

ORIGINAL ARTICLE

**PSYCHOMETRIC PROPERTIES OF THE MALAY
VERSION OF THE INVENTORY OF SOCIALLY
SUPPORTIVE BEHAVIOUR (ISSB)**

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Abstract

Objective: This study validates The Malay Version of The Inventory of Socially Supportive Behaviour. **Methods:** The psychometric properties of the ISSB-Malay Version were examined on sixty-eight women who were Malay native speakers and diagnosed with breast cancer. Respondents answered the questionnaire at three weeks and ten weeks following surgery for breast cancer. **Results:** The Malay Version of ISSB showed excellent internal consistency (Cronbach's $\alpha=0.96$). Test-retest Intraclass Correlation Coefficient (ICC) was 0.03. Small mean differences were observed at test-retest measurement with Effect Size Index 0.18. **Conclusion:** The Malay Version of the ISSB could be an appropriate tool to measure the supportive behavior of the Malaysian population. *ASEAN Journal of Psychiatry, Vol. 15 (1): January – June 2014: 23-29.*

Keywords: Social Support, Malay, Inventory of Socially Supportive Behaviour, Validation, Psychometry

Introduction

Social support is an important dimension in one's adaptation to chronic diseases. In relation to this, many concepts surrounding 'interpersonal relationship' (termed as a relationship which is reciprocally shared by persons) such as 'informal helping' has been brought forward by some other researchers to explain the relationship interaction that happens interpersonally. For example, psychologist describes the concept of 'informal helping' as an interaction in which one partner tries to help the other with an external problem; whereas, internal problem is considered more as a conflict [1]. In addition, it was suggested that the interactions, pertaining to internal problems, are better considered as conflicts rather than helping [1]. From other behavioral scientist's perspective,

they replaced a more precise but unwieldy term, 'help-intended communication' which refers to a dyadic communication where one party is experiencing emotional distress and the other is attempting to alleviate that feeling of distress. This concept has been intensively used in breast cancer studies and other diseases as well [2 - 5].

Related to this concept of support, Barrera and Ainlay [6] introduced one scale namely the Inventory of Socially Supportive Behaviour (ISSB) which was designed to assess how often individuals received various forms of assistance during the preceding month [6]. This ISSB consists of a 40-item self-report measure in which subjects were asked to rate the frequency of each item on the five-point Likert scales, ranging from "not at all" (score zero) to "about every day" (score five). A

higher score indicates a better supportive behaviour received by the respondent. The reliability of the scale had been consistently above 0.9 [7-11]. A large body of research in the last decade has given their attention to explain the processes of natural helping, thus, this area of study is given particular attention. In addition, empirical literature on social support have appeared in numerous disciplines - psychology, sociology, sociology, public health and medicine, in which social support was said to be an important role in the prevention of psychological disorders [12].

The appropriateness of this scale to be used for Malaysian population is questionable due to the unavailability of the scale in Malay version. Thus, this study was implemented to evaluate the psychometric properties of the translated version (i.e. Malay Version) of the Inventory of Socially Supportive Behaviour (ISSB) that was studied among Malay native speakers of women who were diagnosed with breast cancer.

Methods

Women diagnosed with breast cancer were sampled from three main hospitals in the Klang Valley, the capital area of Malaysia - University of Malaya Medical Centre (UMMC), Kuala Lumpur General Hospital (KLGH) and Universiti Kebangsaan Malaysia Medical Centre (UKMMC) (see Figure 1). These hospitals were chosen because they are major hospitals in Klang Valley, Malaysia that have capacity for cancer treatment such as chemotherapy unit. The recruitment of the women with breast cancer were based on the following criteria i.e. new cases of breast cancer, had undergone breast cancer surgery, were planned for adjuvant chemotherapy and had no current major diseases or chronic psychiatric condition. Ethical approval was obtained from the Ministry of Health Malaysia and from the hospitals involved in this study.

The permission for using and translating the ISSB from its original language (English) into Malay language was obtained from Barrera & Ainlay [6]. The 'backwards translation' was used to ensure the meaning equivalence between the original and translated version [13]. Based on this technique, two Malay native speakers (who were also fluent in

English) translated the original version (English) into Malay language. Discussion with the translators was made to decide any difficulties in understanding or ambiguous meaning of certain words or sentences. The same process was done with another two Malay native speakers. Discussion was made with the translators before the final version could be piloted. The backward translation was re-implemented for the controversial words or sentences reported. The final Malay Version of ISSB was distributed to sixty eight women who were diagnosed with breast cancer and planned for chemotherapy. They answered the scale themselves in privacy in the clinic room.

Their names were retrieved from the breast surgeon and oncologist who had the list of new patients with breast cancer planned for chemotherapy. Patients' medical records were also referred to in order to get more information on the patients' medical background. Signatures were sought from all women who participated, prior to the commencement of the study. The consent form was enclosed together with the patient's information sheets, based on the standards format set by the Ethical Committee of the University of Malaya Medical Centre.

The test-retest method was performed at two points of evaluation for the psychometric analyses. These were at approximately two to three weeks following surgery (prior to chemotherapy) and at approximately ten weeks following surgery (during chemotherapy). Socio-medical data was also documented such as age, ethnicity, education, occupation, monthly income, duration of marriage, type of surgery, time since diagnosis and stage of breast cancer.

Five questions were omitted from the original ISSB, as they were not relevant for the marital relationship setting in the current study. These included question 17 (Gave you over USD25), question 22 (Gave you under USD25), question 34 (Loaned you over USD25), question 38 (Provided you with a place to stay) and question 40 (Loaned you under USD25). All the data were analyzed by using the Statistical Package of Social Science (SPSS) Version. Various analyses for the justification of the reliability and validity of

the scale were calculated. The Cronbach's alpha coefficient was presented to interpret the internal consistency [14]. In the meantime, the Intraclass Correlation Coefficient (ICC) which ranges from one (perfectly reliable) to zero was calculated to infer the test-retest reliability [15]. Sensitivity of the scale was assumed by calculating the mean differences between the

evaluations undertaken, by means of a paired *t*-test. The Effect Size Index (ESI) was also accounted [15]. To confirm the validity of the scale, discriminant analysis was performed, which comparing two groups of women namely women who had undergone mastectomy and women who had undergone lumpectomy.

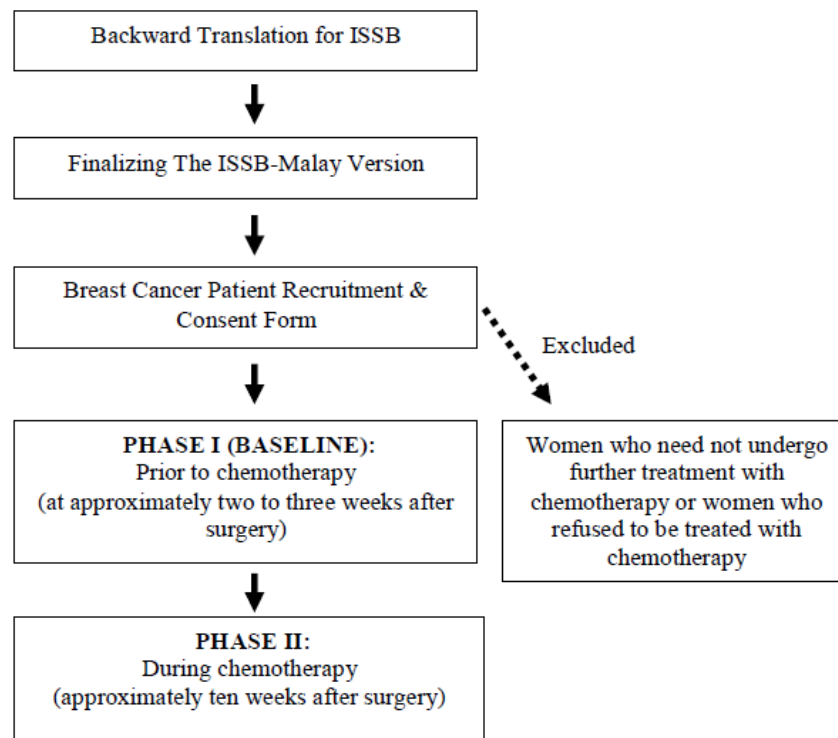


Figure 1: Study Procedure

Results

Table 1 presents the socio-demographic and medical information of the women with breast cancer. The mean age of the women was 46.91 (± 7.65) years old with more than half of them (62%) had regular onset of menstrual cycle. Majority of the women had mastectomy (referring to the removal of entire breast and axillary lymph nodes, whether one side or both side). The remainder were women who had lumpectomy (referring to the removal of the some parts of the breast to

leave the breast cosmetically acceptable while the tumor was removed). Most of the women were diagnosed with stage two (54.4%, $n=37$) and stage three of breast cancer (38.2%; $n=26$). Only a small proportion were diagnosed with stage one (7.4%, $n=5$). The time of diagnosis to their participation in the study was a mean of 52.04 ($sd \pm 2.47$) days. These women had at least a secondary education level (64.7%, $n=44$), with most of the women being unemployed or housewives (58.8%, $n=40$). Their household monthly income were reported to be at least RM3000 or USD854.94 (80.9%, $n=55$).

Table 1. Socio-demographic and Medical Characteristics of the Women with Breast Cancer (N=68)

Parameters	N (%)
Age (Mean \pm SD)	46.91 \pm 7.65 years
Education Levels:	
Primary school	10 (15%)
Lower secondary	20 (29.4%)
Upper secondary	24 (35.3%)
Form 6/Diploma/Certificate	13 (19.1%)
Tertiary	1 (1.5%)
Household Monthly Income:	
Less than RM1000	17 (25.0%)
RM1001 to RM3000	38 (55.9%)
RM3001 to RM5000	6 (8.8%)
More than RM5000	7 (10.3%)
Occupation:	
Professionals	7 (10.3%)
Technicians and associate professionals	5 (7.4%)
Clerical workers	11 (16.2%)
Service workers/shop market sales workers	4 (5.9%)
Housewives	40 (58.8%)
Pensioner	1 (1.5%)
Types of Breast Cancer Surgery:	
Mastectomy	53 (77.9%)
Lumpectomy	15 (22.1%)
Menopausal Status:	
Pre-menopausal	42 (61.8%)
Peri-menopausal	5 (7.4%)
Post-menopausal	21 (30.9%)
Stages of Breast Cancer:	
Stage 1	5 (7.4%)
Stage 2a	21 (30.9%)
Stage 2b	16 (23.5%)
Stage 3a	16 (23.5%)
Stage 3b	7 (10.3%)
Duration of Breast Cancer (Mean \pm SD) (From diagnosis to their participation in the study)	52.04 \pm 2.47 days

Table 2, 3 and 4 showed the various results of analyses of the psychometric properties of the Malay Version of ISSB. The cronbach's alpha was 0.96 (Table 2). In the meantime, the test-retest Intraclass Correlation Coefficient (ICC) was 0.03 (Table 2). Sensitivity of the scale was presented by the mean differences and

Effect Size Index which are 11.51 and 0.18 respectively (Table 3). In term of discriminant analysis, no differences were observed when comparison was made between the mastectomy group and lumpectomy group (Table 4).

Table 2. Internal Consistencies and Intraclass Correlation Coefficient (ICC) of the Inventory of Socially Supportive Behaviour (ISSB) Malay Version

Phase 1 Mean (\pm SD)	Phase 2 Mean (\pm SD)	Cronbach's alpha	Test-retest ICC
112.12 (\pm 33.21)	123.25 (\pm 30.12)	0.96	0.03

Phase 1 = Two weeks following surgery; *Phase 2* = Ten weeks following surgery
 (ICC: Intraclass Correlation Coefficient; SD: Standard Deviation)

Table 3. Sensitivity of the Inventory of Socially Supportive Behavior (ISSB) Malay Version

Phase 1 Mean (\pm SD)	Phase 2 Mean (\pm SD)	Mean Differences	Effect Size Index	<i>p</i> -value
112.12 (\pm 33.21)	123.25 (\pm 30.12)	11.51	0.18	$p < 0.05$

Phase 1 = Two weeks following surgery; *Phase 2* = Ten weeks following surgery
 (ICC: Intraclass Correlation Coefficient; SD: Standard Deviation)

Table 4. The Discriminant Validity of the Inventory of Socially Supportive Behavior (ISSB) Malay Version

Mastectomy Mean (\pm SD)	Lumpectomy Mean (\pm SD)	<i>t</i>	<i>p</i> -value
114.08 (\pm 32.05)	105.20 (\pm 37.39)	0.913	Not Significant

SD: Standard Deviation

Discussion

The internal consistency of the ISSB (Malay Version) was excellent as indicated by the Cronbach's alpha value which is more than 0.75, which is similar to previous studies [7 - 11]. The low test-retest Intraclass Correlation Coefficient (0.03) and small effect size (0.18) were perhaps due to a small sensitivity of the scale to detect any changes. This could probably be due to the treatment situation itself (prior to and during chemotherapy) contributed to the small effect size, and not due to the small sensitivity or undetectable of the scale used in the current study.

For the analysis of discriminant validity, this Malay Version of ISSB showed no differences between the mastectomy and lumpectomy groups. This is almost similar to previous studies who did not find any effect of type of surgery (mastectomy versus lumpectomy) towards sexual satisfaction and marital adjustment [e.g. 16]. We do not argue this

since the dimension of 'help seeking' (as mirrored by 'perceived support'), is typically constructed by the element of relationship quality with others [17]. To date, Yusoff et al. [18] indicated that perceived husband support explained 6% of the variance of breast cancer patient's relationship satisfaction with their husband.

The appropriateness of ISSB-Malay Version to be used for Malaysian population could be accepted with consideration on the limitation of the study. Low Intraclass Correlation Coefficient and Effect Size Index could be due to the short interval of the point of evaluation (i.e. three weeks and ten weeks), as well as the effect of treatment itself. However, the selection of the respondents that was recruited from specific population (i.e. women who diagnosed with breast cancer and were planned for chemotherapy) may possibly give strength to this study in term of the homogeneity of the sample selection. Future research should be undertaken by the

researchers to establish the psychometric properties of this ISSB-Malay Version by commencing the measurement at baseline (two weeks after surgery/prior to chemotherapy) and 6 months afterwards, in order to make a strong justification of the test-retest Intraclass Correlation Coefficient and the sensitivity of the scale.

Face and content validity analyses were not carried out in this study as they need separate qualitative work. For the concurrent analysis, we were unable to perform the analysis since it requires other very similar tools. Thus, we consider this as a limitation of the study. In addition, this study is just a small part form the 'Breast Cancer Psychosocial Study' that was done among breast cancer patients in Klang Valley, Malaysia.

Conclusion

The Malay Version of the ISSB could be an appropriate tool – with cautious, to measure the supportive behavior of the Malaysian population. It is suggested for the future researchers to improve the psychometric properties of the scale, especially with different specific population.

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