suggests that group settings can be of value to pregnant women.

Lacy, Paulman, Reuter, and Lovejoy (2004) explored no-show rates and the possible reasons why adult clients with a range of presenting difficulties, failed to attend 1:1 outpatient psychotherapy appointments. Their findings suggest that negative emotions about the appointment can be greater than perceived benefits. A delay between scheduling and attendance also contributed to this dynamic. Subsequently, fear and worry presented as emotional barriers to attendance. This may be particularly pertinent for women who may already be experiencing high levels of worry and fear about birth.

The Theory of Planned Behaviour (TPB) is a useful framework for understanding people's motivation to attend appointments (Sheeran, Aubrey, & Kellett, 2007). According to the TPB, an important predictor of behaviour, is one's intention to perform it. Intentions are thought to represent the motivational factors that influence behaviour, and thus direct how much effort is invested into performing the action (Ajzen, 1991). Sheeran et al., (2007) showed that by implementing an intention formation ('if-then plan' based on normalising anticipated negative affect) participants in a non-perinatal sample were able to self-regulate, which subsequently helped them to attend their initial psychotherapy appointments. This approach may help women attend psychological support during the perinatal period.

Whilst a degree of fear about giving birth is normal (Rouhe et al., 2009), women's understanding of birth, can be determined by their attitudes and beliefs, which are inherently linked to culture and health system influences (Nettleton, 2006). Research has shown that more women are experiencing antenatal anxiety about pain and a reduced faith in their ability to manage labour (Green, Baston, Easton, & McCormick, 2003). This trend is also correlated with

women's positive attitudes towards obstetric interventions, as pain relief and caesarean sections on maternal request are increasingly being requested (Thomas & Paranjothy, 2001). Future studies may wish to explore how ACT may support women to be more open to birth being a natural process.

In this study, women were on average seeking support for birthing worries at 30.3 weeks gestation. This is consistent with previous research, which suggests that fear increases during the third trimester (Hofberg & Ward, 2007). The 'precontemplation' stage of behavioural change (Prochaska & DiClemente, 1983) may also account for loss of uptake as women may not be ready to consider accessing support before 30 weeks.

However, it is important to note that the prenatal period is a critical time for foetal neurodevelopment. It is a vulnerable period for the foetus, during which a range of exposures (including maternal distress) have been found to contribute towards long-term changes on their development, with implications for physical and mental health (Kinsella & Monk, 2009). Subsequently for expectant mothers, accessing support earlier on in the prenatal period is vital.

Implementing health related behaviour change takes time and as with any skill, practice is important (Gardner, Lally, & Wardle, 2012). This too has implications for the acceptability and feasibility of interventions to support women during the final trimester of pregnancy, as there may well be unknown 'opportunity costs' (the extent to which benefits, profits, or values must be given up to engage in an intervention). More exploration is needed regarding 'when' women may begin to identify worries and their readiness for change as well as investigating the barriers or costs which may hinder accessing psychological support earlier in pregnancy.

Quantitative analysis

In acknowledgement to the accessibility aim, elements of feasibility, the lack of a control group and a small sample size, a cautionary approach should be taken to the findings and degree to which changes on measures can be explained by the ACT intervention alone. However, the results show statistically significant reductions in FOC and anxiety and no changes to IOU. Promising findings were evident regarding women's increased levels of value-driven behaviour. No significant changes were shown regarding the level of importance placed by women on valued life domains. This may be due to adequate internal consistency or that this ACT process may not be sensitive to change during a small (> 2-week) time-frame.

A proportion of the changes to FOC, anxiety and valued living were deemed reliable and clinically meaningful. There are no indications of the intervention leading to adverse outcomes. This suggests that the single-session ACT intervention is acceptable and as hypothesised, beneficial for women during first pregnancy. Importantly, 'no change' does not mean the support offered was ineffective. The intervention may have prevented an escalation of distress, as the literature highlights FOC to typically increase over time (Hofberg & Ward, 2007), which was not demonstrated at follow-up for this sample.

With regards to the suitability of the measures, normative data which closely represented the antenatal population were only available for the FOBS (Haines et al., 2011), GAD-7 (Löwe et al., 2008) and the WHO-5 (Ellervik, Kvetny, Christensen, Vestergaard, & Bech, 2014). It was not available for the IUS-12 (Carleton et al., 2007) and VLQ (Wilson & Groom, 2002). Therefore, the identified baselines may not accurately represent the antenatal population. Completion rates of follow-up measures were promising, indicating attrition rates to be low. A two-week follow-up period has also been demonstrated to be viable and suitable with this population. There were no known reports of the research component being too burdensome.

The internal consistency for the WHO-5 (1998) in this study was poor. This may be due to the small sample and/or inadequate correlation of items. The WHO-5 has previously shown good internal consistency in antenatal samples (Mortazavi et al., 2015). The work subscale on the SDS (Sheehan, 1983) was not applicable for four women, due to them not working for reasons unrelated to worry. Future studies may wish to omit the SDS measure (Sheehan, 1983). Readers are encouraged to be conservative regarding their interpretations of the findings in relation to wellbeing and functional impairment during first pregnancy.

Previous research has highlighted IOU to be a significant driver of FOC (Sheen & Slade, 2018; Rondung et al., 2018). Interestingly at baseline, only three women reported clinical levels of IOU and there was no significant change. This is an important theoretical finding as this suggests that either the IUS-12 (Carleton et al., 2007) ineffectively captured women's levels of uncertainty, women under-reported, the sample was non-representative or that other factors may also drive FOC. Future studies should consider the reporting of IOU and the suitability of alternative measures to capture this mechanism.

This study evidences reductions in FOC and anxiety. ACT aims to increase 'psychological flexibility' through process of change captured within the 'be present, be open, do what matters' approach. Avoidant coping was not directly tested, but future studies should examine whether ACT helps women minimise avoidant coping styles, through the development of a courageous willingness to be present with feelings of childbirth related worry and fear alongside a commitment to value-driven behaviour. Doing so may help women to be more open to the uncertainties of childbirth. Acceptance serves to foster an increase value driven behaviour (Hayes et al., 2011) which is important when considering preparation for motherhood. Future studies should explore the role of 'psychological flexibility' and include

the Acceptance and Action questionnaire-II (AAQ-II; Bond et al., 2011) as a measure of psychological flexibility to assess how ACT processes may reduce perinatal distress.

Overall, the quantitative findings demonstrate the single-session ACT intervention to be acceptable for this population, with women reporting 'self-efficacy' regarding their capability to engage with the intervention. Alongside the appropriateness of suitable outcome measures being determined. Building on the encouraging results, a power calculation showed a relatively small number of women is required to verify efficacy. Per NIHR (2015) guidelines, the next phase is a pilot RCT to explore whether ACT effectively reduces FOC through the mechanisms it posits.

Qualitative analysis

Evaluation forms were completed by all women, suggesting that qualitative and quantitative feedback was acceptable. Women's affective attitudes regarding the ACT session were very positive, with techniques and concepts being described as helpful. All of the women reported an interest in at least one of the ACT strategies, with suggestions that the skills were helpful in managing the uncertainties of childbirth. Intervention coherence was therefore demonstrated as the intervention had face validity for women. Women's management of birth-related worry may in turn, have an indirect influence on behaviour change via mood. These findings are in keeping with the quantitative results, which suggests that this approach is acceptable and that there is potential for change to occur via ACT processes.

Acceptance of the intervention regarding 'ethicality' and 'perceived effectiveness' were ascertained by reviewing women's recommendations and comments. One suggestion was made, to include more information about the contextual factors affecting birth. The delivery of

the session was consensually deemed as user-friendly and the provision of information and skills being helpful for pregnant women.

Additional feedback post-follow-up also highlighted women's gratitude for being offered help to manage their birthing worries and that the information continued to be helpful in their daily lives. One lady shared that she had benefited from using the ACT techniques during labour. Future research may wish to further explore women's experience of prenatal behaviour change through the application of the ACT skills.

Limitations

Future studies may benefit from seeking information about women's experience of the self-help tool kit as information on usage was not sought. Despite regular reminders to the community midwives, it is not known how readily the EOI forms were disseminated to women. It is likely that midwifery engagement varied and not all women for whom this could be of benefit, were made aware. Women from diverse backgrounds were also under-represented; this limits generalisability.

FOC was not an inclusion criterion. Subsequently, not all the women fulfilled the basic criteria for the FOBS (Haines et al., 2011). However, women who self-identified as having FOC, perceived themselves to have difficulties with coping. Therefore, they were considered to be potentially more open to receiving support. The researcher deemed this to be suitable, in the context of this study. The session was also pitched as 'coping with the uncertainties of childbirth' to reduce any stigma associated with access.

Seven out of 10 scheduled sessions took place. Session cancellation is an important area for future research to consider. By addressing recruitment barriers, it is anticipated that this limitation can be overcome. With regards to outcomes, no measure of 'psychological

flexibility' was included, to assess potential processes of change. Future studies should include the AAQ-II (Bond et al., 2011).

As it was a doctoral project, the researcher was directly involved in facilitating the session. This may have introduced bias in data gathering and it may have reduced women's willingness to provide critical feedback. Future research should employ a more diverse approach, as this would allow for a mix of skills, reducing bias and fostering reflexivity (Parkinson, Eatough, Holmes, Stapley, & Midgley, 2016).

Finally, this study was uncontrolled. A pilot RCT would allow for the feasibility question to be answered regarding whether control participants can be recruited and retained in future trials, when evaluating the efficacy of this intervention.

Strengths

Firstly, the use of a mixed-methodology to examine the acceptability of a single-session ACT intervention for women during first pregnancy is a strength. In particular, seeking information about women's experience of the ACT session, with regards to managing the uncertainties of childbirth.

Secondly, the use of a single session ACT intervention to support women with birthing worries has been shown as acceptable, with preliminary treatment signals being indicated. This is important considering the need for briefer, cheaper interventions within the healthcare system (Striebich et al., 2018). The findings provide a useful benchmark as they indicate trends and themes that could be explored in a future trial.

Thirdly, having an *ACBS* peer-reviewed trainer offering input on the ACT materials was useful as well as having support from the Consultant Midwife, who has a background in research and significant expertise in supporting women's pre- and post-partum mental health.

Lastly, this is the first empirical study to examine ACT as an approach to support women with FOC, therefore it adds to the growing body of evidence of psychological interventions during the perinatal period.

Future Research and Clinical Implications

This study contributes towards the ongoing development of complex interventions to support the wellbeing of women during pregnancy. The findings demonstrate that a single-session ACT intervention to be acceptable to this population. There are also preliminary treatment signals, although the potential mechanisms of change require further exploration. The findings justify a pilot RCT, as recommended by NIHR (2015). Economic evaluation of the costs and benefits of the intervention should also be carried out as the intervention has the potential to be cost-effective.

Such a trial may benefit from including a FOC screen, an IOU measure validated within normative samples, alongside pre-intervention contact with midwives in order to work through any foreseeable recruitment barriers. Testimonies from women who have contributed to this study could be included on participant sheets to demonstrate to recipients the potential benefits of the approach. Future studies should also seek to ascertain women's use and experience of the self-help tool kit.

In recognition of the challenges identified in this study, future research should seek to explore the possible underlying access barriers from both a clinical (i.e. psychological, demographic) and practical (i.e. setting) perspective. It would also be beneficial to seek women's experience not only as participants in research but as 'experts by experience' as well (Sacristan et al., 2016).

Women should be invited to collaborate with perinatal research and its design. Having women play a more active role in research is fundamental to the ongoing improvement of maternity care services. This in turn may help improve recruitment and retention, provide further information about barriers to engagement and provide further information about how to tailor services to best meet women's needs (i.e. where within the perinatal care-pathway the ACT session is best integrated; who might be deliver it best; and determine whether it could be merged into an existing group).

Additionally, in light of improving antenatal care as well as women's experience, maternity providers should move away from the traditional medical model towards a more comprehensive approach, one that covers physical, emotional, social, spiritual and psychological care (Mathibe-Neke & Masitenyane, 2018). Increased screening for FOC and anxiety may also help women and the professionals supporting them to become more aware of their needs and provide adequate support (Evans, Morrell, & Spiby, 2017).

Improved training and education are also essential for maternity providers regarding FOC (de Vries, Stramrood, Sligter, Sluijs, & van Pampus, 2020) as well as the benefits of adopting a biopsychosocial informed approach to maternity care (Mathibe-Neke & Masitenyane, 2018).

Finally, services should review both quantitative and qualitative outcomes from all stakeholders to measure effectiveness, quality, and improvement. Doing so, would help to ascertain whether the changes add value to clinician's routine practice and reflect what women (and their families) who use the services want and need (NHS England & NHS Improvement, 2016).

Conclusion

A single-session ACT intervention has been shown to be acceptable in supporting women cope with the uncertainties of childbirth in a first pregnancy. This study has demonstrated preliminary treatment signals, with reductions in FOC and anxiety alongside increased value-driven behaviour. It also raises an important theoretical question regarding whether IOU is the underlying mechanism. A pilot-RCT is warranted based on these findings. It is anticipated that by addressing the identified barriers and limitations, the implementation of future trials will be improved.

Building on a small but growing body of evidence, the present findings highlight the need for ongoing research for the development of complex interventions for this population. Future research should also explore how changes in women's 'psychological flexibility' through the use of ACT, meaningfully reduce childbirth related fears.

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Appendix A: PLoS ONE author guidelines (systematic review)

Essential information provided. Please see link for full details:

<https://journals.plos.org/plosone/s/submission-guidelines#loc-manuscript-organization>

Original contributions / Reviews should be arranged as follows;

Format

No word limit. Use standard font and size (e.g. Times New Roman 12). Limit of 3 headings levels. Number figures and tables; insert after citation. Double spaced. Key words on title page.

Abstract

Max. 300 words. Describe objectives, methodology and summarise.

Introduction

Background information; define the problem addressed and its importance; brief review of literature; note relevant controversies or disagreements; conclude with the aim.

Materials and Methods

Results

Discussion

Explain findings, interpretation, and future implications

Conclusion

Acknowledgements

Those who have supported the research.

References

Vancouver style; square brackets; citation-sequence method; et.al.

Appendix B: Electronic database search strategy

Search Number	Search permutation	Results (05.11.19)					
		PsychINFO	CINAHL	Medline	PubMed	Scopus	Web of Science
#1	("midwiv*" OR "midwif*") OR ("obstetric*") OR ("gynaecolog*)OR ("clinician*") OR (specialist*) OR (professional*)	12,708	58,172	71,835	5364	79,141	30,028
#2	("experience*")OR ("attitud*") OR ("knowledge") OR ("perception*") OR ("opinion*") OR ("view*") OR ("perspective*") OR ("belief*") OR ("feeling*") OR ("understanding")	2,183,541	1,078,874	3,451,864	2,516,346	8,974,959	6,383,189
#3	("caesarean section") OR ("caesarean delivery") OR ("caesarean birth") OR ("cesarean section") OR ("cesarean delivery") OR ("cesarean birth") OR ("c-section") OR ("surgical birth")	1782	22,460	67,189	52,427	99,954	46,988
#4	("maternal request") OR ("elective") OR ("planned") OR ("patient preference") OR ("maternal choice") OR ("on demand)	5550	21,305	88,726	152,147	334,010	202,927
#5	#1 AND #2 AND #3 AND #4	51	118	278	44	545	329

Appendix C: Email to authors seeking full papers and access to publications

Dear (author's name),

I am currently undertaking a systematic review of the research literature exploring Obstetricians, Gynaecologists and Midwives attitudes towards maternally requested caesarean sections.

During the literature search, I identified your paper entitled "(name of paper)" which is relevant to the review.

I am emailing to request a full copy of your paper and to check if you have undertaken any further research, which meets the following criteria:

- Obstetricians, Gynaecologists or Midwives working in any setting, with any level of experience.
- Assessment of at least one attitude regarding maternally requested caesarean sections-general and/or specific validated measures. The measure may focus on different attitudes e.g. risk, maternal choice.
- Analysis to ascertain clinicians' attitudes towards maternally requested caesarean sections.
- Analysis to report quantitative results

If so, please could you send me any relevant papers so that they can be considered for inclusion in this review?

Thank you for your time.

Kind Regards,

Sarah Howard

Trainee Clinical Psychologist

Under the supervision of Dr Vicky Fallon

Doctorate in Clinical Psychology Programme, Division of Clinical Psychology, The University of Liverpool, Whelan Building, Brownlow Hill, Liverpool, L69 3GB.

Appendix D: Quality Assessment Tool

Thomas et al. [30] 12-item checklist

- (i) the aims and objectives were clearly reported;
- (ii) there was an adequate description of the context in which the research was carried out (including a rationale for why the study was undertaken);
- (iii) there was an adequate description of the sample used and the methods for how the sample was identified and recruited;
- (iv) there was an adequate description of the methods used to collect data; and
- (v) there was adequate description of the methods used to analyze data.
- (vi) the reliability of data collection tools;
- (vii) the validity of data collection tools;
- (viii) the reliability of the data analysis methods; and
- (ix) the validity of data analysis methods.
- (x) used appropriate data collection methods for helping participants to express their views;
- (xi) used appropriate methods for ensuring the data analysis was grounded in the views; and
- (xii) actively involved participants in the design and conduct of the study.

Appendix E: International Journal of Childbirth author guidelines (empirical paper)

Essential information provided. Please see link for full details:

<https://www.springerpub.com/international-journal-of-childbirth.html>

Original contributions / Research articles should be arranged as follows;

Format

No word limit. Recommended maximum 25 pages. 12-point Times New Roman. Double spaced.

Left justify only. Number pages consecutively. Tables to be numbered. State any conflicts of interest.

Abstract

Max. 250 words. Include study purpose; design; major findings; conclusion. Keywords on title page or abstract (max.8).

Introduction

Include the research question and purpose of the study.

Literature Review

Sample

Include inclusion and exclusion criteria. Include institutional review board approval.

Materials and Methods.

Results

Acknowledge any bias

Discussion

Include clinical applications and main conclusion.

References

APA format.

Appendix F: Ethical approval

16/04/2019

RE: 4137 - The feasibility and acceptability of a single Acceptance and Commitment Therapy (ACT) informed education session to support the mental wellbeing of women coping with the uncertainties of childbirth in first pregnancy.

Dear Prof Slade,

All necessary documentation and regulatory approvals have now been received by the University of Liverpool Research Support Office in its capacity as Sponsor, and we are satisfied that all Clinical Research Governance requirements have been met. You may now proceed with any study specific procedures to open the study.

The following REC Approved documents have been received by the Research Support Office. Only these documents can be used in the recruitment of participants. If any amendments are required please contact the Research Support Office:

Document Type	File Name	Date	Version
Project Protocol/Clinical Investigation Plan	Proposal V.2 Final Aug 18	31/08/2018	2
Evidence Of Peer Review	Howard_Sarah_Approval_10.09.18	10/09/2018	1

Please note, under the terms of your Sponsorship you must:

- Gain NHS Confirmation of Capacity and Capability from each participating site before recruitment begins at that site;
- Ensure all required contracts are fully executed before recruitment begins at any site;
- Inform the Research Support Office as soon as possible of any adverse events especially SUSARs and SAE's, Serious Breaches to protocol or relevant legislation or any concerns regarding research conduct (as per SOP007);
- Approval must be gained from the Research Support Office for any amendments to, or changes of status in the study prior to submission to REC and any other regulatory authorities (as per SOP018);
- It is a requirement that Annual Progress Reports are sent to the NHS Research Ethics Committee (REC) annually following the date of Favourable Ethical Approval. You must provide copies of any reports submitted to REC and other regulatory authorities to the Research Support Office
- Maintain the study master file (as per SOP005);

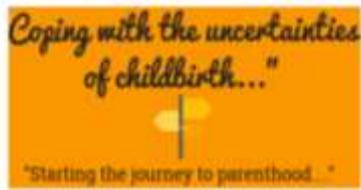
- Make available for review any study documentation when requested by the sponsors and regulatory authorities for the purposes of audit or inspection (as per SOP002);
- Upon the completion of the study it is a requirement to submit an End of Study Declaration (within 90 days of the end of the study) and End of Study Report to REC (within 12 months of the end of the study). You must provide copies of this to the Research Support Office
- Ensure you and your study team are up to date with the current RSO SOPs throughout the duration of the study.

If you have any queries regarding the sponsorship of the study, please do not hesitate to contact the Clinical Research Governance Team on 0151 794 8373 (email sponsor@liverpool.ac.uk).

Yours sincerely,

Miss Lara Lavelle-Langham
Research Integrity and Governance Manager
Research Support Office

Appendix G: ACT-session presentation



An Acceptance and Commitment Therapy (ACT) based approach

Session Outline

- Coping with the uncertainties of childbirth using an Acceptance & Commitment Therapy approach.

By the end you will have;

- Know about key ACT skills.
- Thought about how these skills can help with managing the uncertainties of childbirth
- Reflected upon skills which might be helpful for you.
- Have a self help toolkit to help you try out some of these skills into your daily life.

Welcome.... Today's approach



Knowledge and Ideas



Personal Qualities



Skills and Exercises

The nature of the mind.....



Take a moment to reflect upon your experience....

•What's brought you here today?

•if you can think of / write down your main worry or fear about childbirth – what might that be?

•if you feel comfortable to, use this as your example as we talk through some of the skills to help cope with the uncertainty of childbirth.



Fear of Childbirth... Common worries and concerns

"Fear of not having a voice in decision making."

"Fear of inability to cope with the pain."

"Fear of loss of control, being 'done to', being abandoned."

"Fear about my body's ability to give birth."

"Fear of harm/stress to the baby."

"Fear of not knowing and not being able to plan for the unpredictable."

"Fear of harm to self during labour and post-natally."

"Terrified of birth and not knowing why."

Arriving

Dropping Anchor



Healthy, Happy, Normality...



"I'm not happy".....



"Something's wrong with me...."

Illustration: © 2004 Neil Gaiman Books, NY 10011

Casting doubt on "Healthy, Happy, Normality"

Human distress is common....

"The single most remarkable fact about human existence is how hard it is for humans to be happy"

"Avoidance of experience"



- It is normal to want to avoid unpleasant thoughts, emotions or sensations about childbirth...
- We might try to manage our fears and seek control by requesting medical interventions e.g. Caesarean.
- The irony is that avoidance of our experiences *keeps* our distress going *rather than* making it go away



- When we *sit with* unpleasant thoughts, feelings and sensations (even if only briefly), they lose their power.



Be Present:
Show up to your distress and fears of childbirth



Open Up:
Change the relationship with your fears of childbirth



Do What Matters:
Move forwards along your valued journey towards motherhood

Be Present

Five Sense Experience vs. Inner Experience

• It can be helpful to notice the difference between things that happen:

Outer World	Inner World
Five Senses	Thoughts, feelings, memories, sensations, etc.
	

• Being **present** is about the whole range of experience we can have... Including: **Both our inner and outer worlds**

Images: © 2004 Neil Gaiman Books, NY 10011

Be Present

Here & Now

Being present: purposely connecting with what is happening in this moment.

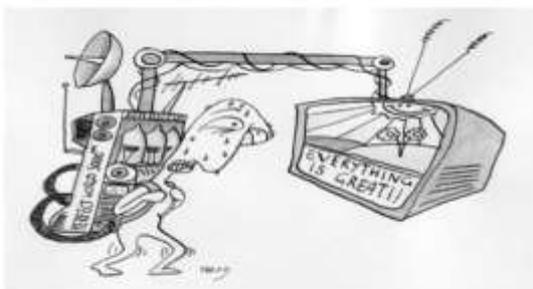
Becoming aware of our **inner & outer** worlds.

Paying attention to our **"here & now"** experience. Instead of being on auto pilot or drifting off into our thoughts about childbirth.

Staying present can be difficult. We can get swept away by our thoughts and loose touch with the world around us.

Being non-judgemental is important. We are aiming to **"notice"** rather than "judge".

The Time Machine



© 2004 Neil Gaiman Books, NY 10011

Be Present



But maybe it is about taking the time to notice what is happening now

© 2004 Neil Gaiman Books, NY 10011

Mindfulness Exercise

- Leaves on a stream



"Observing Self"



"Observing Self"
...the part of us which notices...



"Observing Self"



- A **"viewpoint"** from which we can notice our thoughts, feelings, sensations about childbirth.
- A **"space"** we can create through noticing.
- A **"place"** we can notice our experience without being caught up in our fears.

© 2010 Mind.org

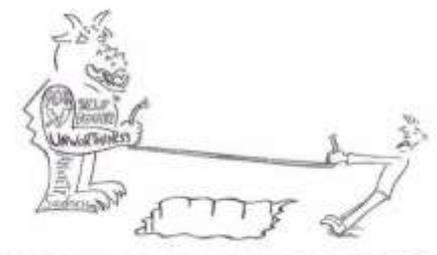
Be Present: Show up to your distress and fears about childbirth

Open Up: Change the relationship with your fears of childbirth

Do What Matters: Move forwards along your valued journey towards motherhood

Open Up

Struggling sometimes gets us nowhere!



© 2010 Mind.org

Open Up



Acceptance means opening up and making room for painful feelings, sensations and emotions about fears of childbirth.

Drop the struggle- give our fears & worries some space and allow them to be as they are.

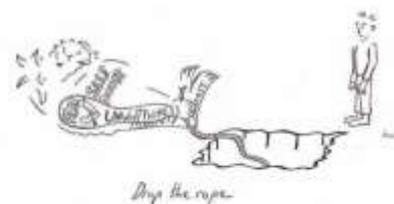
Instead of fighting, avoiding, or feeling overwhelmed by our fears... we open up to them and let them be.

This doesn't mean liking our fearful experience about birth.

It simply means **making room!**

Open Up

Letting go of the struggle might help



© 2010 Mind.org

Open Up

The being human is a guest house
Every morning a new arrival.
A joy, a depression, a madness,
some momentary awareness comes
as an unexpected visitor.

Welcome and entertain them all!
Even if they're a crowd of somers,
who violently sweep your house
empty of its furniture,
still, treat each guest honorably.

He may be clearing you out
for some new delight.
The dark thought, the shame, the malice,
meet them at the door laughing,
and invite them in.

Be grateful for whoever comes,
because each has been sent
as a guide from beyond.



By Rumi
From Rumi: *Collected Poems*, © 2001 Coleman Barks with John Moyner, Jr. / Bantam, 360 pages, Hardcover, \$24.95

"Getting un-hooked"

When overwhelmed or worried we can find ourselves "hooked" in our negative thoughts about childbirth. ...We can get swept away... Spending a lot of time, energy and effort reacting to these negative thoughts.

When we "un-hook" ourselves, we can see our thoughts for what they really are: sounds, words, language passing through our minds.

Thoughts about childbirth	How to respond?
Understand a thought is a thought not a fact.	Realize this is a process in our heads rather than a truth.
It may or may not turn out to be true.	We do not automatically believe them.
May or may not be important.	We can pay attention if they are helpful.
They are not orders.	We do not have to obey them.
They may or may not be wise.	We do not automatically follow their advice.

"Getting un-hooked"



Thoughts and emotions that we experience might be very upsetting

© 2000, David Newman and Joseph Grenville

"Getting un-hooked"



But noticing that these are experiences and not facts can help

© 2000, David Newman and Joseph Grenville

Chicken Game

Don't look at this chicken



Chicken Over

"Getting un-hooked"

"Un-hooking" techniques - Finding a new way to respond to unhelpful / fearful thoughts about childbirth.

Moving us towards mindful and valued living.

There are many different skills described in ACT... Some examples;

1) Metaphor Exercise: "Master Story Teller"



2) Practical Exercise: "I'm having the thought that..."



Suffering vs. Values

If you were not busy trying not to be in a particular situation...

Where might you actually be?



Be Present:
Show up your distress about fears of childbirth



Open Up:
Change the relationship with your fears of childbirth



Do What Matters:
Move forwards along your valued journey towards motherhood



Do What Matters

The other side of the coin:
 "Where there is love.. There is Pain"
 (Spanish Proverb).



Thinking about our Values..
 What value sits behind our worries and fears of childbirth?

Values

What do you want?
 What sort of person do you want to be?
 What's important to you?



The key is to know why...

"In your pain you'll find your values... and in your values you'll find your pain"



Do What Matters "Sweet Spot Exercise"

- Bring to mind a memory that conveys some of the sweetness and richness of life
- Make it vivid
- Make room for all the feelings that arise (sadness often shows up)
- Share it with your partner
- What does this memory reveal about what matters to you?
- What personal qualities were you showing?
- How were you treating yourself, others, the world around you?
- What does this suggest about the way you'd like to behave (values) or the things you'd like to do (goals), moving forwards?

Values



Some Values

I want to behave...

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • respectfully • innocently • co-operatively • competitively • independently • usefully • generously • loyally • kindly / compassionately • dependably • helpfully • sociably • consistently | <ul style="list-style-type: none"> • honestly • caringly • adventurously • in a nature-friendly way • creatively • with curiosity • justly / fairly • with appreciation of beauty • openly • spiritually / religiously • with commitment | <ul style="list-style-type: none"> • gratefully • self-challengingly • with a sense of fun • respectably • flexibly • taking other perspectives • with originality • with awareness • healthily • nurturingly • effectively • enthusiastically |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

* "some other way, that's not on this list!"

• not so important to me
 • important to me
 • very important to me

Values

• Values guide us through life in an on-going way. E.g. being loving and caring.

• Values are at the heart of ACT. Helping us all to live meaningful lives and help dignify painful experiences such as our fears of childbirth.

• Perhaps to start – find out what your personal values are.... Not just valuing something because you feel you should or to please others.

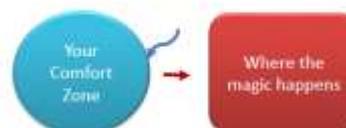
Compass Metaphor



Behaviour guided by our values

Make a value driven commitment: means behaving in ways which are guided by our values. It also means being flexible – being able to adapt to any challenges.

Question: What's the smallest, simplest, easiest step you can take in the next 24 hours... that will take you a little further towards your values of motherhood?



Bringing It Together

- Do my worries about childbirth affect my behaviour?
- Have there been times where I have responded to negative thoughts / feelings about childbirth that haven't been helpful?
- Does it stop me from moving forwards along my valued journey towards motherhood?
- It may be useful to ask ourselves "does x work?"

Self-help Toolkit



Thinking about what works...

Worry	Coping technique	Act of coping techniques (doing or thinking)	Short-term effect	Long-term effect	Overall workability (0-100)
Worrying something will go wrong during childbirth	Think about it all the time - try to reassure self.	Get rid of worry (away)	Worry drops temporarily	Feeling stressed & alone. Worry returns - gets worse	25
Worrying something will go wrong during childbirth	Be Present Be Open Do What Matters (Talk to other mothers)	Get rid of worry (away)	Worry remains - but it doesn't stop you doing what is important	You stay true to what is important in your life - connecting with others.	95

Final Steps...

- 1) Please complete the **Post-Session Evaluation Form**.
- 2) Please take a copy of the **Debrief Sheet and Self-Help Toolkit**.
- 3) **From 2-weeks** after today's session Sarah will get in touch to ask for the **completion of post-session questionnaires**.
- 4) If you would like **further support** - please talk with **your midwife**.

THANK YOU

Many thanks for coming today.

We hope this session has been of benefit to you.

Thank you for taking part in this Research Project looking at how ACT techniques can support with the uncertainties of childbirth.

Any questions?.....

2018-2020. ACT presentation as part of the "Coping with the uncertainties of childbirth" research study. The information in this presentation is intended as a guide and is not definitive. Submitted in partial fulfillment of the Doctorate of Clinical Psychology, University of Liverpool. Written by Sarah Howard with acknowledgements to Dr Ross White (UoL), Prof. Pauline Slade (UoL), xxx (Site Lead), Service User advisors & Russ Harris (ACT Made Simple). Permission to use ACT artwork conceptualized by Joseph Garrochi, CBT4panic.org (observer mode), Condi Nest. Photographs sourced from Unsplash & Pexels (attributions not required). Symbols and stock images from Clipart, Wixhow and Freepik.

Appendix H: Self-help tool kit



*An Acceptance and Commitment Therapy (ACT) based
approach*



Self Help Toolkit

Content

"Be Present" – Page: 4

"Be Open" – Page: 6

"Do What Matters" – Page: 8

Extra Resources – Page: 11



Be Present:
Show up to your
distress and fears of
childbirth



Open Up:
Change the
relationship with
your fears of
childbirth



Do What Matters:
Move forwards
along your valued
journey towards
motherhood

Introduction

Please see below some Acceptance and Commitment Therapy (ACT) exercises.

These may be helpful when trying coping with the uncertainties of childbirth.

This toolkit follows the same ideas discussed during the information session.

This self-help toolkit aims to support you to apply some ACT skills into your daily life. Like any skill, practice is important.

If you feel willing, try, and give some of these a go to see what happens.

We hope that you feel able to try some of them.

This self-help toolkit aims to support you to apply some ACT skills into your daily

life. Like any skill, practice is important.

If you feel willing, try and give some of these a go to see what happens.

We hope that you feel able to try some of them.

If you didn't feel able to try any of the exercises - we'd like to invite you to take a moment to think about what stopped you.

What thoughts did you get caught up in, what feelings came up, or what got in the way?

Write down what got in the way:



Here & Now

“Be Present”

“Connecting with what is happening here and now – not getting swept up in our fears about childbirth”.

“Becoming aware of our inner and outer worlds”.

Take 10 Breaths

Practice throughout the day. Especially when you find yourself getting caught up in thoughts and feelings about the uncertainty of childbirth.

Take

10

Breaths

Take 10 slow, deep breaths. Focus on breathing out as slowly as possible until your lungs are completely empty – and then allow them to refill by themselves.

Notice the feeling of your lungs emptying. Notice them refilling. Notice your ribcage rising and falling.

Notice the gentle rise and fall of your shoulders.

As you sit with that felt experience of breathing in and out, you may become aware of thoughts you might be having. See if you can let these thoughts come and go - like cars driving down a road.

Allow your awareness to expand now: at the same time, notice your breathing and your body. Then look around the room and notice what you can see, hear, smell, touch, taste.

Notice 5 things

Practice throughout the day. Especially when you find yourself getting caught up in thoughts and feelings about the uncertainty of childbirth.

5

- 1) Pause for a moment.
- 2) Look around and notice 5 things that you can see.
- 3) Listen carefully and notice 5 things you can hear.
- 4) Notice 5 things you can feel in contact with your body.
- 5) Finally, do all of the above at the same time.

Mindfulness Exercises – *Set aside some time throughout the day to practice. Especially useful when you find yourself getting caught up in thoughts and feelings about the uncertainty of childbirth.*

Notice your thoughts and feelings with an attitude of kind curiosity; allow your thoughts and feelings to be as they are.

E.g. Leaves on a Stream:



1) Sit in a comfortable position and either close your eyes or rest them gently on a fixed spot in the room.

2) Picture yourself sitting beside a gently flowing stream with leaves floating along the surface. *Pause 10 seconds.*

3) For the next few minutes, take each thought that enters your mind and place it on a leaf... let it float on by. Do this with each thought – whether it be pleasurable, worrisome or neither. Place your thoughts on a leaf and let them float on by. *Pause 10 seconds.*

4) Allow the stream to flow at its own pace. Don't try to speed it up and rush your thoughts along. You're not trying to "get rid" of your thoughts. You are allowing them to come and go at their own speed.

5) If your mind "This is stupid," "I'm bored," or "I'm not doing this right" place those thoughts on leaves, too, and let them pass by. *Pause 20 seconds.*

6) If a difficult or painful feeling comes up, simply notice it. Say to yourself, "I notice myself having a feeling of boredom/worry/frustration." Place those thoughts on leaves and allow them float on by.

7) From time to time, your thoughts may hook you and distract you from being fully present in this exercise. This is *normal!* As soon as you notice that your mind has swept you away; gently bring your attention back to the exercise.

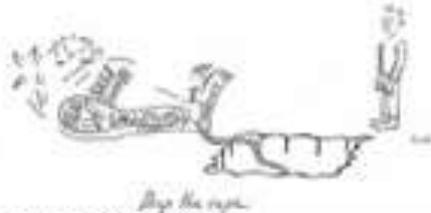
8) When you are ready, gently bring your awareness back into the room and open your eyes.

Audio links:

<http://www.freemindfulness.org/download>

<https://www.actmindfully.com.au/free-stuff/free-audio/>

“Be Open”



Artwork: David Newson and Ingeborg Garrosta

“Making room for worrisome feelings, sensations and emotions about childbirth.”

“Drop the struggle.”

Healing Hand



Lay a hand on the part of your body where you feel an emotion / urge / feeling about the uncertainty childbirth most strongly. Imagine this is a healing hand of someone close to you. Send some warmth into this area.

You’re not trying to get rid of the feeling; instead, you’re trying to open up around it, make room for it, hold it gently.

Quicksand Metaphor



When we’re stuck in quicksand, our first reaction is to struggle and fight to get out. But that’s exactly what you mustn’t do in quicksand – because it increases the downward pressure and your body sinks into the quicksand. The more you struggle, the deeper you sink – and the more you begin to struggle.

So, what are you supposed to do?

With quicksand, there’s a very helpful way for freeing yourself. You should spread the weight of your body over a large surface area – lie back into it. Now, this seems to go against what we think we should do, to lie down and really be with the quicksand, but that’s exactly what works.

The same idea can apply to coping with our fears of childbirth if we struggle and fight against it. Perhaps it’s time to think about the option of leaning into the uncertainty; being with our discomfort or our worrying thoughts and feelings. By doing so, we’re more successfully opening ourselves up to our experience—than if we fight and struggle against it.

Naming the story



If all these thoughts and feelings about childbirth were put into a book or movie called "the something something story", "What would you call it?"

Each time this story shows up in the coming weeks see if you can notice it and name it: "A-ha, there's the XYZ story again!"

My story is called: _____



Wellbeing Diary (See page 12 for a blank copy).

Painful thoughts/ feelings/ sensations about childbirth that showed up today	Things I did- which helped when thoughts and feelings showed up that led to me feeling better	How helpful was this? (0-100)	Things I did- which didn't help when thoughts and feelings showed up that led to me feeling worse/same	How helpful was this? (0-100)
EXAMPLE e.g. worried that something bad was going to happen to me during labour.	Tried a mindfulness exercise.	80	Tried to ignore my worries and feelings.	25
	Spoke to a friend.	60	Avoided telling people how I was feeling.	15
	Went for a walk outside.	85	Stayed in, avoided going out.	10

“Do what matters”

Values

“Values are what we want to stand for in life, how we want to behave, what sort of parent we want to be, what sort of strengths and qualities we want to develop.”



Imagine your 80th Birthday

Take a comfortable position and close your eyes. Bring your attention to imagining your 80th birthday – everyone who truly matters to you is there, friends, family, partners, pets, colleagues...

Keep in mind that you’re not actually trying to predict the future – you’re creating a fantasy of what your 80th birthday would look like. If your mind starts getting in the way and unhelpful thoughts crop up then just say “thanks mind” and come back to the exercise.

Now imagine that one person, whom you really care about stands up to make a short speech about you (3 or 4 sentences). They talk about what you stand for in life... what you mean to them... the role you have played in their life... imagine them saying whatever it is deep in your heart you would most love them to hear them say.

Take a moment to notice what comes up; it may bring feelings of love & warmth or sadness and pain. Think about what these feelings tell you... and what truly matters to you.... What sort of person you want to be... And what, if anything, you’re currently avoiding or ignoring.

Bring the exercise to an end by gently bringing your attention back into the room and noticing what is around you.

“What are my Values?”



Your values describe what is important to you. They can help you move forwards along your valued journey towards motherhood.

Knowing your values will help you to understand important areas of your life and what to prioritize. Our values guide the choices we make and how we act towards ourselves and others.

Select your top 10 values. (Examples on page 10). Rank them from 1-10 with “1” being the most important.

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Make a Commitment

Keep it

simple

“Think of a small step that you can take in the next 24 hours that will take you a little further towards your values of motherhood”.

- 1) Notice what happened?
- 2) Notice if anything got in the way?

I will _____

I noticed _____

*What are
you willing
to do?*

“Between now and next week, would you be willing to do 2 things?”

- 1) Notice when you are doing something in line with your values.
- 2) Notice what it’s like to do so and what difference it makes?

I did _____

I noticed _____

Values List

Remember no list can ever be complete. There may be additional personal values that are unique to you, so don't be limited by the list. Add anything else that just feels right.

Acceptance	Fast pace action	Power
Achievement	Financial rewards	Privacy
Adventure	Focus	Productivity
Altruism	Freedom	Promotion prospects
Ambition	Friendship	Reaching potential
Appreciation	Fun	Recognition
Authenticity	Happiness	Respect
Authority	Harmony	Responsibility
Autonomy	Health	Results
Balance	Helping others	Risk taking
Beauty	Honesty	Romance
Belonging	Humor	Routine
Challenge	Imagination	Security
Choice	Independence	Self expression
Collaboration	Influence	Service
Commitment	Intellect	Sharing
Community	Intuition	Solitude
Compassion	Justice	Spirituality
Competition	Kindness	Status
Connection	Leadership	Success
Contribution	Learning	Teaching
Creativity	Love	Team work
Equality	Loyalty	Tolerance
Excellence	Making a difference	Tradition
Excitement	Nature	Travel
Expertise	Nurturing	Trust
Fairness	Order	Variety
Faith	Passion	Winning
Fame	Peace	Wisdom
Family	Personal growth	Zest for life

Any other values which are important for you:

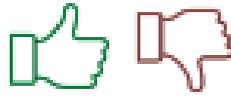


Thinking about what works...

Distress	Coping Technique	Aim of coping techniques (Away or Towards)	Short-term effect	Long-Term effect	Overall Workability (0-100)
Worrying something will go wrong during childbirth	Think about it all the time – try to reassure self.	Get rid of worry (away)	Worry drops temporarily	Feeling stressed & alone. Worry remains – gets worse	25
Worrying something will go wrong during childbirth	Be Present Be Open Do What Matters (Talk to other mothers)	Get rid of worry (away)	Worry remains- but it doesn't stop you doing what is important	You stay true to what is important in your life – <i>Connecting with others.</i>	90

<i>Distress</i>	<i>Coping Technique</i>	<i>Aim of coping Technique (Away or Towards)</i>	<i>Short-term Effect</i>	<i>Long-term effect</i>	<i>Overall Workability (0-100)</i>

Extra Resources



Wellbeing Diary

Painful thoughts/ feelings/ sensations about childbirth that showed up today	Things I did- which helped when thoughts and feelings showed up that led to me feeling better	How helpful was this? {0-100}	Things I did- which didn't help when thoughts and feelings showed up that led to me feeling worse/same	How helpful was this? {0-100}

Make a Commitment

*Keep it
simple*

"Think of a small step that you can take in the next 24 hours that will take you a little further towards your values of motherhood".

- 3) Notice what happened?
- 4) Notice if anything got in the way?

I will -----

I noticed -----

*What are
you willing
to do?*

"Between now and next week, would you be willing to do 2 things?"

- 3) Notice when you are doing something in line with your values.
- 4) Notice what it's like to do so and what difference it makes?

I did -----

I noticed -----

*Keep it
simple*

"Think of a small step that you can take in the next 24 hours that will take you a little further towards your values of motherhood".

- 5) Notice what happened?
- 6) Notice if anything got in the way?

I will -----

I noticed -----

*What are
you willing
to do?*

"Between now and next week, would you be willing to do 2 things?"

- 5) Notice when you are doing something in line with your values.
- 6) Notice what it's like to do so and what difference it makes?

I did -----

I noticed -----

We hope this Self Help Tool Kit has been helpful.



If you would like any more information there are some extra materials on the internet including:

<https://www.actmindfully.com.au/free-stuff/>

2018-2020. Self-help toolkit; part of the "Coping with the uncertainties of childbirth" research study. The information is intended as a guide and is not definitive.

Submitted in partial fulfilment of the Doctorate of Clinical Psychology. University of Liverpool.

Written by Sarah Howard with acknowledgements to Dr Ross White (UoL), Prof. Pauline Slade (UoL), xxxx (Site Lead), Service User advisors & Russ Harris (ACT Made Simple).

Permission to use ACT artwork conceptualised by Joseph Ciarrochi. Photographs sourced from Unsplash & Pexels (attributions not required). Symbols and stock images from ClipArt.

Appendix I: Expression of Interest (EOI)

V3 11.12.18 IRAS: 294347 CUB Study

"Coping with the uncertainties of childbirth during first pregnancy"

Session format:
When: Selected weekday evenings.
Location: [REDACTED] Hospital.
How long is it?: Up to 3 hours - with regular breaks and refreshments included.
Can I bring someone with me? Yes, a partner or friend is welcome too.
Expenses: Travel expenses offered. Voucher for time taken to complete questionnaires 2+ weeks after the session.
Session Outline: Information about how to cope with uncertainty during pregnancy- through guided presentations, opportunities for informal discussion and a self-help tool kit to take home.
Delivered by: Sarah Howard (Trainee Clinical Psychologist) with support from the Midwifery Team.

You are invited to take part in a research study. In partnership with the Clinical Psychology programme at Liverpool University the Midwifery team are inviting you to attend a single information based session.

The session is shaped around understanding the uncertainty of childbirth during pregnancy and learning new ways to cope.

The study hopes to find out how well this approach meets women's needs; to inform future recommendations.

Participation is voluntary.

Requirements: 18+ years old, first pregnancy, single pregnancy, good understanding of English. Midwife to double check and confirm eligibility.

If you would like more information please complete the form attached- the researcher will then get in touch.

Contact details: Sarah Howard
Email: sarah.howard@liverpool.ac.uk

"Coping with the uncertainties of childbirth during first pregnancy" Consent to Contact Form

Please provide the following information:

Name:

Address:

Phone 1:

Phone 2:

Email:

Name of Midwife:

Please return this form to your midwife to pass onto the research team. Many thanks.

If you have not heard from us after 10 days please feel free to contact Sarah using the details on the leaflet.

Contact details: Sarah Howard
Email: sarah.howard@liverpool.ac.uk

Appendix J: Participation Information Sheet

Study Title: Coping with the uncertainties of childbirth in first pregnancy (CUB)



Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Please also feel free to discuss this with others if you wish. Ask if anything is not clear or if you would like more information. Please use the contact numbers given below.

What is the purpose of the study? Pregnancy can be a wonderful experience but sometimes fears of childbirth can affect how a woman feels. We are testing out a new way of providing support for women during their first pregnancy to help cope with the uncertainties of childbirth. This study will tell us what women think about this approach, whether it meets their needs and how it could be improved. The study will start to give us an idea whether this approach helps.

Why have I been chosen to take part? All women who are in their first pregnancy and feel they have worries about the uncertainties of childbirth can take part so long as they are over 18 years old and can speak / read English. If you are reading this sheet your midwife may think this session could be useful or you have seen this advertised via the notices or website.

What will happen if I take part? If you provide your contact details, then the researcher will contact you with further information. You will be invited to attend a single session lasting up to 3 hours. It will be run by the Trainee Clinical Psychologist and a midwife. It will be at xxx Hospital with about 12 women attending. Women can bring a partner/friend if they wish. Friend or partners do not themselves take part in the study. After welcome and refreshments, you will be asked to complete a consent form and brief questionnaires about how you have been feeling. You will have an opportunity to speak with the researcher/midwife individually at the end, if you have any concerns. Around 2 hours will be given to understanding and managing feelings of uncertainty based on an approach called Acceptance and Commitment Therapy (ACT). This involves skills such as “mindfulness” and “being in the here and now” as ways of coping with uncertainty, rather than worrying about the past or future. Throughout you can take part in as little or as much discussion as you feel comfortable with. There is also a “self-help” tool kit available; giving extra prompts and guidance to take home. At the end, you will be asked to complete a brief feedback form about the session. From 2 weeks later, you will be contacted by phone/post /email to complete a second set of questionnaires asking you about how you are and how you have got on, taking about 20 minutes to complete. You may receive two reminders from the research team from a week later.

Expenses/ payments: All participants can claim for travel expenses. The current mileage rate is 45p/mile, the researcher will need start and end journey postcodes. For any other travel costs e.g. bus, train, parking, copies of receipts/tickets are required. You will also receive a £10.00 voucher when completed follow-up questionnaires are received as compensation for your time.

Do I have to take part? No. Participation is voluntary. You are free to withdraw, without giving a reason. Whether you take part will not affect your other care in any way. Information will be analysed by the researcher up until the point of withdrawal.

Who will benefit from the study? We hope you may find participating helpful to develop skills to help cope with the uncertainties of childbirth, following attendance and use of the self-help tool kit. This study can also help pregnant women in the future by helping us to develop new approaches.

Are there any risks? Information may touch upon sensitive issues which might temporarily feel quite emotional. There will be no pressure for women to discuss anything they are not comfortable with. Additional support will be available if needed. In the case of a disclosure requiring further support from midwives and/or mental health teams, the GP will be informed through the referral system process, not by the researcher.

Will my taking part be kept confidential? All data collected will be kept confidential in line with GDPR. *Please see data usage sheet below.* The only information to be shared between the research team and midwife will be notification of attendance/change in pregnancy circumstances. As progress through pregnancy can be unpredictable your midwife will be asked to tell the researchers if for any reason it would be inappropriate for you to still attend or be followed up. Therefore, the midwife will be required to check your records. In the unlikely event that the researcher has reason to believe that a participant or another is at risk of harm; confidentiality may have to be broken in line with Trust Policy. During the information session there may be limits to confidentiality due to the nature of an open session; therefore, it cannot be fully guaranteed. Participants will be reminded to only share information they are comfortable with others knowing. Participants will be informed about confidentiality and they will be asked to sign a consent form. Reminders regarding confidentiality will occur throughout.

What will happen to the results of the research study? During the session, a midwife will be present. The Chief Investigator Sarah Howard is carrying out this research project as partial fulfilment of the Doctorate in Clinical Psychology and she will be supervised by her mentors. The results will be published in medical and midwifery journals and presented at conferences. A summary will be made available; if you would like a copy you can request one by ticking a box on the consent form.

Who is organising and funding the research? The University of Liverpool.

Who has reviewed the study? It has been reviewed and approved by the GTAC ethics committee for the research to be conducted correctly and safely to protect participants. The IRAS ID is 254547.

Who can I contact if I have any questions? If you are not sure about the information please contact

Principal Investigator: Prof Pauline Slade, Psychology Department, University of Liverpool, L69 3GB. Tel: 0151 794 5458. Email: Ps1ps@liverpool.ac.uk	Secondary Supervisor: Dr Vicky Fallon, Room 2.61 School of Psychology, Eleanor Rathbone Building, University of Liverpool, L69 7ZA. Email: vfallon@liverpool.ac.uk	Consultant Midwife: xxxx, xxxx	Trainee Clinical Psychologist: Sarah Howard, Doctorate of Clinical Psychology, University of Liverpool, L69 3GB. Tel: 0151 794 5530. Email: sarah.howard@liverpool.ac.uk
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Who can I contact if I have any complaints? If you are not happy with any aspect of the study, please contact either: **Prof Pauline Slade** (contact details above) or the **Patient and Liaison Service (PALS)**. Liverpool: 0151 702 43 53. PALS@lwh.nhs.uk

Appendix K: Outcome measures

Demographic Questionnaire

What is your age?

What is your ethnic group?

White

1. English/Welsh/ Scottish/Northern Irish/ British
2. Irish
3. Gypsy or Irish Traveller
4. Any other White Background, please describe:

Mixed / Multiple Ethnic groups

5. White and Black Caribbean
6. White and Black African
7. White and Asian
8. Any other Mixed / Multiple ethnic background, please describe:

Asian / Asian British

9. Indian
10. Pakistani
11. Bangladeshi
12. Chinese
13. Any other Asian background, please describe:

Black / African/ Caribbean / Black British

14. African
15. Caribbean
16. Any other Black / African / Caribbean background, please describe:

Other ethnic group

17. Arab
18. Any other ethnic group, please describe:

What is your marital status?

1. Single, that is never married and never registered in a civil partnership
2. Married
3. Registered in same sex civil partnership
4. Separated
5. Divorced
6. Widowed

What is your education level? Please select the highest qualifications you have:

1. No qualifications
2. GCSEs
3. A Levels
4. Vocational Qualifications
5. Graduate
6. Post-Graduate

What was your pre-pregnancy employment status?

1. Paid full-time employment
2. Paid part-time employment
3. Self-employed
4. Unemployed
5. Voluntary work
6. Student

Fear of Birth Scale (FOBS)
(Haines, Pallant, & Hildingsson, 2011)

How do you feel right now about the approaching birth?

Please mark an X on the lines below.

Calm _____ **Worried**

No Fear _____ **Strong Fear**

Generalised Anxiety Questionnaire - (GAD-7)

(Spitzer, Kroenke, Williams, & Löwe, 2006.)

Over the last 2 weeks how often have you been bothered by any of the following problems?

Please circle / highlight your answer.

	Not At All	Several Days	More than half the days	Nearly Every Day
Feeling nervous, anxious or on edge	0	1	2	3
Not being able to control or stop worrying	0	1	2	3
Worrying too much about different things	0	1	2	3
Trouble relaxing	0	1	2	3
Being so restless that it is hard to sit still	0	1	2	3
Becoming annoyed or easily irritable	0	1	2	3
Feeling afraid as if something awful might happen	0	1	2	3

How difficult have these problems made it for you to do your work, take care of things at home or get along with other people?

Not Difficult at All	Somewhat Difficult	Very Difficult	Extremely Difficult
0	1	2	3

The World Health Organization Well-being Index

(WHO-5; 1998)

Over the last 2 weeks please report for each of the 5 statements which closely represents how you have been feeling?

Please circle / highlight your answer.

	All of the time	Most of the time	More than half the time	Less than half the time	Some of the time	At no time
I have felt cheerful and in good spirits	5	4	3	2	1	0
I have felt calm and relaxed	5	4	3	2	1	0
I have felt active and vigorous	5	4	3	2	1	0
I woke up feeling refreshed and rested	5	4	3	2	1	0
My daily life has been filled with things which interest me.	5	4	3	2	1	0

Sheehan Disability Scale (SDS)

(Sheehan, 1983)

Please mark one score for each scale.

WORK* (includes paid, unpaid, volunteer work or training)
The symptoms have disrupted your work:

Not at all	Mildly	Moderately	Markedly	Extremely
0	1 2 3	4 5 6	7 8 9	10

I have not worked at all during the past week for reasons unrelated to how I have been feeling.

SOCIAL LIFE

The symptoms have disrupted your social life / leisure activities:

Not at all	Mildly	Moderately	Markedly	Extremely
0	1 2 3	4 5 6	7 8 9	10

FAMILY LIFE / HOME RESPONSIBILITIES

The symptoms have disrupted your family life / home responsibilities:

Not at all	Mildly	Moderately	Markedly	Extremely
0	1 2 3	4 5 6	7 8 9	10

Days Lost.

On how many days in the last week did your symptoms cause you to miss work or leave you unable to carry out your normal daily responsibilities?

.....

Days Unproductive

On how many days in the last week did you feel so impaired by your symptoms, that even though you went to work, your productivity was reduced?

.....

Intolerance of Uncertainty Scale-12 (IUS-12)

(Carleton, Norton, & Asmundson, 2007)

Please select the number that best corresponds to how much you agree with each item.

Not at all characteristic of me	A little characteristic of me	Somewhat characteristic of me	Very characteristic of me	Entirely characteristic of me
1	2	3	4	5

1. Unforeseen events upset me greatly
2. It frustrates me not having all the information I need
3. Uncertainty keeps me from living a full life
4. One should always look ahead so as to avoid surprises
5. A small unforeseen event can spoil everything, even with the best of planning
6. When it's time to act, uncertainty paralyses me
7. When I am uncertain I can't function very well
8. I always want to know what the future has in store for me
9. I can't stand being taken by surprise
10. The smallest doubt can stop me from acting
11. I should be able to organise everything in advance
12. I must get away from all uncertain situations

Valued Living Questionnaire (VLQ)
(Wilson & Groom, 2002)

Below are areas of life that are valued by some people. We are concerned with your quality of life in each of these areas. One aspect of quality of life involves the importance one puts on different areas of living. Rate the importance of each area (by circling / highlighting a number) on a scale of 1-10. 1 means that area is not at all important. 10 means that area is very important. Not everyone will value all of these areas, or value all areas the same. Rate each area according to your own personal sense of importance.

	Not at All Important					Extremely Important				
Family (other than marriage or parenting)	1	2	3	4	5	6	7	8	9	10
Marriage /Couples / Intimate Relations	1	2	3	4	5	6	7	8	9	10
Parenting	1	2	3	4	5	6	7	8	9	10
Friends / Social Life	1	2	3	4	5	6	7	8	9	10
Work	1	2	3	4	5	6	7	8	9	10
Education / Training	1	2	3	4	5	6	7	8	9	10
Recreation / Fun	1	2	3	4	5	6	7	8	9	10
Spirituality	1	2	3	4	5	6	7	8	9	10
Citizenship / Community Life	1	2	3	4	5	6	7	8	9	10
Physical Self Care (diet, exercise, sleep)	1	2	3	4	5	6	7	8	9	10

Here we would like you to rate how consistent your actions have been with each of your values. We are not asking about your ideal in each area. We are also not asking what others think of you. Everyone does better in some areas than others. People also do better at sometimes than at others. We want to know how you think you have been doing during the past week. Rate each area (by circling / highlighting a number) on a scale of 1-10. 1 means that your actions have been completely inconsistent with your value. 10 means that your actions have been completely consistent with your value.

	Not at all consistent					Completely consistent				
Family (other than marriage or parenting)	1	2	3	4	5	6	7	8	9	10
Marriage /Couples / Intimate Relations	1	2	3	4	5	6	7	8	9	10
Parenting	1	2	3	4	5	6	7	8	9	10
Friends / Social Life	1	2	3	4	5	6	7	8	9	10
Work	1	2	3	4	5	6	7	8	9	10
Education / Training	1	2	3	4	5	6	7	8	9	10
Recreation / Fun	1	2	3	4	5	6	7	8	9	10
Spirituality	1	2	3	4	5	6	7	8	9	10
Citizenship / Community Life	1	2	3	4	5	6	7	8	9	10
Physical Self Care (diet, exercise, sleep)	1	2	3	4	5	6	7	8	9	10

Appendix L: ACT Session plan

Research Implementation Phase: Participant involvement Session Plan	
Session Title	Coping with the Uncertainties of Childbirth – an Acceptance and Commitment Therapy (ACT) based approach.
Delivery Date	To Be Arranged.
Delivered By	Sarah Howard (Trainee Clinical Psychologist) with support from lead Midwife.
Participant Numbers	Approximately 12 participants per session.
Session Duration	Up to 3 hours. (This includes time allocated for the completion of pre-session questionnaires, a break and post-session feedback).
Location	Hospital
Set up / Layout	Chairs to be arranged facing presentation equipment. Layout in horseshoe / rows to aid inclusion and discussion. Ensure ease of access to tables to enable completion of written material.
Session Aims	To deliver the information session regarding managing the uncertainties of childbirth using an ACT approach.
Session Objectives	By the end of the session participants will have; <ul style="list-style-type: none"> • Heard about key ACT techniques. • Thought about how these translate to managing the uncertainties of childbirth • Reflected upon what techniques might be helpful. • Be supported with a self help toolkit to help participants implement some of the ideas into their daily lives.

Time	Details	Equipment
20 mins	<p>Introductions.</p> <p>Consent and paper based pre-session questionnaires to be completed.</p>	<p>Refreshments</p> <p>Handouts / Information sheets / Consent forms / Pre-session questionnaires</p> <p>Pens</p>
<p>Session 2 hours in total.</p> <p>15 minute refreshment break</p>	<p>Delivery of the “Coping with the uncertainties of childbirth – an Acceptance and Commitment Therapy (ACT) based approach information session”.</p> <ol style="list-style-type: none"> 1) Delivery of the Information session – based upon the Traffic light approach (be present, be open, do what matters) 2) Refreshment break 3) Discuss Self help tool kit- based upon the Traffic light approach (be present, be open, do what matters) 	<p>PowerPoint presentation</p> <p>Laptop</p> <p>Internet connection</p> <p>Handouts / Worksheets</p> <p>Video Links</p> <p>Mindfulness exercises</p> <p>Self help tool kit</p> <p>Flip chart</p> <p>Pens</p> <p>Tables & chairs</p> <p>Refreshments</p>
15 mins	<p>End of session paper based evaluation form to be completed.</p> <p>Debrief information to be provided</p> <p>Reminder about post-session follow up from 2 weeks post attendance.</p>	<p>Pens</p> <p>Evaluation form</p> <p>Debrief Sheet</p> <p>Copies of handouts / self help tool kit.</p>
10 mins	Closing comments and thanks for taking part.	Travel expenses / parking subsidy information.

Appendix M: Participant consent form

Title: Coping with the uncertainties of childbirth in first pregnancy (CUB).



Name of researcher(s): Prof Pauline Slade (Principal Investigator -UoL), Dr Vicky Fallon (Secondary Supervisor-UoL), xxxx (Site Lead /Consultant Midwife-NHS), Sarah Howard (Trainee Clinical Psychologist-UoL).

This form is to help us check that we have told you everything that you need to know about this study before participating. It shows that you have agreed to take part and that it has been clearly explained to you what is involved. The research team will keep one for our records, one copy will go in your hospital notes and one copy is for you to keep.

Please Initial Boxes

1. I confirm that I have read and have understood the information sheet dated [05.02.19] for the above study. I have had the opportunity to consider the information and ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw without any reason, without my medical or legal rights being affected. In addition, I understand that I am free to decline to answer any questions.
3. I understand that only members of the University of Liverpool (UoL) research team named above will have access to my contact details and research data for the duration of the study.
4. I consent to my Midwife being informed if I were to show ongoing distress in relation to childbirth at the completion of this study. I also agree for the Midwife to notify the research team of any change in my circumstances affecting my pregnancy which might affect my participation for the duration of the study.
5. I understand that taking part involves the completion of 2 sets of questionnaires and an evaluation form. I will receive reminders if the post session questionnaires are not returned after a week following distribution.
6. I understand that all my information will be anonymised using codes and I will not be identifiable.
7. I understand that my information will be kept confidential. However, there are limits to confidentiality which have been explained to me.
8. I understand that I have been asked to keep any personal reflections from women discussed during the session confidential.
9. I understand the above points and agree to take part in the above study.
10. I would like to receive a summary sheet of the results of the study.

<input type="checkbox"/>

Participant name

Date

Signature
