Midwifery 66 (2018) 148–154

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/locate/midw

Translation, adaptation and psychometric validation of the preterm birth experience and satisfaction scale (P-BESS) into Spanish

Ruben Alfaro Blazquez, Ph.d student, Midwife[a,b,*], Esperanza Ferrer Ferrandiz, Ph.D[c,d], Sonia Pardo Moya, Midwife[a], Vicente Gea Caballero, Ph.D[c], Silvia Corchon, Ph.D[b]

[a] Department of Obstetrics, University and Polytechnic Hospital "La Fe", Valencia, Spain
[b] School of Nursing and Podiatry, University of Valencia, Spain
[c] Nursing School "La Fe", University of Valencia, Spain
[d] Nursing Research Group in Art and Science of Care (GREIACC), Spain

ARTICLE INFO

Keywords:
Labour
Patient satisfaction
Preterm births
Surveys and questionnaires
Validation studies

ABSTRACT

Background: Preterm labour and birth are two of the most important issues in perinatal care. The birth of a preterm baby is often a stressful and traumatic time for parents. Assessment of satisfaction with maternity services is crucial and questionnaires are the most common method as long as they are well-constructed. Only one, The Preterm Birth Experience and Satisfaction Scale (P-BESS), developed in United Kingdom, has been designed for this specific birth type.

Objectives: To translate, transculturally adapt and assess the psychometric properties of the P-BESS into Spanish.

Design: Cross-sectional study.

Setting: Maternity unit of a tertiary level hospital in Spain.

Participants: A total of 182 woman who gave birth before 37 weeks of gestation.

Methods: The instrument was translated and back translated. The P-BESS was tested for face validity and construct validity by carrying out an exploratory/confirmatory factor analysis. Reliability was estimated from the internal consistency, with the Cronbach's alpha (α), and the test-retest, with the intraclass correlation coefficient (ICC).

Findings: The principal component analysis revealed the presence of three factors with eigenvalues greater than 1, explaining a total variance of 66.6%. A subsequent varimax rotation revealed the presence of strong loadings on each of the three components. Confirmatory factor analysis was performed, offering the model a very good fit to the data: chi-square was $\chi^2_{(df=149)}=362.727$ ($p=0.000$); the root mean square error of approximation (RMSEA)=0.089; the normed fix index (NFI)= 0.852 and the comparative fit index (CFI)=0.905. The total scale and subscales had good reliability with all Cronbach´s alpha above the acceptable level of 0.7. The total ICC was 0.994 (CI 95%, 0.988–0.997).

Conclusions: The Spanish version of P-BESS appears to be a robust, valid and reliable instrument for assessing satisfaction with care during preterm birth.

Implications for practice: the instrument provides a more comprehensive understanding of this complex experience. It allows the detection of areas of intervention in order to empower strategies to cope with preterm births and to maximise feelings of self-confidence and control.

Introduction

Preterm birth (PTB), defined as delivery prior to 37 weeks of gestation, is considered one of the leading health indicators of a nation (Institute of Medicine (US) Committee on Leading Health Indicators, 2011; World Health Organization, 2017) as it is the most frequent cause of neonatal death and the second most frequent cause of death in children aged <5 years worldwide (Blencowe et al., 2012), responsible for approximately 1 million deaths in 2015 (Liu et al., 2016). PTB is the most important single determinant of adverse outcome in terms of survival, quality of life, psychosocial and emotional impact on the family, and costs for health services (Tucker and McGuire, 2004).

After decades of rising PTB rates in the USA and other developed countries, recent prematurity rates seem to be on the decline (Zeitlin et al., 2013; Martin et al., 2015). However, PTB rates remain high (11–12% of births in the USA in 2013) (Gyamfi-Bannerman and Ananth, 2014). Multiple factors were thought to have contributed to the rising

* Corresponding author at: Jose Ponce, 32. CP 02006, Albacete, Spain.
E-mail addresses: ruben.ab87@hotmail.com (R. Alfaro Blazquez), gea_vic@gva.es (V. Gea Caballero), silvia.corchon@uv.es (S. Corchon).

https://doi.org/10.1016/j.midw.2018.08.007
Received 25 April 2018; Received in revised form 14 June 2018; Accepted 12 August 2018

of PTB rate including: higher average maternal age; more frequent use of assisted reproductive technologies; an increase in non-infertility-related multiple gestations and higher rates of preterm inductions and caesarean deliveries (Chang et al., 2013).

Preterm labour and birth are two of the most important issues in perinatal care. The birth of a preterm baby is often an extremely stressful and traumatic time for parents (Forcada-Guex et al., 2011). The birth may have been rapid and unexpected, and parents and babies are usually separated at birth as the baby is taken to the neonatal unit (Redshaw, 2008). Parents frequently report distress, depression and symptoms of post-traumatic stress or complaints for several years (Karatzias et al., 2007; Bell and Andersson, 2016). Negative maternal experiences in their turn, may have long-term detrimental effects on parenting and child's development (Latva et al., 2008).

Understanding of the patients' experiences of healthcare services has improved considerably over recent decades, and patient satisfaction is now one of the most frequently reported health outcomes (Fowler and Patterson, 2013). In this sense, women's views and experiences of maternity services, especially the care during labour and childbirth, are increasingly important to healthcare providers, administrators, and policymakers, and can influence decisions about the organisation and provision of services (Redshaw, 2008).

One way in which quality of care from patient´s perspectives has been assessed is through the development and application of satisfaction measures (Fowler and Patterson, 2013). Questionnaires are the most common method of assessing satisfaction. These provide an efficient and cost-effective method of obtaining an overview of patient´s experience and allow comparisons to be made between patients and institutions, as long as they are well-constructed tools with high levels of reliability and validity (Marin-Morales et al., 2013; Konerding, 2016).

According to the literature, there is a moderate number of sound instruments capable of measuring maternal satisfaction with the overall package of care received during labour and childbirth within a hospital setting. However, it is interesting to note that most of the questionnaires are limited to healthy women with low obstetric risk pregnancies, meaning that they do not assess the satisfaction of mothers with unhealthy or preterm newborns. This seems to be an important gap as their experiences could be different from those of mothers giving birth to a healthy, full-term infant (Alfaro Blazquez et al., 2017). Unique factors to preterm birth have been identified, such as the importance of the staff appearing calm during the birth, and the staff portraying confidence and taking control during the birth. Women valued being listened to, and both they and their partners valued staff helping fathers to feel involved during the birth (Sawyer et al., 2013a).

Of these instruments available, only one has been designed for this specific birth type and population. The Preterm Birth Experience and Satisfaction Scale (P-BESS) designed by Sawyer et al., (2014) was developed in England, especially for assessing parental satisfaction with a premature newborn delivered within 32 weeks of pregnancy in a hospital setting. A remarkable aspect of the scale is that it allows the inclusion of couples as the subject of study. Until this moment, the P-BESS has not been translated into other languages.

Concerning the Spanish language, there are very few validated instruments available to assess satisfaction with labour and childbirth, which have been adapted to Spanish. The ones currently available, such as the Mackey Childbirth Satisfaction Rating Scale (Marin-Morales et al., 2013), the Women's Views of Birth Labor Satisfaction Questionnaire (Mas-Pons et al., 2012) and the Intrapartal Specific Questionnaire Patient's Perspective Questionnaire (Donate-Manzanares et al., 2017) do not take preterm childbirths into account. Therefore, It has been verified the lack of such a measure in the current literature: neither the adaptation of an existing instrument nor the development of a new instrument was found (Alfaro Blazquez et al., 2017). For this reason, the aim of the current study is to translate, transculturally adapt and evaluate the reliability and validity of the P-BESS in a Spanish-speaking population to assess patient satisfaction with overall package of care received during the labour and childbirth of their preterm baby within a hospital setting. It was also decided to undertake the test-restest reliability method to measure the stability and reliability of the P-BESS over time, as this has not been done previously.

Methods

Design

This study followed a prospective cross-sectional design. It was focused on the translation, transcultural adaptation and psychometric validation of a quantitative multidimensional satisfaction questionnaire, the P-BESS. This study follows a sequential process of instrument evaluation using classical and contemporary psychometric approaches (Furr and Bacharach, 2013; Ramada-Rodilla et al., 2013) applied to a single cohort that is differentiated by clinical attributes and which allowed evaluation of the instrument measurement properties.

Instrument

The Preterm Birth Experience and Satisfaction Scale (P-BESS) consists of 17 items with three dimensions related to various aspects of preterm childbirth experiences: staff professionalism and empathy (seven items), information/explanations (seven items) and confidence in staff (three items). A fourth dimension could be added to assess partner involvement (two items) for women whose partner´s attended birth. In addition, two items related to overall satisfaction are examined to establish convergent validity. Participants respond to those items using a 5-point Likert scale. The total scale score is obtained by adding the scores of the values assigned to each item, with higher scores reflecting greater satisfaction (Sawyer et al., 2014; Alfaro Blazquez et al., 2017).

Content and face validity were undertaken in order to develop the tool (Sawyer et al., 2013a, 2013b). The final validation stage included 145 mothers and 85 partners from the UK. Factor analysis with data from women was confirmed through exploratory/confirmatory factor analysis, group differences and convergent validity. It also showed an adequate reliability both on the global scale (a Cronbach's alpha score 0.94), and on the subscales (alpha values ranging between 0.77 and 0.92). Regarding the validation of the questionnaire with partners, the author recommended to use the total satisfaction score. Results showed that although the scale was reliable ($\alpha = 0.93$), the three factor solution did not fit the partner's data well (Sawyer et al., 2014; Alfaro Blazquez et al., 2017).

Translation procedure

The Spanish version of the P-BESS was constructed following the recommendations for adapting tests (Muniz et al., 2013). Permission was obtained from the original author via e-mail. All the translators worked at different organizations, so they did not know one another. The English version of the scale was independently translated into Spanish by two bilingual native Spanish translators with knowledge in healthcare. Both were advised that the translation should be semantic rather than literal to attain conceptual and linguistic equivalences. For each item, they assessed the difficulty in finding an expression in Spanish conceptually equivalent to the original, using a scale from 0 (minimum difficulty) to 10 (maximum difficulty). Five items had a score equal or greater than 5. Both translations were reviewed by a panel of experts (the research group plus three midwives). The items with moderate or high difficulty were discussed. Both translations were synthesised into one and a first Spanish version was agreed. This initial version was backtranslated into English, independently, by two bilingual English native translators and with knowledge in healthcare. The difficulty in finding expressions was also scored and a panel of experts compiled these two translations into one. The original scale and the translated Spanish version were reviewed