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The relationship between childbirth self-efficacy and aspects of well-being, birth interventions and birth outcomes

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ABSTRACT

Objective: this study aimed to examine how women's childbirth self-efficacy beliefs relate to aspects of well-being during the third trimester of pregnancy and whether there was any association between childbirth self-efficacy and obstetric factors.
Design: a cross-sectional design was used. The data was obtained through the distribution of a composite questionnaire and antenatal and birth records.
Setting: data were recruited from antenatal health-care clinics in Halland, Sweden.
Participants: a consecutive sample of 406 pregnant women was recruited at the end of pregnancy at gestational weeks of 35–42.
Measurements: five different measures were used; the Swedish version of Childbirth Self-Efficacy Inventory, the Wijma Delivery Expectancy/Experience Questionnaire, the Sense of Coherence Questionnaire, the Maternity Social Support Scale and finally the Profile of Mood States.
Findings: results showed that childbirth self-efficacy was correlated with positive dimensions as vigour, sense of coherence and maternal support and negatively correlated with previous mental illness, negative mood states and fear of childbirth. Women who reported high childbirth self-efficacy had less epidural analgesia during childbirth, compared to women with low self-efficacy.
Key conclusions: this study highlights that childbirth self-efficacy is a positive dimension that interplays with other aspects and contributes to well-being during pregnancy and thereby, acts as an asset in the context of childbirth.

Introduction

Being pregnant and becoming a mother is a transition and an adaption that poses a challenge for the woman (Barclay et al., 1997; Nelson, 2003). The transition is a passage of change and this also includes a redevelopment of self-agency (Kralik et al., 2006). Self-efficacy is a construct that is considered to have a major impact on human agency as it refers to beliefs in one's agentive capability (Bandura, 1995; Bandura, 1997; Bandura, 2001). This construct is composed of two cognitive assessments. First, when an individual encounters a new situation the individual evaluates what specific skill and behaviour will be best to perform in this particular situation (i.e. outcome expectancy). Secondly, the individual evaluates her own ability to act and master the skills required (i.e. efficacy expectancy) (Bandura, 1997). It is the individual's beliefs that are the most important for the evaluation, not what is actually true or not. Depending on how the individuals perceive their capabilities in the situation that lies ahead, self-efficacy will affect motivation, vulnerability to emotional distress and last but not the least, influence the behaviour that will be initiated in the given situation (Bandura, 1997). For a woman who is expecting her first child the impending labour is a situation she has never faced and she is thus, without personal previous experiences. This may cause doubts about own capability to cope with labour and birth and thus, stress responses. Those who believe themselves to possess adequate abilities to cope with labour will feel more in control and have a reduced stress response (Bandura et al., 1977; Bandura, 1982; Nierop et al., 2008). Further, women's self-efficacy during pregnancy also affects well-being during pregnancy with respect to mood (Nierop et al., 2008), anxiety (Sieber et al., 2006; Beebe et al., 2007) and fear of childbirth (Lowe, 2000; Salomonsson et al., 2013b). Fear of

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childbirth has also been associated with anxiety and depression (Storksen et al., 2012). In Sweden self-reported symptoms of mental illness especially anxiety and depression are increasing among young people (Socialstyrelsen, 2013). Thus, we may assume that among childbearing women we have a group of considerable sizes that have an increased vulnerability during the transition to motherhood and may have more difficulties in coping with childbirth. This group with previous mental illness poses a challenge for the antenatal and obstetric care with more pregnancy complications (Kurki et al., 2000) and an increased number of obstetric visits (Andersson et al., 2004). Furthermore, these women also have a higher number of instrumental deliveries and caesarian sections (Chung et al., 2001; Thornton et al., 2010).

Childbirth self-efficacy has received attention in several countries such as USA (Lowe, 2000; Beebe et al., 2007), Iran (Taheri et al., 2014), Hong Kong (Ip et al., 2009), New Zealand (Berentson-Shaw et al., 2009) and Germany (Sieber et al., 2006) but studies from the Nordic countries in the area of childbirth self-efficacy are scarce. There are only two published studies by Salomonsson et al. (2013a, 2013b) who had solely studied the self-efficacy concept in relation to fear of childbirth and interventions during labour and birth outcomes. To our knowledge, no other studies have focused on both positive and negative dimensions of well-being in relation to childbirth self-efficacy and interventions during birth and birth outcome.

The aim of the present study was twofold. First, we wanted to study how women's childbirth self-efficacy beliefs relate to aspects of wellbeing during the third trimester of pregnancy. The second aim was to assess whether there was any association between childbirth self-efficacy and obstetric factors.

Methods

Study design and setting

This study used a cross-sectional survey design and women were recruited by their own midwife during a clinical appointment at the antenatal clinics in Halland, Sweden, during a period in 2011–2012.

Participants

A prospective consecutive sample of 406 pregnant women was recruited at the end of pregnancy at gestational weeks of 35–42. Third trimester was chosen because self-efficacy is a condition that is changeable. The inclusions criteria for participating were the following: Only nulliparous women were invited to participate, to avoid influence of a previous birth experience on their level of childbirth self-efficacy. Further, only singleton and normal pregnancies were included. An additional criterion for participation was that the women had the ability to understand the Swedish language sufficiently well to read and fill in the questionnaires. Ninety-five per cent of the women, who were accessible consented to participate and completed a questionnaire during a routine visit.

Data collection and data sources

Data were collected by a composite questionnaire which included background questions regarding age, education level, cohabitating status, employment status and place of birth. We added questions about sources that could affect childbirth self-efficacy such as attendance in childbirth education classes and if the women had spoken about their upcoming birth and/or if they had heard birth stories from others (family/other relatives and friends). Moreover, one additional question was about previous mental health illness, phrased as '*Have you ever sought professional health service for mental illness*'? Additional data on previous reproductive history and mental diagnosis, and lifestyle factors such as tobacco use, and body mass index (BMI) was collected from the antenatal birth records as well as obstetrical data from the birth records retrospect. The composite questionnaire was combined with five self-assessment scales.

Measurements

Childbirth Self-Efficacy Inventory (CBSEI)

The Swedish version of Childbirth Self-Efficacy Inventory (Swe-CBSEI) was used to assess self-efficacy prior to the impending childbirth (Carlsson et al., 2014). This Inventory was translated from Lowe's (1993) original Inventory. The inventory is a four dimensional instrument designed to measure outcome expectancies and self-efficacy expectancies during both the first active stage of labour and second stage of labour.

In this study we choose only to use the dimension of the scale measuring self-efficacy expectancies for the first active stage of labour (Efficacy active labour, E-AL). The dimension used (E-AL) is a 15-item scale, ranging from 1 to 10; higher scores indicate a higher degree of childbirth self-efficacy and maximum scores are set to 150.

The original inventory has been translated and has shown reliability and validity in several cultures (Drummond and Rickwood, 1997; Ip et al., 2005; Khorsandi et al., 2008; Tanglakmankhong et al., 2011). The Swedish version is validated within the Swedish culture with satisfactory psychometric properties (Carlsson et al., 2014).The reference value for Cronbach's alpha coefficients was 0.93 in Lowe's (1993) original study and 0.92 in the present study.

The Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ)

The Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) was developed and tested for psychometric properties in Sweden by Wijma et al. (1998). It measures fear specific to childbirth and delivery. The scale consists of 33 items, with items ranging from 0 (extremely) to 5 (not at all). The maximum score is 165 and a minimum score is zero. The cut-off point beyond ≥ 85 is suggested to indicate a more severe fear of childbirth known as SFOC (Ryding et al., 1998) and a score of ≥ 100 has been used in previous studies to represent phobic fear of childbirth. The instrument has been used extensively and has been translated and tested in several countries (Hall et al., 2009; Nordeng et al., 2012). The instrument has demonstrated high internal consistency ($\alpha = 0.89$) and high validity (Wijma et al., 1998). In the present study Cronbach's alpha coefficient was 0.92.

Sense of Coherence Questionnaire (SOC-13)

The SOC scale developed by Antonovsky (1987) measures overall sense of coherence, a global life orientation which acts as a resource to manage stressful situations (Eriksson and Lindström, 2006). The short version consists of 13 items with response rating from 1 (very often) to 7 (very seldom or never), with a total maximum sum of 91. The higher the scores the more the sense of coherence. The SOC scale has been used in various contexts associated to pregnancy and childbirth (Jeschke et al., 2012; Tham et al., 2007; Sjoström et al., 2004).The tool has demonstrated validity and internal consistency ($\alpha = > 0.80$) (Sjoström et al., 2004) and for the present sample the Cronbach's alpha coefficient was ($\alpha = 0.85$).