Midwifery 36 (2016) 80–85

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/midw

The association of birth model with resilience variables and birth experience: Home versus hospital birth

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ARTICLE INFO

Article history:
Received 15 December 2015
Received in revised form
15 March 2016
Accepted 16 March 2016

Keywords:
Home birth
Resilience
Childbirth experience
Optimism

ABSTRACT

Objective: to study home, natural hospital, and medical hospital births, and the association of these birth models to resilience and birth experience.
Design: cross-section retrospective design.
Setting: participants were recruited via an online survey system. Invitations to participate were posted in five different Internet forums for women on maternity leave, from September 2014 to August 2015.
Participants: the sample comprised 381 post partum healthy women above the age of 20, during their maternity leave. Of the participants: 22% gave birth at home, 32% gave birth naturally in a hospital, and 46% of the participants had a medical birth at the hospital.
Measurements: life Orientation Test Revised (LOT-R), General Self-Efficacy Scale, Sense of Mastery Scale, Childbirth Experience Questionnaire (CEQ).
Findings: women having had natural births, whether at home or at the hospital, significantly differed from women having had medical births in all aspects of the birth experience, even when controlling for age and optimism. Birth types contributed to between 14% and 24% of the explained variance of the various birth experience aspects.
Key conclusions: home and natural hospital births were associated with a better childbirth experience. Optimism was identified as a resilience factor, associated both with preference as well as with childbirth experience.
Implications for practice: physically healthy and resilient women could be encouraged to explore the prospect of home or natural hospital births as a means to have a more positive birth experience.

Introduction

Despite childbirth being a universal process, both pregnant women and service providers in the field of obstetrics in Western countries have engaged in creating customised birth conditions. While giving birth is a natural process that can progress without medical intervention, most developed countries relate to it as a medical event, commonly regarding the hospital as the safest, most appropriate site at which to give birth (Borquez and Wiegers, 2006; van Haaren-ten Haken et al., 2012). The process of giving birth may affect every woman differently, subject to many factors, such as the range of circumstances in which it occurs, the expectant mother's personality, as well as sociodemographic variables (Bryanton et al., 2008; Lindgren and Erlandsson, 2010; Jouhki, 2012)

There are various birth trends in Western culture today, involving types of birth (medical or natural) and locale (home or hospital). In some Western societies, women with low-risk pregnancies can choose the form of care services in advance (Sluijs et al., 2015). Statistically, less than 1% of women opt for home births in most Western industrialised countries (Catling-Paull et al., 2011; van Haaren-ten Haken et al., 2012). The exception is the Netherlands, where there is a relatively high rate of home births (van Haaren-ten Haken et al., 2012; CBS, 2015; Sluijs et al., 2015).

During the 20th century, hospitals have adopted a strict protocol of interventions, but, over time, they have also adopted some of the natural birth model's recommendations and have permitted natural childbirth in the hospital under certain conditions. In the current research we consider three birth models: *home birth,* as a planned, natural birth at home without any kind of intervention except the aid of a privately practicing midwife; *natural hospital birth*, as an option offering no pain medication or any medical intervention in the hospital setting with the aid of a hospital

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http://dx.doi.org/10.1016/j.midw.2016.03.005
0266-6138/

midwife; and *medical birth,* as a birth with the application of any intervention protocols (such as rupture of membranes, labour induction, instrumental childbirth, etc.) and/or pain medication of any sort in the hospital setting with the aid of a hospital midwife.

The current research is the first attempt, to the best of our knowledge, to examine qutatively the mother's experience in relation to the various birth models in Israel. Of around 160,000 births occurring annually in Israel, approximately 700 are home births, attended by 20 midwives and four male obstetricians. Most natural births take place in hospitals or, more unconventionally, are self-funded at home. In Israel the option for home birth is possible only with the help of a privately practicing midwife. Although in some hospitals there is also an option of an accompanying private practicing midwife in a natural birth, in our study all births in the hospital (natural as well as medical) were with a midwife from the hospital staff, and home births at home with a privately practicing midwife. The home birth rate in Israel has been reported to be increasing at a slow pace (Meroz and Gesser-Edelsburg, 2015).

Several factors can have an impact on expectant mothers' deliberations regarding their birth-model preference. The focus of this study was to investigate the associations of three birth models––home birth, natural hospital birth, and medical hospital birth––with both resilience-related personality traits and mothers' experiences accompanying the birth model. Among the potentially critical factors that contribute to determining the birth model that are not investigated in the current study are the social role of the Ministry of Health's policies, financial aspects, and societal elements. Furthermore, this study does not address safety issues, such as morbidity and mortality, for both the mother and the infant in home births, although this has been a hotly-debated issue (Roome et al., 2016).

Women's preference for home birth and natural birth may be driven by a desire for greater personal autonomy, low fear of childbirth, self-efficacy and sense of control, self-confidence, and a perception of childbirth as a natural event (Viisainen, 2001; Sjöblom et al., 2006; Catling-Paull et al., 2011; Jouhki, 2012; van Haaren-ten Haken et al., 2012). Furthermore, a mother's childbirth experience has been shown to be strongly associated with the mode of delivery (Bryanton et al., 2008; Guittier et al., 2014; Handelzalts et al., 2014); however the quantitative research regarding home birth and childbirth experience is scarce, with most of the relevant studies being limited to those carried out in the Netherlands (Borquez and Wiegers, 2006; Christiaens and Bracke, 2009; Fontein, 2010).

Regarding satisfaction with the childbirth experience, despite its complexity (Hodnett, 2002; Bryanton et al., 2008; Sawyer et al., 2013), studies have found that prior familiarity with midwifery, personal emotional support, perceived personal control, self-efficacy, and expectations about childbirth improve birth experience (Viisainen, 2001; Christiaens and Bracke, 2007; Tinti et al., 2011; Fair and Morrison, 2012; Stevens et al., 2012; Karlström et al., 2015), thus positioning home and natural hospital birth as potential options for enhancing birth satisfaction (Borquez and Wiegers, 2006; Morison et al., 1998).

Research has increasingly focused on the impact of protective resilience factors on the potential to influence an individual's adaptation to life stressors (Sexton et al., 2015). Childbirth, its universality notwithstanding, may be considered one of these stressors. *Psychological resilience* is defined as an individual's ability to effectively adapt to and rebound from negative experiences (Lazarus, 1993). In this study, we focused on optimism, generalised self-efficacy, and self-mastery as markers of resilience, as suggested in previous studies (Yi et al., 2008).

The cited resilience variables, though associated with more positive consequences in general (Pearlin and Schooler, 1978; Bandura, 1982; Scheier et al., 1994) and with childbirth benefits in particular (Rini et al., 1999; Lobel et al., 2000; Lowe, 2000; McDonald et al., 2014; Carlsson et al., 2015), have yet to be studied quantitatively in relation to home birth. The aim of this study was to investigate whether the birth models are associated with resilience variables; furthermore, we sought to investigate how the various birth models and the resilience variables are associated with the mother's birth experience.

Our first hypothesis: women undergoing home birth will score higher in all of the resilience factors than women undergoing natural hospital birth or women undergoing medical birth.

Our second hypothesis: the mother's birth experience will be associated with the birth model, both with and without controlling for resilience factors.

Method

Participants and data collection

The sample comprised 381 post partum healthy women, all over the age of 20, and on maternity leave. Participants were characterized by three birth models: 22% gave birth at home, 32% had a natural hospital birth, and 46% of the participants had a medical hospital birth.

The participants were recruited by means of an online survey. The invitation to participate was posted in five different forums for women on maternity leave, from September 2014 to August 2015. In order to recruit participants from the home birth population, comprising less than one per cent of all deliveries, an invitation was posted at a natural parenting site. The study was approved by the local IRB (No. 2014175).

To minimise mothers' bias in recalling the birth process, due to the differing times since childbirth (Tinti et al., 2011), we carried out comparisons with two different groups: the first group comprised 340 women on general maternity leave (up to a year), with a second group comprising 41 women who had given birth within 12 weeks prior to the time the data was collected. A series of *t* tests were carried out to compare the two samples for all study variables. No significant differences were found, enabling further analyses to incorporate the entire sample of 381 mothers.

Measures

Optimism was measured using the Hebrew translation (Benyamini and Raz, 2007) of the Life Orientation Test Revised (LOT-R) (Scheier et al., 1994).This 10-item Likert-type scale assesses optimism as a personality trait. Three items assess generalised positive expectancies, such as 'In uncertain times, I expect the best' (optimism), three items assess generalised negative expectancies, such as 'If something can go wrong for me, it will' (pessimism), and four are filler items. Using 1 (*strongly disagree*)−5 (*strongly agree*) Likert scale, with high scores indicating a higher optimistic disposition, scores range between 10 and 50. Cronbach's alpha measure of internal consistency was.78 for the translated version (Benyamini and Raz, 2007) and .76 for the current study.

Sense of Mastery was assessed by the Hebrew version (Hobfoll and Walfisch, 1984) of the 7-item Mastery Scale (Pearlin and Schooler, 1978), using a 1 (*strongly disagree*)−7 (*strongly agree*) Likert-type scale. This scale consists of items tapping the degree to which individuals feel that they have control over their lives (sample items: 'I often feel helpless in dealing with the problems of life', 'I have little control over the things that happen to me' and 'There is really no way I can solve some of the problems I have'). Scores ranged between seven and 49, with higher scores reflecting