Verona Service Satisfaction Scale- 32 (VSSS-32): Persian Translation and Cultural Adaptation

Ali Akbar Nejatisafa MD [1,2]
Seyed jafar Mousavinia, MD [1]
Yasamin Mottaghipour, MD [3]
Vandad Sharifi, MD [1,2]
Homayun Amini, MD [1,2]
Mohammad reza Mohammadi, MD [1,2]
Abbas Nazemian MD [1]
Naista Zhand, MD [1]
Varasteh Vakili Zarch, MD [1]
Payam Sobhe-Bidari, MD [1]

1 Psychiatry & Psychology Research Center, Tehran University of Medical Sciences, Tehran, Iran
2 Department of psychiatry, Tehran University of Medical Sciences, Tehran, Iran
3 Department of Psychiatry, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Corresponding author:
Ali-Akbar Nejatisafa,
Assistant Professor of Psychiatry,
Psychiatry & Psychology
ResearchCenter, Tehran
University of Medical Sciences.
Roozbeh Hospital, South Kargar
Ave. Tehran, 13337, Iran .
Email: nejatisafa@tums.ac.ir
TelFax: +98-21-55419113

Objective: To translate Verona Service Satisfaction Scale-32 (VSSS-32) to Persian, to adapt it for Iranian culture and to investigate the performance characteristics of the Persian version intended to measure patient satisfaction with psychiatric care.
Method: The VSSS-32 was translated to Persian using an elaborated methodology according to World Health Organization guideline. In addition, understandability and feasibility, of the measure were investigated in 121 patients and 74 relatives.
Results : Few changes or few adaptations were made to bring about cross-cultural comparability. The VSSS-32 questions were generally understandable and acceptable for Iranian patients and relatives. The instrument was feasible to be administered in both participants and interviewers point of view.
Conclusion: The VSSS-32 Persian version appears to be a good cross-culturally equivalent of the original English version. Understandability and applicability of the instrument was good.

Key Words:
Cross-cultural comparison, Patient satisfaction, Translation, Iran

Satisfaction with psychiatric services is an important goal for providers and, thus, its measurement is relevant to those who assess mental health services. The relationship between satisfaction and effectiveness and on the other hand association between dissatisfaction and discontinuation with care was shown in previous studies (1). Research in this area has been hampered by the lack of instruments on which sufficient psychometric data are available, and which cover a multifaceted construct like satisfaction (2). This leads to a lack of knowledge about causes of dissatisfaction or to high satisfaction ratings despite other evidence to the contrary (3).

The Verona Service Satisfaction Scale (VSSS) is a multi-dimensional questionnaire developed to address these methodological concerns. It has two modules, one for patients and the other for relatives. The acceptability, sensitivity, content validity and test-retest reliability of the original version of the VSSS have already been demonstrated in the Italian community care context in which the instrument was developed (4,

5). The English version has been tested in various studies (6-10). An EU-version has been produced in Various languages besides Italian (English, Danish, Dutch and Spanish) and tested in the framework of the Epsilon study on samples of patients suffering from schizophrenia (11). The instrument was considered acceptable in all countries and only minor modifications to the wording and structure of the items were requested.

Translating an instrument into another language is a formidable task and is subject to cultural and linguistic variations. Methodological flaws created by instrument translation errors directly threaten the validity of cross-cultural research. In a review of 47 articles describing instruments that were translated , it has been shown that "the quality of processes used for instrument translation varies widely". Documenting the methods used in the translation process and testing equivalence is a crucial activity (12). The translation should follow meticulous process so that cross-cultural issues addressed adequately (13).

The purpose of this article is to describe the procedure used for translation and cultural adaptation of Verona Service Satisfaction Scale-32 (VSSS-32), for Iranian patients.

Materials and Method

We used a modified type of Brislin's model (14) of translation that has been suggested by World Health Organization for translation and cultural adaptation of instruments (15). The overall translation model can be described as a cycle of five steps as shown in Figure 1.

Step 1: Translation
Two independent bilingual translators, competent in both English and Persian, translated the source VSSS-32 from English into Persian. They reached consensus on the translation of words, phrases and items.

Step 2: Cultural appropriateness testing
A review team of bilingual mental health professionals was invited for an expert panel. The team consisted of three psychiatrist, a psychologist and two translators. In the panel, Persian translation was evaluated and compared with the English one to select more culturally and linguistically appropriate words and phrases. After discussing the comments necessary revisions were made.

Step 3: Pilot testing in the target population and revision
In the third step, a pilot study was conducted in a group of patients and relatives. This pilot study had two objectives: first, to evaluate the two different method of administration (self report versus interview); second, to identify incomprehensible and ambiguous words and phrases in the VSSS-32 Persian version.

A convenience sample of 20 patients (10 patients with schizophrenia and 10 patients with bipolar disorder) and 20 relatives with different levels of education were participated in the pilot study. After giving the informed consent they were asked to review the questionnaire and to mark words and items that were incomprehensible or vague. Half of the participants completed the instrument as a self report measure and another half, participated in an interview by a research assistant in order to complete the instrument.

The time to complete both methods and the number of questions that were completed thoroughly were recorded.

Step 4: Blind Back-translation
In this step, the reviewed Persian version of VSSS-32 was back-translated by another bilingual translator who was unfamiliar with the original English version.

This step assured that the meaning of Persian version was reflected in the back-translation version. The review team then rechecked, discussed, and revised the items in the back-translated version that did not adequately represent the meaning of the original VSSS-32.
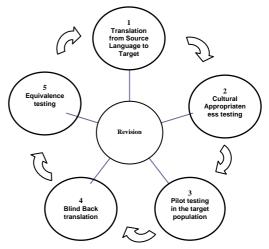
Step 5: Equivalence testing
Translation and content equivalence was ascertained by an expert panel whose members were asked to review the 32 items of VSSS original and back-translated version. The expert group consisted of 5 psychiatrists, 2 psychologists and 3 general physicians. They were asked to review and rate the comparability of each item using a four-point rating scale ranging from 1 (not at all comparable) to 4 (very comparable). The content equivalence of each item was calculated based on the experts' ratings. Adequacy of translation was determined when the score of each item was "3" or "4", otherwise the item considered problematic.

The understandability, acceptability and feasibility of application of the Persian version of VSSS-32 was evaluated in a sample of patients (patients with schizophrenia and bipolar disorder) and their relatives who participated in the study of psychometric properties of the instrument. The complete detail of this ongoing project will be published in the future. One hundred and twenty one patients and 74 relatives were evaluated. Participants were selected from inpatient, outpatient and home visit services of Roozbeh Psychiatric Hospital in Tehran. Participants had at least one year contact with the services. Two questionnaires were developed to measure understandability, acceptability and feasibility of application in participants and interviewers, separately. The VSSS-32 Persian version was administered by four interviewers (two residents in psychiatry, one social worker and one general physician).

Results

The Persian version of VSSS-32 was developed in complete conformance with the translation process mentioned. Each step of the process provided additional information and marked linguistic or cultural discrepancies. To overcome translational difficulties, priority was given to maintaining the content meaning and clarity of the Persian version rather than linguistic or grammatical structure of English version.

Figure1. Five steps of translation of the instrument

Table 1. Comparison of two methods of administration of VSSS-32 Persian version in a sample of Iranian patients and their relatives

Indicator of performance	patients		relatives	
	Interview	Self Report	Interview	*Self Report*
	n=10	n=10	n=10	*n=10*
Time (Minute) (Mean± SD)	25 ± 6	22 ± 5	22 ± 7	*19 ± 6*
Number of thoroughly Completed Questionnaires(%)	8 (80%)	4 (40%)	9 (90%)	*6 (60%)*
Rate of ambiguity in items according to participants' point of view	Low	High	Low	High

Table2. Understandability and applicability of VSSS-32 Persian version from the participants' and interviewers' point of view

Group	questions	Modules	Response rate	Likert Scale[†]				
				1	2	3	4	5
Participants	How much was difficult or easy for you to complete this questionnaire?	Patients	107(88.4%)	2(1.9%)	2(1.9%)	34(31.7%)	53(49.5%)	16(15%)
		Relatives	60(81.1%)	0	2(3.3%)	20(33.3%)	29(48.3%)	9(15%)
Interviewers	How much was difficult or easy for you the administration of this questionnaire?	Patients	105(86.8%)	0	6(5.7%)	27(25.7%)	59(56.2%)	18(12.4%)
		Relatives	58(78.4%)	0	1(1.7%)	11(18.9%)	34(62%)	12(20%)

Group	questions	Modules	Response rate	Likert Scale[‡]				
				1	2	3	4	5
Interviewers	How did you assessed the performance of the participant in completing this questionnaire	Patients	105(86.8%)	2(1.9%)	7(6.2%)	38(36.2%)	47(44.8%)	11(10.5%)
		Relatives	58(78.4%)	0	3(5.2%)	16(27.6%)	29(50%)	10(17.2%)

† 1= very difficult 2= difficult 3= moderate 4= easy 5= very easy
‡ 1= very bad   2= bad   3= moderate 4= good 5= very good

Some example of these difficulties and the solution are provided here:

1) Because there was not any recognized community mental health center in Iran at the time of this study, the expert panel decided to replace the term "community mental health services" with a more general term "services of this center" that covers all kind of mental health services provided by by centers like hospitals .

2) In the rating scale of all items, the word "terrible" have more negative connotation in Persian than English language, so the experts decided to replace it with a the word "completely dissatisfied". For the purpose of maintaining homogeneity of rating scale which facilitates response to items, the word "excellent" also substituted with "completely satisfied".

3) The participants had difficulties in understanding the phrase "during the last year" that is literally translated to " dar yak sale gozashteh". They interpreted it as "last year in such day", so it was replaced by the phrase "az parsal ta hala" which means "since the last year ".

4) To clarify some items expert group decided to provide further examples or explanation for items 2, 7, 24, 29 and 30 in the parenthesis, but the items were not changed.

5) There was not any appropriate equivalent for the terms "sheltered work" in Persian. One explanation may be the absence of such services in Iran. Therefore the expert panel decided to replace it with more recognized term "kar darmani" which means "occupational therapy".

6) In contrary to English, the position of verbs in Persian is at the end of sentences. This grammatical difference may create difficulties for the patients in understanding long, multi-phrased sentences. Some patients could not pursue and understand these sentences. Therefore, it was decided to break down long sentences into a few simple sentences.

Table 3. Items that had ambiguity for the participants and the number of participants who had questions about them

Participants	Items	Number of participants who had questions about items
	16	7
	6,20	6
Patients	12	4
	7,13,26	2
	10,14,15,17,18,19,22,23	1
	15,20	3
Relatives	12	2
	7,16,22,31	1

Comparison of two methods of administration of the instrument has shown that in interview method participants had better performance than self -report method. In addition the time that was needed for completing the questionnaire was not significantly different (Table 1).

The results of assessment of understandability and applicability are shown in Table 2. Twenty four patients (19.8%) and 10 relatives (percentage?) had ambiguity in understanding and asked questions about items. Table 3 shows the ambiguous items and the number of participants who had questions about them. The Persian version of VSSS-32 had good understandability and easy applicability from the participants and interviewers point of view.

Discussion

The VSSS-32 was translated into Persian and tested for the understandability and applicability on a sample of Iranian patients and their relatives. The processes of translation and back-translation were performed strictly according to standardized guidelines and some difficulties were encountered. Most of these difficulties originated from lack of a recognized community mental health service in Iran. At the consensus meeting, some questions needed transcultural adaptation based on unanimous agreement.

The result of this study shows that it is better to administer VSSS-32 as an interview rather than a self report measure especially in poorly educated population.

The VSSS-32 was clearly understood and easily applicable in the patients and their relatives. The results show that the VSSS-32 Persian version could be regarded as an acceptable instrument with regard to cross-cultural equivalence and feasibility of application. The results still need to be supplemented by an analysis of reliability, validity and factorial

structure of Persian version of VSSS-32 that will be provided in our future report.

International and national comparisons of satisfaction with mental health services will be possible on the basis of this and the future studies.

This study had some limitations. Our patients was recruited from one center. There is different accents and languages in various ethnic groups (e.g. Turkish, Kurdish, Arabic , etc.) in Iran, but we used the official Persian language that use mainly in Capital, Tehran, and central parts of Iran.

Acknowledgements

References

1. Ware JE, Davies-Avery A, Stewart AL. The measurement and meaning of patient satisfaction. *Health Med Care Serv Rev* 1978; 1: 1, 3-15.
2. Henderson C, Hales H, Ruggeri M. Cross-cultural differences in the conceptualisation of patients' satisfaction with psychiatric services--content validity of the English version of the Verona Service Satisfaction Scale. *Soc Psychiatry Psychiatr Epidemiol* 2003; 38: 142-148.
3. Bruster S, Jarman B, Bosanquet N, Weston D, Erens R, Delbanco TL. National survey of hospital patients. *Bmj* 1994; 309: 1542-1546.
4. Ruggeri M, Dall'Agnola R. The development and use of the Verona Expectations for Care Scale (VECS) and the Verona Service Satisfaction Scale (VSSS) for measuring expectations and satisfaction with community-based psychiatric services in patients, relatives and professionals. *Psychol Med* 1993; 23: 511-523.
5. Ruggeri M, Dall'Agnola R, Agostini C, Bisoffi G. Acceptability, sensitivity and content validity of the VECS and VSSS in measuring expectations and satisfaction in psychiatric patients and their relatives. *Soc Psychiatry Psychiatr Epidemiol* 1994; 29: 265-276.
6. Boardman AP, Hodgson RE, Lewis M, Allen K. North Staffordshire Community Beds Study: longitudinal evaluation of psychiatric in-patient units attached to community mental health centres. I: Methods, outcome and patient satisfaction. *Br J Psychiatry* 1999; 175: 70-78.
7. Clarkson P, McCrone P, Sutherby K, Johnson C, Johnson S, Thornicroft G. Outcomes and costs of a community support worker service for the severely mentally ill. *Acta Psychiatr Scand* 1999; 99: 196-206.
8. Leese M, Johnson S, Slade M, Parkman S, Kelly F, Phelan M, et al. User perspective on needs and satisfaction with mental health

services. PRiSM Psychosis Study. 8. *Br J Psychiatry* 1998; 173: 409-415.

9. Merinder LB, Viuff AG, Laugesen HD, Clemmensen K, Misfelt S, Espensen B. Patient and relative education in community psychiatry: a randomized controlled trial regarding its effectiveness. *Soc Psychiatry Psychiatr Epidemiol* 1999; 34: 287-294.

10. Parkman S, Davies S, Leese M, Phelan M, Thornicroft G. Ethnic differences in satisfaction with mental health services among representative people with psychosis in south London: PRiSM study 4. *Br J Psychiatry* 1997; 171: 260-264.

11. Ruggeri M, Lasalvia A, Dall'Agnola R, van Wijngaarden B, Knudsen HC, Leese M, et al. Development, internal consistency and reliability of the Verona Service Satisfaction Scale--European Version. EPSILON Study 7. European Psychiatric Services: Inputs Linked to Outcome Domains and Needs. *Br J Psychiatry Suppl* 2000: s41-48.

12. Maneesriwongul W, Dixon JK. Instrument translation process: a methods review. *J Adv Nurs* 2004; 48: 175-186.

13. Sharifi V. [Translation of instruments for Psychiatric researches: An overview]. *Baztab-e-Danesh* 2007; 5: 48-58.

14. Brislin RW. Back-Translation for Cross-Cultural Research. *J Cross Cult Psychol* 1970; 1: 185-216.

15. Sartorius N, Janca A. Psychiatric assessment instruments developed by the World Health Organization. *Soc Psychiatry Psychiatr Epidemiol* 1996; 31: 55-69.