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Validation of the Chichewa Perinatal PTSD Questionnaire and Chichewa Child Health Worry Scale

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ABSTRACT

Malawian mothers regardless of gestation at birth find pregnancy to be a stressful period that triggers worry due to a fear of maternal death. Research has mostly focused on maternal depressive symptoms regardless of gestation. Limited literature exists on posttraumatic stress symptoms and maternal worry. The purpose of this study was to translate and validate the Perinatal PTSD Questionnaire and Child Health Worry Scale for assessment of posttraumatic stress symptoms and worry about child's health, respectively, among Malawian women. The process of assuring the accuracy of the translation involved having five native English-speaking nurse researchers and eight Malawian nurse-midwives in a focus group review the translations. We then psychometrically tested the instruments with 30 postpartum mothers at Kamuzu College of Nursing and Queen Elizabeth Central Hospital. Findings from the nurse researchers and the nurse-midwives agreed with most of the translations and modifications were done to improve the adaptations. The instruments were administered to the postpartum mothers. The Chichewa Self Reporting Questionnaire was used as the standard for assessment of perinatal emotional distress symptoms. Both the Chichewa Perinatal PTSD Questionnaire and Chichewa Child Health Worry Scale had high internal consistency and showed strong to moderate correlations with the Chichewa Self Reporting Questionnaire. The mothers agreed that the questions were easy to understand and culturally sensitive, although a few questions were seen as distressing. Future adaptations need to consider testing the instruments in mothers throughout infancy and utilizing other gold standard instruments for validation.

1. Introduction

Research on the postpartum period in Malawi has focused primarily on depressive symptoms, regardless of the gestation at which the infant was born, with some research done on anxiety (Stewart et al., 2010; Stewart et al., 2009; Stewart, Umar, Gleadow-Ware, Creed, & Bristow, 2015; Stewart et al., 2008; Stewart, Umar, Tomenson, & Creed, 2013). However, no published literature on Malawi could be located on postpartum posttraumatic stress (PTS) symptoms or maternal worry, possibly contributing to inadequate psychological support following traumatic birth experiences. The available Chichewa translated and validated screening instruments for depressive symptoms during postpartum period include the Self-Reporting Questionnaire (SRQ) for neurotic symptoms (Stewart et al., 2009; Stewart et al., 2013). The SRQ was developed to assess neurotic disorders (World Health Organization, 1994) and was translated into Chichewa, one of Malawi's native languages, and validated by Stewart et al. (2009, 2013) to assess depressive and anxiety symptoms but this instrument does not assess for PTS symptoms or worry about the child's health.

Posttraumatic Stress Disorder, also a neurotic condition, and maternal worry are the least explored negative psychological responses following childbirth in Malawi. The Perinatal PTSD Questionnaire (PPQ) is a commonly used instrument to assess postpartum PTS symptoms (Gondwe & Holditch-Davis, 2015). The dichotomized PPQ-I was developed by DeMier, Hynan, Harris, and Manniello (1996) and later modified into 5-point Likert scale, PPQ-II, by Callahan, Borja, and Hynan (2006). The Child Health Worry Scale (CHWS) has been used to assess maternal concerns following birth of a high-risk infant and it measures how much mothers worry about infant medical problems, infant development, whether the infant might get sick or die, and whether infant is eating and sleeping enough (Docherty, Miles, & Holditch-Davis, 2002; Miles, Holditch-Davis, Burchinal, & Nelson, 1999). The CHWS was developed by Miles and colleagues and was tested on American mothers of medically fragile infants, both preterm

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and full-term (Miles et al., 1999). Neither instrument has been translated or validated in any Malawian language. Thus, it was necessary to translate measures that assess for other emotional distress measures, posttraumatic stress and maternal worry, in order to capture in-depth, the emotional struggles of mothers in the postpartum period (first 6 weeks after birth).

The purpose of this study was to translate the PPQ-II and CHWS into Chichewa and validate them for assessment of PTS symptoms and worry about a child's health in Malawian women. A two-phase process was used in which the instruments were first translated and back-translated. Once accuracy of the translation was assured, the instruments were tested in postpartum (1–6 weeks after childbirth) women to determine the instrument's reliability and validity. Findings from this study should contribute to research on negative emotional responses in the postpartum period in Malawi.

2. Method

This was a mixed method study that was conducted in the postpartum period in two phases. First, two instruments available in English (one on post-traumatic stress symptoms and the other on worry about the child's health) were translated in Chichewa and then back translated to English. The accuracy of the translation was checked by native English-speaking nurse researchers comparing the original instruments to the back-translated one. Also, focus group discussions were conducted with Malawian nurse-midwives to explore the translations and the face validity of the instruments. The final translated instruments were the result of these processes. In the second phase, the translated instruments were tested to determine their psychometric characteristics when used with the targeted population, postpartum women who gave birth to preterm or full-term infants. The translated instruments were administered to postpartum mothers followed by a short interview to assess the perceptions of the mothers on ease or difficulty of these questionnaires.

2.1. Ethical procedures

Approval was obtained from Duke University IRB and the Malawi College of Medicine Research Committee. The study was also authorized by Kamuzu College of Nursing and Queen Elizabeth Central Hospital administration.

2.2. Phase I: Instrument translation, back-translation, and verification

2.2.1. Measures that were translated

Modified Perinatal PTSD Questionnaire (PPQ-II) – The modified English PPQ-II is a 14-item instrument that measures intrusive thoughts since delivery (e.g., bad dreams of giving birth), avoidance, or numbing (e.g., inability to remember parts of the hospitalization), and increased arousal (e.g., irritability or anger) (Callahan et al., 2006; Quinnell & Hynan, 1999). The PPQ-II is rated on a 5-point Likert scale from 0 (not at all) to 4 (often for more than a month). The PPQ-II has a total score ranging from 0 to 56 with higher scores indicating elevated PTS symptoms and a clinical range of 19 or above indicating the need for therapy (Callahan et al., 2006). The PPQ-II showed high internal consistency with Cronbach alpha of 0.90 (Callahan et al., 2006). The English version of PPQ-II also showed high internal consistency in other studies with a Cronbach alpha ranging from 0.80 to 0.87 (Brandon et al., 2011).

Chichewa Child Health Worry Scale (CHWS) – The CHWS is a 7-item instrument that measures the extent to which mothers worry about infant medical problems, development, whether infant will get sick or might die, and whether infant is eating and sleeping enough (Miles et al., 1999). The instrument is rated on a 5-point Likert scale from 1 (*not at all*) to 5 (*very much*) (Miles et al., 1999). The CHWS has a total score that ranges from 7 to 35 with higher scores indicating more worry. The English CHWS shows high internal consistency with Cronbach alpha ranging from 0.89 to 0.90 (Brandon et al., 2011).

2.2.2. Translation and back-translation

A bilingual Malawian nurse-midwife fluent in English and Chichewa translated the English PPQ-II and CHWS into Chichewa. Four bilingual Malawians discussed the translations: two nurse-midwives, a psychologist, and curriculum development graduate student. Modifications were made until the team reached a consensus. Another bilingual person, a lecturer for primary school teachers, back translated the instruments into English. The translation and back translation processes were repeated until the closest translation was obtained and consensus reached among the reviewers.

2.2.3. Expert agreement on accuracy of translation

Five mother-child relationship and neonatal care researchers, PhD prepared nursing professors and native English speakers, checked the back translations against the original English instruments to assess consistency between the original and back translation. The original and back-translated instruments items were compared, and the experts rated the back-translated version on a 3-point Likert scale (1 = disagree, 2 = somewhat agree, or 3 = agree) to indicate whether the back-translated instruments retained the meaning of the originals. We dichotomized the ratings as disagreeing (1 or 2) and agreeing (3). Items that scored 1 or 2 were revised and sent back to the experts. The experts submitted comments for each item and the process of translation and back translation was repeated. A face-to-face discussion was conducted with three of the professors to discuss their comments and clarifications were made using examples from the original instrument.

2.2.4. Focus group discussion on accuracy of translation

Eight nurse-midwives were recruited from the graduate programs, masters in midwifery and masters in reproductive health at Kamuzu College of Nursing. One nurse-midwife had experience working in maternity and the other seven had experience working in both maternity and neonatal units. Five nurses had clinical experience of 5–6 years and three nurses had more than 6 years. The nurse-midwives were fluent in both Chichewa (native language of Malawi) and English. The nurse-midwives were presented with both the original and translated instruments. Discussion focused on whether the translation for each item retained the content of the original, ease and difficulty of the items, and the significance of the instrument in postpartum period.

2.2.5. Data analysis

We assessed agreement between the English-speaking experts on each item and the whole instrument by calculating the item-level content validity index (I-CVI) and the mean I-CVI respectively. The I-CVI for each item was calculated by dividing the number in agreement by the total number of raters. Focus group interviews were transcribed and imported into NVIVO 10. Data was organized into common themes about the perception of the instruments and recommendations for improvement.

2.3. Phase II: Psychometric testing of the instruments

2.3.1. Sample

The psychometric testing of the translated instruments was conducted at Kamuzu College of Nursing and Queen Elizabeth Central Hospital (QECH) in Blantyre, Malawi. We recruited 30 mothers (10 mothers of early-preterm infants [28 0/7 to 33 6/7 weeks gestation], 10 mothers of late-preterm infants [34 0/7 to 36 6/7 weeks gestation], and 10 mothers of full-term infants [37 0/7 to 41 6/7 weeks gestation]). Criteria for enrollment were mothers who were aged 18 years or older, were fluent in Chichewa, gave birth to a live full-term or preterm infant, and had no history of mental illness to control for other risk factors for emotional distress. Table 1 provides demographic characteristics of the