Breastfeeding self-efficacy scale-short form (bses-sf)

The objectives of this study were to determine the reliability and validity of a Malay-version questionnaire Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) among respondents.

METHODS

Participant

Target population for this study is primiparous mothers who gave birth to a single, healthy, term infant who were planning on breastfeeding were eligible to participate in this study. The study applied convenience sampling, in which researcher recruited volunteer primiparous mother who have delivered baby and hospitalized at postnatal ward, Hospital USM between one to three days. Mothers were excluded if they had a factor that could significantly interfere with breastfeeding, such as a mother whose illness, have maternity complication or infant admitted to the Neonatal Intensive Care Unit (NICU) and the infant had a condition that prevented ingestion of breast milk via the breast such as cleft palate.

Sample Size

For the sample size, the study needed 38 of respondents to validate the questionnaire base on the internal consistency of the items from previous study. Cronbach’s alpha will be used to measure reliability because it is the most common form of internal consistency reliability coefficient. The Cronbach’s alpha coefficient for internal consistency of the items from previous study was 0. 89 (Wutke, & Dennis, 2006). The sample size was determined by using Stats ToDo software. The questionnaire will be

administered to primiparous mothers which breastfed their baby after delivered to one week postpartum. Sample size calculation where;

Type I Error (α) = 0. 05 Cronbach's Alpha expected or required = 0. 8 Power (1-β) = 0. 8 Testing Null Hypothesis against Ref Alpha of = 0. 6 Number of items = 14 Delta (δ= (1-Ref Alpha) / (1 – Alpha)) = 2

Sample size required = 38

Instrument

Breastfeeding Self-Efficacy Scale

The confidence level will be measured by using the Breastfeeding Self-Efficacy Scale Short-Form (BSES-SF) which was adapted from a previous study (Dennis, 1999, 2003) with the permission from the author. The BSES-SF is used to assess breastfeeding confidence among mothers intending to breastfeed and has had extensive use and evaluation in a wide variety of settings and populations (Dai & Dennis, 2003; Dennis, 1999; Dennis, 2002; Dennis, 2003; Dennis, Hodnett, Gallop, & Chalmers, 2002). Breastfeeding confidence and self-efficacy have sometimes been used interchangeably in prior literature. For the purposes of this study, the term of " confidence" is preferred. It is a 14 item self-report instrument developed to measure a mother's perceived ability to breastfeed her infant. All items are preceded by the phrase " I can always..." and use a five-point Likert scale for rating from 1 (" not at all confident") to 5 (" always confident"). Items ratings will be summed to produce a total score from 14 to 70, with higher scores indicating higher confidence. The means score points will be used as the cut-off point

between high and low scorers. This instrument is based on the breastfeeding self-efficacy theory, and was synthesized from a longer tool. It has been utilized in women as early as 36 weeks gestation and found to predict breastfeeding continuation up to three months postpartum. Dennis, (2003) who also were using the BSES-SF, found that BSES-SF was a good measurement tool for evaluating breastfeeding self-efficacy. The original BSES-SF (English version), the Cronbach’s alpha coefficient for internal consistency of the items is 0. 89 (Wutke & Dennis, 2006). This questionnaire will take about six to ten minutes to fill up.

Translation process

The Breastfeeding Self-Efficacy Scale Short-Form (BSES-SF) in English version will be translated into national language which is Malay language in order to help the respondent understand the questions. The translation was done by two people who are experts in both English and Malay language using back translation technique. The questionnaire was sent to linguistic department and two bilingual experts were invited in translation process. Back translation is the process of translating a document that has already been translated into a foreign language back to the original language. Thus, through the translation and back-translation process and expert review, minor alterations were made to the instrument to improve clarity and eliminate cultural bias and translation inaccuracies. Then, the content and face validity will be done.

VALIDITY TEST

Content validity

Validityis theabilityof aninstrumenttomeasurewhatit is supposedtomeasure. This questionnaire has been validated by five experts from; obstetrics and gynecology specialist, midwifery, and health education, linguistics and statistician to determine the validity of the content. The experts were invited to review, evaluated and provide feedback on the content of each BSES-SF item. This is to comply with the recommendations Sekaran which is to ensure reliability, the question shall be given to the experts made the correction and evaluation called Expert Judgment Validity (Sekaran, 2005). Based on this evaluation, five modifications were made: (1) the item " I can always motivate myself to breastfeed successfully" was changed to " I can always motivate myself to do well at breastfeeding," (2) the item " I can always breastfeed my baby without using formula as a supplement" was changed to " I can exclusively breastfed my baby without using formula as a supplement to at least 4 months," (3) the item " I can always refrain from bottle feeding for the first 4 weeks" was changed to " I can refrain from exclusively bottle feeding for the first month," (4) the item " I can always feed my baby with breast milk only" was changed to " I can always feed my baby with breast milk only for at least 4 months," and (5) the item " I can always keep feeling that I really want to breastfeed my baby for at least 6 weeks" was changed to " I can always keep feeling that I really want to breastfeed my baby for at least one and a half months." The modified instrument was presented to the experts a final time and after several discussions, all items were considered relevant to Malay speaking mothers.

Face validity

Finally, the translated BSES-SF was administered to five respondents which are primiparous mothers who have breastfeed their baby and hospitalized at postnatal ward during the first to three days postpartum. This recruitment as a part of this study to identify the problems in the translated questionnaire. This method requires researchers to ask participants to rephrase the items using their own words immediately after answering the items. Respondent's suggestions for the improvement of the questions were noted and were being analyzed and discussed with the experts. This allows the researchers to assess whether respondents understand the items totally as well as to evaluate the comprehension and readability of the Malay BSES-SF version.

PILOT TEST ANDRELIABILITY TEST

Results from content and face validity actually improve the items in the questionnaire to be applied in this study. After making improvements, the questionnaire was done a pilot study on 30 respondents at postnatal ward, Hospital USM to test the reliability of the questionnaire.

RESULT

Internal Consistency

Reliability of instrument refers to the extent to which an instrument's score is consistent or stable (Ananda, 2007). Reliability is obtained when the same result each time the test is made. Thus, the reliability of the instrument can be defined as a standard of measurement that is free from error in which they give consistent answers. According to Sekaran (2005), the closer to 1. 0 Coefficient of reliability, the reliability is higher. Generally, reliability of less

than 0. 60 can be defined reliability is low, in the range of 0. 70 if it is acceptable, while above 0. 80 indicates higher reliability. Therefore, the questionnaire in this study can be categorized as good and reliable for use in this study. The IBM SPSS Statistics Version 21 was used for statistical analysis. Results of a pilot study of 30 respondents are as follows:

The internal consistency of the translated BSES-SF was evaluated by considering the following: (1) item summary statistics; (2) inter- item correlations; (3) corrected item-total correlations; (4) Cronbach's alpha coefficient; and (5) the alpha estimate when an item was deleted (Strickland, 1996). Poorly functioning items were defined as (1) items that when deleted increased the alpha coefficient by more than 0. 10 or (2) items that had a corrected item-total correlation less than 0. 30. Cronbach's alpha for the translated BSES-SF was 0. 87; there was no increase of more than 0. 10 in Cronbach's alpha with removal of any item. The Cronbach's alpha estimated when an item was dropped from the scale ranged from . 86 to . 87. All corrected item-total correlations were positive , the lowest item-total correlation was 0. 37 and the highest was 0. 73, with 92. 8 %, falling within the recommended range of 0. 30–0. 70. The mean BSES-SF score was 56. 74 (SD _7. 01). The over all item mean was 4. 05, ranging from 3. 74 to 4. 39. The item variance mean was 0. 65, ranging from 0. 35 to 0. 96.

Table 1 *:* Reliability Statistics Breastfeeding Self-Efficacy Scale Short-Form (BSES-SF)

Cronbach's Alpha	N of

Items

. 877 14

Table 2 *:*

Item	Corrected Item-Total Correlation	Cronbach' if Item De
Saya sentiasa dapat memastikan bayi saya mendapat susu yang mencukupi	. 376	. 876
Saya sentiasa dapat mengatasi masalah penyusuan sepertimana tugasan mencabar yang lain	. 586	. 867
Saya sentiasa dapat memberikan susu ibu kepada bayi saya tanpa menggunakan susu formula sebagai makanan tambahan	. 500	. 871
Saya sentiasa boleh memastikan mulut bayi saya sentiasa melekap dengan betul bagi keseluruhan tempoh penyusuan	. 543	. 868
Saya sentiasa dapat menguruskan situasi penyusuan dengan rasa puas hati	. 595	. 866
Saya sentiasa mampu menyusu bayi walaupun bayi saya sedang menangis	. 729	. 859

Saya sentiasa mempunyai keinginan untuk menyusukan bayi	. 446	. 873
Saya sentiasa dapat menyusu bayi dengan selesa walaupun dengan kehadiran ahli keluarga yang lain	. 472	. 872
Saya sentiasa berpuas hati dengan pengalaman penyusuan saya	. 565	. 868
Saya sentiasa dapat menerima hakikat bahawa penyusuan anak memang mengambil masa yang lama	. 453	. 873
Saya sentiasa dapat menghabiskan penyusuan bayi dengan satu payu dara sebelum beralih kepada payudara yang satu lagi	. 531	. 869
Saya sentiasa dapat menyusukan bayi setiap kali waktu penyusuan	. 605	. 865
Saya sentiasa memenuhi keinginan bayi saya apabila dia ingin menyusu	. 586	. 866
Saya sentiasa tahu apabila bayi saya sudah habis menyusu	. 640	. 864

Table 3 *:*

	Mean	Minimu	Maximu	Rang	Maximum /	Varianc

		m	m	e	Minimum	e
Item Means	4. 053	3. 737	4. 395	. 658	1. 176	. 030
Item Variances	. 652	. 353	. 956	. 602	2. 704	. 027
Inter-Item Correlations	. 340	-. 018	. 683	. 701	-38. 161	. 020

Table 4 *:*

Statistics for Scale	N	Mean	Varianc e	SD
	14	56. 74	49. 064	7. 005

Procedures

After university and hospital ethics was obtained, eligible mothers were recruited in hospital from the postnatal ward by a researcher. Potential participants were identified by the researcher at 1 to 3 days postpartum from the registry book in the postnatal ward. The eligible participants who are willing to participate in this study has been approached, they will be given further explanation clearly to understand the aims of the study. Once the participant expressed an interest and willingness to participate, they will be provided with inform consent, which is must be documented and signed. After that, finalize translated BSES-SF Malay questionnaire was administered

to the participants as soon as possible after respondent agreed and volunteer to answer the questions. The respondents were given self-administered questionnaires and the researcher will be waiting until respondents completed answer the questions and the completed answer questionnaire were collected back at the same time after the respondent has finished answering all the questions.

Limitation of the study

It is a pilot study, so the small number of samples is the most limitation of the study.

DISCUSSION

Psychometrics properties

The results from this methodological study are consistent with the original study (Dennis & Faux, 1999) and provide evidence that the translated BSES is a reliable measure of BSE among a representative sample of Malay women in Kota Bharu, Kelantan. The Cronbach’s a was . 88, exceeding the recommended a for established instruments (Nunnally & Bernstein, 1994).

CONCLUSION

The BSES-SF Malay version is reliable and valid for assessing mothers’ breastfeeding confidence.

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