ORIGINAL RESEARCH – QUANTITATIVE

A cross-sectional study to determine utility of childbirth fear screening in maternity practice – An Australian perspective

Jocelyn Toohill [a,*], Debra K. Creedy [a], Jenny Gamble [a], Jennifer Fenwick [a,b]

[a] Menzies Health Institute Queensland, Griffith University, University Drive, Meadowbrook, QLD 4131, Australia
[b] Gold Coast University Hospital, Parklands Drive, Southport, QLD 4215, Australia

ABSTRACT

Background: Low intensity anxiety in pregnancy is normal however high levels of fear affect between 20% and 25% of women, with around 10% suffering severe levels. Research from Scandinavian countries includes women with severe levels of fear, with little work undertaken in Australia. This paper explores predictors of fear and the relative benefits of screening women for childbirth fear at high or severe levels.
Method: A secondary analysis of data collected for the BELIEF study was conducted to determine differences for demographic, psycho-social and obstetric factors in women with severe fear (W-DEQ $\geq$85, n = 68) compared to women with less or no fear (n = 1318). Women with severe fear (W-DEQ $\geq$85, n = 68) were also compared to those with high fear scores (W-DEQ $\geq$66–84, n = 265). Logistic regression modelling was used to ascertain if screening for high or severe levels of fear is most optimal.
Results: 1386 women completed the W-DEQ. There were no differences on demographic variables between women with severe or high fear. Depression symptoms, decisional conflict and low self-efficacy predicted high and severe fear levels. Nulliparity was a predictor of high fear. A previous operative birth and having an unsupportive partner were predictors of high fear in multiparous women.
Conclusion: Psychosocial factors were associated with both high and severe fear levels. Screening for severe fear may detect women with pre-existing mental health problems that are exacerbated by fear of birth. Australian women with high childbirth fear levels (W-DEQ $\geq$66) should be identified and provided appropriate support.

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1. Introduction

Predictors and birth outcomes of women with childbirth fear are of increasing interest in developed countries.[1–5] Predominantly research on childbirth fear has emanated from Scandinavian countries.[5–7] The Wijma Delivery Expectancy Questionnaire (W-DEQ),[8] the most widely used tool to measure childbirth fear, originally delineated women with high fear scores (W-DEQ $\geq$66) from the rest of the population.[9] Recently severe fear levels (W-DEQ $\geq$85) have become the research focus.[1,10,11] There have been no published studies specific to severe childbirth fear levels in Australian women. The relative benefit of screening women for childbirth fear and making a distinction at the high or severe level is unclear.

The relationship between anxiety and childbirth fear is also unclear. The terms 'childbirth fear' and 'anxiety' are sometimes used interchangeably to describe women's antenatal distress. This may possibly be due to a reported association between anxiety and childbirth fear.[12–14] However comparing anxiety levels to fear in pregnancy is not clear as studies use either general language descriptors or standardised tools developed for the general community or may use measures specific to the childbearing period. Depending on the woman's stage of pregnancy the prevalence of both anxiety and fear levels differ for similar reasons of measurement, but also possibly due to women's initial concerns of viability in early pregnancy having resolved by later trimesters.[12,15] While both anxiety and fear during pregnancy are associated with a history of mental illness, anxiety has not been found to be associated with obstetric history whereas childbirth fear is linked to both adverse personal experience and negative stories of other women.[12,16,17] Therefore while anxiety and fear in

* Corresponding author at: School of Nursing & Midwifery, Griffith University, Logan Campus, University Drive, Meadowbrook, QLD 4131, Australia.
Tel.: +61 07 33821107; fax: +61 07 33821277.
E-mail addresses: J.Toohill@griffith.edu.au (J. Toohill),
D.Creedy@griffith.edu.au (D.K. Creedy), J.Gamble@griffith.edu.au (J. Gamble),
J.Fenwick@griffith.edu.au (J. Fenwick).

pregnancy may be similar, they may not be the same. Whether this remains true for women with severe levels of childbirth fear (tocophobia)[18] is not known, but higher levels of anxiety are predictive of higher levels of childbirth fear and vice versa.[12,14]

This paper reports on a secondary analysis of data collected from women recruited during their second trimester of pregnancy for a randomised controlled trial on childbirth fear known as BELIEF (Birth Emotions and Looking to Improve Expectant Fear).[19,20] Baseline details for the 1410 women recruited to the study,[4] and outcomes of the intervention[20] have been published. The prevalence of high fear was 24% (*n* = 333). The published primary analysis reported significant differences between women scoring high for childbirth fear (W-DEQ ≥66) compared to those that did not.[4] In this secondary analysis women's W-DEQ scores were categorised as high fear (W-DEQ ≥66) and severe fear (W-DEQ ≥85). Demographic, psycho-social factors and birth outcomes of these groups were compared to ascertain predictors of fear levels and relative benefits of screening women for childbirth fear at high or severe levels. Identifying important differences in fear levels could guide clinical practice and optimise utilisation of health resources.

2. Background

High childbirth fear is reported to occur for around 20–25% of women, with severe fear levels impacting 4–16% of the population.[2,4,11,18,21,22] While variations exist, women having a first baby report higher prevalence and intensity of childbirth fear compared to multiparous women.[1,4,11] However, multiparous women who have experienced an operative birth (more commonly emergency caesarean section) are at risk for childbirth fear and trauma symptoms.[11,16,23–25] Reports of the contribution of women's demographic backgrounds and birth outcomes associated with childbirth fear also vary.[18,26–28] However fearful women have been shown to have longer labours and high rates of emergency CS. This finding highlights the need for clinicians to consider how they support women to achieve vaginal birth[7,21,24] and reduce intrapartum caesarean section (CS).

Having a history of mental health problems and diminished social support has been consistently associated with severe levels of childbirth fear.[3,16,29–31] Psycho-education interventions provided by midwives,[20,32] obstetricians, or psychologists[10,33,34] have shown benefit and indicate that childbirth fear is modifiable. Severe levels of fear are considered to be of clinical significance as these women are more likely to seek an elective CS[6,11,28,33,35–37] or to experience an emergency CS.[7,38–40] However, one Swedish study found that up to 25% of women reported their fear was related to the uncertainty of requiring an operative birth.[41] An important reason for maternal requests for CS in the UK was childbirth fear[37] and fear accounted for 8% of requests for caesarean sections in Sweden.[42,43] However given differences in culture and provision of maternity services the relevance of international findings of severe childbirth fear to an Australian population is unknown. This paper examines the impact of demographic, psycho-social and obstetric factors on women's birth outcomes at different levels of childbirth fear and the relative benefits of screening women for childbirth fear at high or severe levels.

3. Method

Participants were recruited in their second trimester of pregnancy from three maternity hospitals in south east Queensland. Informed written consent was gained from all participants.[19] Women who required an interpreter, those unable to consent or younger than 16 years of age were excluded. Ethics approval was

received from Griffith University and the Gold Coast University Hospital, Redlands and Logan Hospitals.

All women invited to the BELIEF study, were screened for childbirth fear using the antenatal Wijma Delivery Expectancy Questionnaire (W-DEQ). At six weeks postnatal the Wijma Delivery Experience Questionnaire (W-DEQB) was used (Refer Box 1). Recruitment occurred from May 2012 to June 2013. Demographic, obstetric history and psycho-social measures were also collected at baseline. Women who reported high childbirth fear (W-DEQ ≥66) were randomised to the primary (BELIEF) study. These women completed additional questionnaires at 36 weeks of pregnancy and at 6 weeks postnatal. Details have been published in the study protocol.[19] Baseline questionnaires could be completed in the antenatal clinic at time of recruitment or mailed to the research office. Subsequent questionnaires were completed by mail or over the telephone with a research assistant who was not a midwife and not involved in any other aspect of the study.

Box 1. Psychosocial measures.

Edinburgh Postnatal Depression Scale (EPDS)	10 item well validated self-report questionnaire designed to screen for depression. It has a split-half reliability of 0.88 and standardised alpha coefficient of 0.87. Range of scores is from 0 to 30 with postnatal scores above 12 indicative of probable depression.[62] Cronbach alpha in this study was 0.86
Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ)	33-Item, 6-point Likert scale questionnaire that measures women's fear of childbirth. Items refer to expectations and experiences before birth (version A) and after birth (version B). It has good internal consistency and split-half reliability (>0.94 before and >0.87 after birth) with nulliparous and multiparous women.[8,9] In this study the Cronbach alpha was 0.94
Childbirth Self-Efficacy Inventory (CBSEI)	62-Item scale[63] that requires responses on a 10-point Likert scale. Has four components to capture the specific beliefs and behaviours during the first and second stage of labour. High scores indicate high self-efficacy or outcome expectancy for birth. The CBSEI has been validated for use in the Australian birthing population.[64] In this study the Cronbach alpha was above 0.90 for all four subscales
Decisional Conflict Scale (DCS)	16 item scale, which investigates factors that compromise or facilitate effective decision making. Has been used in decision aid research (including VBAC) within the Australian context.[65] Internal consistency coefficients ranged from 0.78 to 0.92 and discriminated significantly (*p* < 0.001) between those who had strong intentions either to accept or decline a method of care compared to those who were uncertain.[66] The Cronbach alpha in this study was 0.97
Parenting Sense of Confidence and Satisfaction (PSOC – 12 items)	Measures self-efficacy and satisfaction derived from parenting.[67] Only the self-efficacy factor (7 items, 6-point Likert scale) was used. This factor has good internal consistency (α .76) with higher scores indicating stronger self-efficacy, with a Cronbach alpha of 0.91 in this study