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Assessing Sexual Function amongst Hong Kong Chinese Patients with Gynecological Cancer: Translation and Validation of the Sexual Function-Vaginal Changes Questionnaire (SVQ)

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OBJECTIVE The study aims to translate the Sexual Function-Vaginal Changes Questionnaire (SVQ) into Chinese and to establish its psychometric properties.
METHODS A Chinese SVQ was developed by the use of the Brislin model of translation. The content validity and semantic equivalence were assessed by an expert panel. The translated version of SVQ was administered to 75 Hong Kong Chinese women who were suffered from gynecological cancer to test its psychometric properties.
RESULTS The Chinese version of SVQ was compared to the original study for factor analysis. Internal consistency, item-to-scale correlations and test-retest reliability were high. The convergent and divergent validities supported the Chinese SVQ to be valid.
CONCLUSION We conclude that the Chinese SVQ appears to be a valid, reliable and feasible disease-specific tool for the assessment of sexual function among Chinese patients.

KEY WORDS: sexual function-vaginal changes questionnaire, sexual function, Hong Kong Chinese.

Introduction

Gynecological cancer is now amongst the ten most common cancers in Hong Kong Chinese women[1]. Sexual function is generally taken to be compromised in gynecological cancer patients. However, both care and assessment in this area tend to be neglected in Hong Kong. In fact, there is no validated Chinese version of a disease-specific sexual function instrument suitable for clinical use with such patients. The Sexual Function-Vaginal Changes Questionnaire (SVQ)[2] is a short self-assessment questionnaire newly developed to assess sexual and vaginal problems in gynecological cancer patients. The original assessment found the English version of SVQ to be a valid and reliable instrument[2].

This study aims to translate the SVQ into Chinese and to establish its psychometric properties among Hong Kong Chinese women following treatment for gynecological cancer. The completion time, understanding and acceptance of the questionnaire were also assessed.

Materials and Methods

The Brislin model of translation was used as a guide to translate the SVQ into Chinese[2-3]. First, the SVQ was translated by the first author, a bilingual native registered nurse. Then, the Chinese version was checked by a monolingual reviewer for incomprehensible or ambiguous wordings. Backward translation of the Chinese SVQ was then carried out by another bilingual translator, who was 'blinded' to the original English version. Finally, the back-translated version was compared with the original English for linguistic congruence and cultural relevance. Items with apparent discrepancies were amended until a maximum equivalent version was achieved.

The content validity and semantic equivalence of the Chinese SVQ were assessed by 6 healthcare professionals who specialized in oncology. These panel members were asked to rate the SVQ content independently for its relevance and appropriateness to Chinese culture and society, using a content validity index (CVI) four-point rating scale (1 = not relevant/appropriate; 2 = somewhat relevant/appropriate; 3 = quite relevant/appropriate; 4 = very relevant/appropriate). All items in the Chinese SVQ had a content validity index of 1.0, except for 2 items with 0.83. As a result, the Chinese SVQ was considered a semantically equivalent instrument with content validity.

Two gynecological cancer patients were recruited from the gynecology ward of a teaching hospital in Hong Kong. They were asked to review the Chinese version of SVQ and comment on the relevance, importance, clarity and comprehensiveness of the content. They were also asked to complete the whole scale and then comment on its ease of completion. Both participants reported that the terms in the Chinese SVQ were easily understandable without incomprehensiveness or ambiguous wording, and that the length of the questionnaire was appropriate. No modifications were, therefore, made to the Chinese SVQ.

Results

Sample

A convenience sample of 75 Hong Kong Chinese women were recruited from the gynecological ward of a teaching hospital in Hong Kong during the period July 2005 to March 2006, it included patients with cervical (n = 29), uterine (n = 22) or ovarian cancer (n = 19), or a combination of 2 or 3 types of gynecological cancer (n = 5). The age of the women ranged from 31 to over 60 years. Most were in the 41 to 50 age group. Although 82.7% of the subjects were married, only 46.7% were sexually active. Most subjects had stage I cancer (61.3%). The major type of treatment received was surgery alone (46.7%), followed by surgery plus chemotherapy (20%) or surgery plus radiotherapy (12%). Fifty-six percent of the subjects had completed treatment less than 6 months before. Most had undergone total hysterectomy (78.7%).

Factor analysis

Jensen et al.[2] suggested that the items of the SVQ clustered into 5 subscales. The intimacy (IN), global sexual satisfaction (GS) and sexual interest (SI) scales were answered by all patients irrespective of partner availability and sexual activity. The other 2 scales, vaginal changes (VC) and sexual function (SF) were only answered by sexually active patients[2]. Therefore, factor analysis was performed in 2 datasets: one for all patients and the other for those who are sexually active.

The dataset of items applicable to all patients was found to be inappropriate for factor analysis because the Kaiser-Meyer-Olkin (KMO) value was less than 0.6. However, factor analysis supported the items applicable to sexually active respondents, clustered together into 2 hypothesized scales: vaginal changes (VC) and sexual function (SF). This supported the results of the original study.

Internal consistency

Internal consistency was high for the overall scale of the Chinese SVQ with a Cronbach's alpha of 0.87, indicating high reliability. Cronbach's' alpha for the subscales ranged from 0.64 (GS) to 0.88 (VC).

Item-to-scale correlations

All items correlated significantly higher with their own scales than with others, with item-to-scale correlation coefficients ranging from 0.59 to 0.94, significant at the 0.01 level (Table 1 and 2).

Test-retest reliability

Test-retest reliability with an interval of 3 months was assessed for the first 50 recruited subjects in the study. The 3-month interval was used because this period of time was considered adequate for subjects to forget the questionnaire content. Thus, the stability of the scale could be measured[4]. The test-retest reliability of the intimacy scale (IN) was 0.76, of the global sexual satisfaction scale (GS) 0.75, of the sexual interest scale (SI) 0.83, of the vaginal changes scale (VC) 0.87 and of the sexual function scale (SF) was 0.71.

Convergent and divergent validities

Convergent validity of the Chinese SVQ was tested by correlating its hypothetical scales scores with those on the Chinese version of the sex relations subscale of Psychosocial Adjustment to Illness Scale Self-Report (PAIS-SR)[5]. Pearson product-moment correlation found medium to strong correlations among these subscales, indicating that the Chinese SVQ measured the same or a similar construct as the sex relations subscale of PAIS-SR (Table 3).

Table 1. Pearson correlation coefficients between items applicable for all patients and the hypothesized scales in the Chinese SVQ.

	Item-scale correlations		
Items*	IN	GS	SI
Intimacy scale (IN)			
Interest in intimacy	0.92	-0.20	0.65
Had close physical contact	0.92	-0.14	0.58
Global sexual satisfaction scale (GS)			
Worry about sex life	-0.31	0.80	-0.18
Satisfaction with sex life	-0.07	0.94	0.10
Sexual interest scale (SI)			
Sexual interest	0.67	0.00	

Item-scale correlations in bold have been corrected for overlap.
*Item numbers refer to the number of each item in the questionnaire Appendix A.

Table 2. Pearson correlation coefficients between items applicable for sexually active patients and the hypothesized scales in the Chinese SVQ.

	Item-scale correlations	
Items*	VC	SF
Vaginal changes scale (VC)		
Lubrication	0.77	0.12
Distress, lack of lubrication	0.87	0.26
Dyspareunia	0.89	0.48
Distress, dyspareunia	0.92	0.30
Sexual function scale (SF)		
Able to complete sexual intercourse	0.00	0.59
Orgasm	0.40	0.84
Relaxed after having sex	0.35	0.92

Item-scale correlations in bold have been corrected for overlap.
* Item numbers refer to the number of each item in the questionnaire Appendix A.

Table 3. Correlations among Chinese SVQ, sex relations subscale of PAIS-SR and physical function subscale of SF-36.

Hypothesized scales in the Chinese SVQ	Pearson correlation	
	Sex relations subscale of PAIS-SR	Physical function subscale of SF-36
Intimacy scale (IN)	0.44**	0.25*
Global sexual satisfaction scale (GS)	0.40**	0.13
Sexual interest scale (SI)	0.59**	0.29*
Vaginal changes scale (VC)	0.51**	0.28
Sexual function scale (SF)	0.57**	0.09

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Divergent validity was tested with correlations between the hypothetical scales scores of the Chinese SVQ and the Chinese version of the physical function subscale score of the MOS 36-item Short Form Health Survey (SF-36)[6]. There were small correlations between the intimacy (IN) and sexual interest (SI) scales of the Chinese SVQ and the physical function subscale of SF-36. This result might be due to the correlations between physical function and sexual and intimacy interests being too strong to overshadow the differences in their construct. It is logical to assume that an individual with better physical function would have more interest in close contact and sexual activity. In spite of this, no significant correlation was detected between the other three scales of the Chinese SVQ and SF-36, indicating that the 2 scales assessed different constructs (Table 3).

Feasibility of the scale

The average completion time for the Chinese SVQ was 13.3 ± 6.0 min. Most patients completed the questionnaire without assistance, except for 11 who needed the questionnaire to be read to them because of a low literacy level.

Conclusions

The Chinese version of SVQ was found to be equivalent to the original English SVQ. There was no incomprehensible or ambiguous wording in the Chinese SVQ. No item in the Chinese SVQ was rated by the expert panel as inappropriate. In respect of the validity, with the evidence of the scale's convergent validity and divergent validity, the Chinese SVQ appears to be a valid disease specific tool for the assessment of sexual function in Chinese patients. In respect of its validity, with the evidence of the scale's convergent and divergent validities, the Chinese SVA appears to be a valid disease-specific tool for the assessment of sexual function among Chinese patients. In respect of its reliabilities, high internal consistency, high items-to-scale correlation and test-retest reliability, it appears to be a reliable instrument.

The average time for completing the Chinese version of SVQ was 13 min, and most patients completed it without assistance. Thus, the Chinese SVQ appears to be a valid, reliable and feasible disease-specific tool for the assessment of sexual function among Chinese patients. The results of this study are preliminary, because of its small sample, which may also explain the inconsistent results of the factor analysis. Further study with a larger sample is warranted to validate the findings of the current study.

Relevancy to clinical practice

The Chinese SVQ has the potential to be used as a practical tool in clinical practice and research for assessing sexual function problems in Chinese gynecological cancer patients, to identify those in need of appropriate counseling or other forms of intervention.

Conflict of interest statement

No potential conflicts of interest were disclosed.

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