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Childbirth efficacy: Validating the childbirth self-efficacy inventory in a Greek sample of pregnant women

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ABSTRACT

Objective: childbirth self-efficacy has been found to be a factor that influences women's decision about their choice of delivery. Greece is a country with a high caesarean section rate and the validation of the Childbirth Self-Efficacy Inventory (CBSEI) would help explore Greek pregnant women's emotional preparation of childbirth. The aim of the study was to translate the CBSEI to Greek and to examine its psychometric properties.
Design: a cross-sectional study.
Setting: private hospital in Athens, Greece.
Participants: 145 pregnant women, in late pregnancy, attending routine antenatal visit between April 2014 and June 2014.
Measurements: the CBSEI was 'forward–backward' translated from English to Greek language. Descriptive statistics and non-parametric tests were used to describe and compare the scales. Factor structure was investigated using principal axis factoring. Measures of self-esteem and optimism were used to assess the convergent validity of the CBSEI. Cronbach's α was used to measure internal consistency reliability.
Findings: the factor analysis suggested the existence of a three-factor structure with meaningful groupings. Greek women were able to distinguish between outcome expectancy and self-efficacy expectancy and between the two labour stages, active phase of the first stage and the second stage of labour. Construct validity was confirmed by computing correlations between the CBSEI subscales and conceptually similar constructions of self-esteem and optimism. Internal consistency reliability was satisfactory.
Key conclusion and implications for practice: the Greek version of the CBSEI is a reliable and valid measure. The clinical use of CBSEI may enable midwives and other health care professionals to identify pregnant women with low childbirth self-efficacy. The clinical use of CBSEI may also give the opportunity to provide information and support for preparing and empowering women for childbirth in order to improve their childbirth experience.

Introduction

Childbirth is one of the most important and stressful life events in a woman's life. Self-efficacy or confidence in ability to cope with labour can be considered as an important factor affecting pregnant women's motivation of normal childbirth (Lowe, 2000). Today, the internationally rising rate of caesarean sections (Mossialos et al., 2005) depicts the necessity of measuring childbirth efficacy and exploring the predictive value of childbirth efficacy on childbirth outcome. In Greece, the caesarean section rate in 2005 was 42% in public maternity hospitals and 53% in private maternity clinics (Mossialos et al., 2005). This rate is similar today and exceeds the World Health Organization recommended rate of no more than 15% (WHO, 1985). Rates higher than 15% have been shown to be associated with more harm than good (Althabe and Belizin, 2006).

The validation of a childbirth self-efficacy instrument in Greece would be helpful for understanding the childbirth self-efficacy of

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Greek pregnant women and for developing childbirth education programmes for the Greek childbearing population.

Self-efficacy theory and childbirth

Self-efficacy theory was developed by Bandura as part of a larger theory, the Social Learning Theory, which has progressed into the Social Cognitive Theory. Self-efficacy is a primary concept of social learning theory that has been defined as 'people's judgments of their capacities to organise and execute courses of action required to attain designated types of performance' (Bandura, 1986, p. 391). According to Bandura (2001), people act on their beliefs about what they can do (efficacy expectation), and on their beliefs about the probable outcome of performance (outcome expectation). Efficacy expectation and outcome expectation are not the same. People may believe that a certain behaviour will produce a desired outcome (outcome expectancy). However, if they think that they cannot perform the certain behaviour (efficacy expectance) they will not finally influence their behaviour. The basic principle behind Self-Efficacy Theory is that individuals are more likely to engage in activities for which they have high self-efficacy and less likely to engage in those they do not (Van der Bijl and Shortridge-Baggett, 2002). Bandura (1977) outlined four sources of information that individuals employ to judge their efficacy: performance outcomes (performance accomplishments), vicarious experiences, verbal persuasion, and physiological feedback (emotional arousal). Since the influential work by Manning and Wright (1983), the application of Self-Efficacy Theory to childbirth (i.e. the influence of self-efficacy expectancies on women's perceptions during childbirth) has been established. Self-efficacy theory has been applied both in childbirth (Lowe, 1989, 1991) and pregnancy (Beebe et al., 2007; Black, 2007). Lowe (1989) identified that self-confidence was the most critical variable in the explanation of pain during active labour and her next study (Lowe, 1991) proved that Self-Efficacy Theory could be linked with women's confidence in coping with labour.

The childbirth self-efficacy inventory

The Childbirth Self-Efficacy Inventory (CBSEI) was developed to measure maternal confidence in coping abilities during labour by Lowe (1993). The CBSEI development was based on Bandura's self-efficacy theory (1977). The tool is a self-report instrument that is composed of 62 items. It is divided into four subscales: (1) Outcome Active Labour (OAL), (2) Self-Efficacy Active Labour (ESS), (3) Outcome Second Stage (OSS) and (4) Self-Efficacy Second Stage (ESS). The CBSEI measures both outcome expectancies, i.e. what behaviour women think would be useful during labour, and self-efficacy expectancies, i.e. how women think they will be able to behave themselves during labour, in two stages of labour (active phase and second stage). The instrument can be administrated in late pregnancy during the third trimester for estimating the woman's confidence regarding childbirth before the onset of birth. According to Bandura's theory, self-efficacy expectancy for childbirth is influenced by four main factors: (1) performance accomplishments, such as past childbirth experience; (2) vicarious experiences, from antenatal classes, books, films or videos and other; (3) verbal persuasion and encouragement from influential others, such as friends, family and childbirth educators; and (4) physiological responses, such emotional arousal, anxiety and stress (Bandura, 1982; Lowe, 1993). Since its development, CBSEI has been tested for its psychometric properties in many studies and it has been proved to be an instrument with high internal reliability measured by Cronbach's alpha with values ranging from 0.84 to 0.96 (Lowe, 1993; Drummond and Rickwood, 1997; Sinclair and O'Boyle, 1999; Ip et al., 2005; Khorsandi et al., 2008; Cunqueiro et al., 2009; Tanglakmankhong et al., 2011; Carlsson et al., 2014). The inventory has also proved to be a valid tool as it is associated reasonably with the variables posited by Bandura's theory (Lowe, 1993; Cunqueiro et al., 2009; Tanglakmankhong et al., 2011; Carlsson et al., 2014). Many previous studies have explored the factor structure of the instrument for identifying underlying constructs. Studies by Lowe (1993) and by Ip et al. (2005) supported the fact that all four subscales of the CBSEI were unidimensional. Studies by Drummond and Rickwood (1997), Khorsandi et al. (2008), Cunqueiro et al. (2009) and Tanglakmankhong et al. (2011) found that factor analyses of the four subscales yielded two or three factors for each subscale. They finally kept for each subscale a single-factor solution as the rest factors were not theoretically interpretable. Finally, study by Carlsson et al. (2014) found and kept for each subscale a three-component structure as this component structure was theoretically interpretable. Therefore the underlying factor structure of CBSEI still remains unclear. Moreover, CBSEI has been translated in many languages: Chinese (Ip et al., 2005), Persian (Khorsandi et al., 2008), Spanish (Cunqueiro et al., 2009), Thai (Tanglakmankhong et al., 2011) and Swedish (Carlsson et al., 2014) but it has not yet to our knowledge been tested for psychometric properties in Greek language.

The aim of the present study was to translate the Childbirth Self-efficacy Inventory in Greek and to psychometrically test the Greek version on primiparas pregnant women.

Methods

Sample and data collection

Data were collected in one maternity clinic in Athens, Greece. The questionnaires were administered to a purposive sample of pregnant women in late pregnancy during the third trimester who were booked for a routine antenatal appointment. According to the inclusion criteria the women chosen: (a) were able to read and write in Greek language in order to have the ability to complete the questionnaires, and (b) have had a low risk, singleton pregnancy, (c) were primiparas. Before the antenatal appointment, a midwife from our research team contacted the women eligible to participate in the study. The pregnant women were informed of the study aim and protocol, and once they voluntarily agreed to participate, they were given an envelope containing the questionnaires and an informed consent form. The completed questionnaires and the signed consent form were returned directly or by mail to the researcher (within one-two weeks). During the recruitment period (from April of 2014 to June of 2014), 160 pregnant women were eligible and were invited to participate and finally 145 women accepted to participate and filled in the questionnaires (response rate 91%). Non-participation was mainly due to time constraints. The sample consisted of 145 pregnant women and was used for the purpose of conducting analyses concerning the factor structure, and the convergent and discriminant validity of the scale.

Translation procedure

After obtaining authorisation by its developers (Dr. Lowe), the 'forward–backward' translation was applied to translate the CBSEI from English to Greek language. Back-translation is highly recommended by experts on cross cultural research (Maneesriwongul and Dixon, 2004). This process must be followed carefully because the values that are reflected by an instrument and the meanings of its component constructs may vary from one culture to another (Maneesriwongul and Dixon, 2004). The CBSEI was translated from English into Greek, by two independent health professionals who were native speakers of the Greek language with a high level of fluency in English and by a professional translator who received