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Sense of coherence and childbearing choices: A cross sectional survey

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ABSTRACT

Background: as concern for increasing rates of caesarean section and interventions in childbirth in Western countries mounts, the utility of the risk approach (inherent in the biomedical model of maternity care) is called into question. The theory of salutogenesis offers an alternative as it focuses on the causes of health rather than the causes of illness. Sense of coherence (SOC), the cornerstone of salutogenic theory, is a predictive indicator of health. We hypothesised that there is a relationship between a woman's SOC and the childbirth choices she makes in pregnancy.
Methods: the study aims to investigate the relationship between SOC and women's pregnancy and anticipated labour choices. A cross sectional survey was conducted where eligible women completed a questionnaire that provided information on SOC scores, Edinburgh Postnatal Depression (EPDS) scores, Support Behaviour Inventory (SBI) scores, pregnancy choices and demographics.
Findings: 1074 pregnant women completed the study. Compared to women with low SOC, women with high SOC were older, were less likely to identify pregnancy conditions, had lower EPDS scores and higher SBI scores. SOC was not associated with women's pregnancy choices.
Conclusion: this study relates SOC to physical and emotional health in pregnancy as women with high SOC were less likely to identify pregnancy conditions, had less depressive symptoms and perceived higher levels of support compared to women with low SOC. Interestingly, SOC was not associated with pregnancy choices known to increase normal birth rates. More research is required to explore the relationship between SOC and women's birthing outcomes.

Introduction and background

Caesarean section rates are increasing and spontaneous vaginal birth rates are decreasing nationally and internationally (Laws and Sullivan, 2004; Betran et al., 2007; Hilder et al., 2014). Although caesarean section can be a life-saving operation when performed for certain medical indications (WHO, 2015), spontaneous vaginal birth is a safer birthing outcome for most women and their babies compared to caesarean section (Häger et al., 2004; Macdorman et al., 2008). As midwives we are the caretakers of normal birth and therefore partly responsible for both its decline and the solution to its decline.

Tertiary maternity services are framed in pathogenesis (Downe, 2008) and exist in a culture of risk magnification that leads to increased intervention in childbirth (Kotaska, 2008). A pathogenic view of birth requires a sceptical view of labour physiology and creates a low threshold for labour intervention. This model emphasises morbidity and mortality and casts labouring women as patients dependent on medical rescue (Walsh et al., 2008). Higher rates of interventions in labour lead to higher rates of intervention in birth (Tracy et al., 2007). For example spontaneous vaginal birth rates are reduced when labour is induced (Thorsell et al., 2011), when women use epidural anaesthesia in labour (Anim-Somuah et al., 2011) and when cardiotocography is used for fetal monitoring (Devane et al., 2012). In order to birth in a straight forward way, women must avoid the default mode of medicalisation and unnecessary intervention in labour (Downe, 2008). It is difficult to avoid intervention in a maternity service framed in risk and danger as the focus on adverse events excludes a focus of health and well-being (Perez-Botella et al., 2014).

Salutogenesis is emerging as an alternative framework to pathogenesis for maternity services. In a salutogenic framework, women's salutary factors are examined as closely as their risk factors (Downe, 2008) and all work with childbearing women emphasises and generates health and well-being over risk and illness and women are moved along a continuum towards health (Perez-Botella et al., 2014).

Antonovsky introduced the concept of salutogenesis in the 1970s after researching concentration camp survivors. His research focused

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on understanding how people who experienced stressful events could remain physically and emotionally well (Antonovsky, 1987). Research with this group led Antonovsky to develop a new theoretical framework that focuses on the causes of health rather than the causes of illness (Antonovsky, 1979). Sense of coherence (SOC) is the cornerstone of salutogenic theory and refers to a person's ability to use existing and potential resources to resist stress and promote health (Antonovsky, 1987). An individual who views their world as manageable, comprehensible and meaningful is considered to have high SOC and experiences better health, particularly emotional health, compared to people with low SOC (Eriksson and Lindström, 2006).

Antonovsky developed the Sense of Coherence scales to operationalise his salutogenic theory (Antonovsky, 1993b). Originally Antonovsky developed the SOC 29 consisting of 29 items with a seven point response scale measuring the three SOC dimensions of comprehensibility, manageability and meaningfulness. The 13 item short form version, the SOC 13, was developed from the original scale. The scales have become important tools in measuring health, especially mental health (Eriksson and Lindström, 2006).

People with high SOC exhibit improved health behaviours, improved physical and emotional health (Eriksson and Lindström, 2006) and positive childbearing outcomes (Ferguson et al., 2014). Our scoping review of the literature found that childbearing women with a high SOC had increased emotional health, improved health behaviours and increased normal birth choices and outcomes (Ferguson et al., 2014). For example, childbearing women with high SOC were less likely to smoke (Abrahamsson and Ejlertsson, 2002) and more likely to seek out useful support (Libera et al., 2007; Hildingsson et al., 2008) compared to women with low SOC. Women with high SOC demonstrated increased emotional health experiencing less depression (Engelhard et al., 2003; Sjostrom et al., 2004; Kerstis et al., 2013), anxiety (Sjostrom et al., 2004), stress (Sekizuka et al., 2006) and post-traumatic stress disorder (Stramrood et al., 2011).

Only four studies examined the effect of SOC on birthing women. One study of 145 Israeli women found that women with high SOC were more likely to experience uncomplicated birth compared to women with low SOC (Oz et al., 2009). The authors intimate that high SOC may be associated with pregnancy choices known to enhance the potential for normal birth but the study was not designed to investigate this. They concluded that SOC may be used to predict birthing outcomes but suggest that the study should be repeated in a larger population. One small ($n=31$), German, mixed method study found women with high SOC were more likely to birth at home compared to women with low SOC (Borrmann et al., 2002). Another study of German ($n=366$) and American ($n=67$) women found German women with higher SOC claimed normal birth as their preferred mode of birth in pregnancy. As these results were not found for the American cohort, the authors suggest that the study should be repeated in a larger population (Hellmers and Schuecking, 2008). Another study of 193 pregnant German women found women with high SOC identified a desire to avoid epidural anaesthesia in labour. Interestingly, actual epidural use was not found to be associated with SOC scores (Jeschke et al., 2012). These four single studies suggest a benefit in further research exploring the relationship between women's SOC and women's childbearing choices.

In their systematic review on the validity of the SOC 29 and the SOC 13, Eriksson and Lindstrom found both SOC scales to be reliable, valid and cross culturally applicable (Eriksson and Lindström, 2005). For example they found the Cronbach's alpha range of the SOC 29 and the SOC 13 to be .70 to .95 and .70 to .92 respectively (Eriksson and Lindström, 2005). Our previous study examining the psychometric properties of the SOC 13 in childbearing women in the Australian setting, found that the construct validity of the SOC 13 was difficult to establish when administered to 718 pregnant Australian women. The SOC 9 was created by removing items 2, 3, 7 and 9 and provided best data fit. The SOC 13 and SOC 9 were found to have sound criterion validity, strong internal reliability and equivalence between the online and the paper version of the instruments (Ferguson et al., 2015).

Originally, Antonovsky believed that SOC was a fixed concept, but later, he revised this view (Antonovsky, 1987). There is now mounting evidence that major life events such as childbearing profoundly affect a woman's SOC (Sjostrom et al., 2004; Habroe et al., 2007) and that education and therapies can strengthen the SOC, improve the management of tension, and improve health in general (Langeland et al., 2006; Foureur et al., 2013).

Clearly SOC is an important health promoting concept. The mechanism of this however, is less clear. Understandings from our review of the SOC and childbearing literature (Ferguson et al., 2014) suggest that women with high SOC may make pregnancy choices known to increase normal birth rates such as continuity of midwifery care (Sandall et al., 2013), to give birth outside a tertiary setting (Davis et al., 2011) and to avoid epidural anaesthesia in labour (Anim-Somuah et al., 2011). Therefore, a childbearing woman's SOC may be an important concept in influencing the rising rates of caesarean section. This study aimed to examine relationships between a pregnant woman's SOC scores and her childbearing choices. The research hypothesis states that compared to pregnant women with low sense of coherence, pregnant women with high sense of coherence will be more likely to choose midwifery care, vaginal birth, birth outside a tertiary centre and to avoid epidural anaesthesia in labour.

Method

Study design

The study used a cross sectional survey design with questionnaires administered at two time points; in the antenatal and postnatal periods. This paper reports on results of the first questionnaire only which focused on women's pregnancy choices. Three Human Research Ethics committees within the jurisdiction approved the study.

Setting

For the purposes of this study, a convenience sample of pregnant women living in a particular jurisdiction of Australia was recruited as part of an ongoing study on the relationship between SOC and women's childbearing choices and birthing outcomes. The jurisdiction has an approximate population of 400,000 people with just over 5000 women giving birth each year (Hilder et al., 2014). Women in this jurisdiction can choose to have their babies in the public or private setting. Public maternity services provide midwife-led care with known or unknown midwives and birth in birth centres or traditional birth suites. Private hospital maternity services offer obstetrician-led care and birth in private hospitals. Private home birth services offer women birth at home with known midwives. Participants were recruited from all maternity services available in the jurisdiction. Participants were eligible to participate if they were less than 30 weeks pregnant with a single baby, over 18 years old and able to read and write in English.

Recruitment

Between September 2013 and September 2014, women who met the inclusion criteria were invited to participate in the study through the distribution of information packs and advertising flyers by the researcher, local midwives, midwifery students, social networking sites and other participants. Snowball sampling allowed for participants to recruit other eligible participants. Participants were also