TRANSLATION AND VALIDATION IN PASHTO (2): BRADFORD SOMATIC INVENTORY

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ABSTRACT

Objective: To translate and validate the Bradford Somatic Inventory (BSI) in Pashto.

Methodology: This study was conducted in Peshawar from July 2015 to January 2016 on 216 participants. The participants consisted of two groups; students (n=111), and patients (n=105) with a mean age of 21.8 ±5.6 years. Three bilingual experts, using forward-backward method, translated BSI from English to Pashto. Both, English and Pashto version of BSI were given to the participants separately. Pashto version of World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) was also given to find out its correlation with BSI. The data were analysed using SPSS v. 20.

Results: The Pashto version of BSI had high discriminant validity as the tool discriminated well between both groups of participants indicating that disability scores were significantly higher in patients as compared to normal participants i.e., students (p value =0.000). The factorial validity of the Pashto version of BSI was found by using exploratory factor analysis, which showed a single factor with an Eigen value of 16.56. BSI had high concurrent validity as the results showed a significant positive correlation between English and Pashto versions of BSI (r =.877; p value =0.000). The Cronbach's alpha value of the Pashto version of BSI was 0.96. There was a positive correlation between somatic symptoms (Pashto version of BSI) and perceived disabilities (WHODAS 2.0, p =.000).

Conclusion: Pashto version of the BSI is a valid and reliable instrument to measure somatic symptoms and can be used in clinical settings as well as in community.

Key Words: Bradford Somatic Inventory, Translation, Validation, Pashto

INTRODUCTION

Somatic symptoms do not always have organic reasons. In many cases, these symptoms are manifested to express intrinsic psychological distresses and suppressed emotions and if these are not dealt early, can have serious clinical warnings in future for the patients as well as for the society[1-3]. These symptoms may suggest the presence of underlying psychological illnesses, commonly anxiety and depression[1,2]. Somatic symptoms without organic reasons greatly influence the clinical picture, affecting both the diagnosis made by the professionals and the patients' view of their health problem[4,5]. In addition, patients exhibiting somatic

symptoms are given symptomatic treatment, without any attempt to explore the underlying organic reasons that at one hand keeps the patient distressed and on the other hand, attention to somatic symptoms by the clinicians' works as a positive reinforcement for the patient that leads not only to the persistence of such symptoms but also addition of more somatic symptoms[1]. Therefore, treatment of such cases poses problems for the physicians and thus increases the disability as well as the burden in terms of time and money, which further increase the utilization and blind consultation of healthcare services and causes greater economic burden[1,2,4,6-8].

A study showed that almost 20% of patients presenting to primary care, during a year's time, had diagnosable psychiatric disorders and more than half of them presented with somatic symptoms with underlying psychological reasons[9]. Similarly, another study described that a sizable number of patients presenting to doctors with somatic symptoms, had symptoms of depression and anxiety[10].

Results of studies conducted on patients with depression, presenting to different treatment settings like primary care, medical outpatient and psychiatric outpatient clinics, respectively, suggest high prevalence of somatic symptoms across these different treatment settings[4]. Studies focused on primary care settings, alone, suggest that more than two-third patients with anxiety and depression have somatic symptoms[11-13]. In clinic-based studies, the prevalence figures are similar or even higher, ranging between 66 and 92%[10,14-18]. An Indian study showed that 100% patients with depression reported with somatic symptoms[19]. Studies have reported that somatic symptoms are more common in developing countries[20]. Patients from the Indian subcontinent, suffering from anxiety or depression, frequently present to the physicians with somatic complaints[21-23].

Research has consistently shown to report a greater tendency of experiencing stress and subsequent somatic complaints for females as compared to males[24-27]. However, a multicenter study in primary care, though reported higher levels in women but concluded that gender had no significant effect on somatic symptoms[28].

Certain instruments such as the present state examination, the standardized assessment of depressive disorders and the self reporting questionnaire have been developed for multicultural use[29]. None of these instruments particularly emphasizes on somatic symptoms, as their range of somatic symptoms is not comprehensive. Therefore, to cater for the need for an inventory of somatic symptoms, Bradford Somatic Inventory (BSI) was developed[30]. It is, perhaps, the only such instrument that was developed in Urdu and English, simultaneously[30]. This self-report instrument consists of 44 items, with two additional items for men only and in-

quires about a wide range of somatic symptoms during the previous month[30]. The responses are measured by three choices i.e., (a) absent, (b) present on less than 15 days during past month and (c) present on more than 15 days during past month. It takes only 5-10 minutes to complete this questionnaire[30]. It has been translated and validated into several languages[31-34].

As patients with psychiatric illnesses, commonly present with somatic symptoms, Pashto version of BSI can assist in diagnosing psychiatric morbidity in patients presenting with predominant somatic symptoms, in the region of Khyber Pakhtunkhwa. Therefore, it is important to validate BSI in Pashto so that it can be used as a useful tool for clinicians and researchers to assess somatic symptoms in patients and community.

METHODOLOGY

This study was conducted, on 216 participants, simultaneously in the psychiatry outpatient departments of teaching hospitals of Peshawar (patients =105) and Peshawar Medical College (students =111) from July 2015 to January 2016, after having ethical approval from the Institutional Review Board of Prime Foundation. Further details of the methodology used, analysis conducted, demographics and limitations have been reported, elsewhere[35].

The correlation between the Pashto version of BSI and World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) Pashto version was explored by using Pearson correlation.

RESULTS

The results of discriminant validity showed that the BSI well discriminated between both groups of participants indicating that scores were significantly higher in patient group of participants as compared to students (p =.000). The detailed results of t-test on both English and Pashto version of BSI are given in table 1.

According to the factorial validity of the scale, the percentage of variance was 37.64 % with an Eigen value of 16.56. Further details and the results of construct validity are given in table 2.

BSI Pashto version has high concurrent validity as we have found significant correlation (r =.877; p value =.000) between English and Pashto versions of BSI.

The internal consistency reliability of the BSI Pashto version was 0.96, which is superb.

The results of correlation between the Pashto version of BSI and Pashto version of WHODAS 2.0 showed a significant positive correlation at p <0.01 level (r= .646). The results are shown in Table 3.

DISCUSSION

This study was done to translate and validate BSI in Pashto. The results showed that Pashto version of BSI is psychometrically reliable and valid inventory to assess somatic symptoms in a variety of clinical settings, similar to the findings reported by the original author[36].

Our study reported that females showed higher scores but this difference was not statistically significant. These findings are in line with other studies that have showed no significant difference in both the gen-

ders[36,37]. However, one study showed contrasting results, where BSI was significantly higher in women as compared to men[38].

Pashto version of BSI showed significant discriminant, construct and concurrent validity and principal component analysis using varimax rotation, single factor, explained 37.64% of total variance. These findings are congruent with Mumford et al[31] who also used the same varimax rotation, yielding 65.8% of the total variance while the study by Kose et al[35] using promax rotation yielded 65.2% of the total variance.

Table 1: Discriminant validity of BSI between two groups (n=216)

Scales	Groups				t-Value	Sig
	Students (n=111)		Patients (n=105)			
	M	SD	M	SD		
English BSI	15.77	15.11	29.71	18.16	-6.144***	.000
Pashto BSI	12.55	14.15	28.16	17.86	-7.140***	.000

Note: *** = p <0.01 level; ** = p <0.05 level

Table 2: Factor Loadings of the Pashto version of BSI in the factor solution obtained through Varimax rotation, item total score correlation and Cronbach's alpha, if item deleted (n=216)

S. No.	BSI Scale	Factor 1	Correlation with Total Score	Cronbach's Alpha if Deleted
1	ITEM 1	**.519**	.508***	.960
2	ITEM 2	**.600**	.571***	.960
3	ITEM 3	**.573**	.552***	.960
4	ITEM 4	**.586**	.559***	.960
5	ITEM 5	**.630**	.610***	.959
6	ITEM 6	**.533**	.511***	.960
7	ITEM 7	**.570**	.547***	.960
8	ITEM 8	**.596**	.581***	.960
9	ITEM 9	**.631**	.605***	.960
10	ITEM 10	**.543**	.529***	.960
11	ITEM 11	**.708**	.681***	.959
12	ITEM 12	**.468**	.441***	.960
13	ITEM 13	**.622**	.599***	.960
14	ITEM 14	**.678**	.655***	.959
15	ITEM 15	**.676**	.647***	.959
16	ITEM 16	**.485**	.463***	.960
17	ITEM 17	**.505**	.494***	.960
18	ITEM 18	**.662**	.633***	.959
19	ITEM 19	**.619**	.598***	.960
20	ITEM 20	**.552**	.531***	.960
21	ITEM 21	**.599**	.578***	.960

22	ITEM 22	**.675**	.650***	.959
23	ITEM 23	**.638**	.605***	.960
24	ITEM 24	**.617**	.601***	.960
25	ITEM 25	**.631**	.604***	.960
26	ITEM 26	**.567**	.556***	.960
27	ITEM 27	**.562**	.545***	.960
28	ITEM 28	**.629**	.614***	.959
29	ITEM 29	**.674**	.650***	.959
30	ITEM 30	**.636**	.615***	.959
31	ITEM 31	**.696**	.663***	.959
32	ITEM 32	**.600**	.570***	.960
33	ITEM 33	**.558**	.533***	.960
34	ITEM 34	**.588**	.559***	.960
35	ITEM 35	**.570**	.540***	.960
36	ITEM 36	**.716**	.684***	.959
37	ITEM 37	**.605**	.586***	.960
38	ITEM 38	**.682**	.651***	.959
39	ITEM 39	**.638**	.616***	.959
40	ITEM 40	**.614**	.578***	.960
41	ITEM 41	**.684**	.653***	.959
42	ITEM 42	**.663**	.639***	.959
43	ITEM 43	**.627**	.597***	.960
44	ITEM 44	**.646**	.615***	.959

Eigen Values =16.56

Percentage of Variance =37.64

Kaiser-Myer-Olkin Measure of sampling Adequacy =.920

Bartlett's Test of Sphericity, Approximate Chi-Square =5666.72***

Bold: greater values of factor loadings in every item (>0.4).

*** p <.001

Table 3: Correlation of Pashto version of BSI with Pashto version of HADS and its sub-scales using Pearson correlation (n=216)

S. No.	Scales	I	II
I	BSI	1	
II	WHODAS2.0	.646** (.000)	1

*** = $p < 0.01$ level; ** = $p < 0.05$ level

The internal consistency reliability of BSI, Pashto version is in line with the reliability of other studies, which have reported the value to be 0.90 and 0.86 respectively[31,35]. The BSI scores showed a significant correlation with WHODAS 2. This means that those who had more somatic symptoms reported more disability. Thus, this could be regarded as additional evidence to suggest that BSI is a valid inventory. Kose et al[31] showed positive and statistically significant correlation with Whiteley index (WI-7), somatosensory amplification scale (SSAS) and the somatization sub-scale of symptom checklist (SCL-90-R).

CONCLUSION

Pashto version of BSI have sound psychometric properties and is a reliable and valid inventory to assess somatic symptoms in patients and in community sample. In addition, Pashto version of BSI will be useful for

future studies, providing help in better understanding of the psychopathology including somatic symptoms, in different populations.

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CONTRIBUTORS

MI conceived the idea, planned the study, and drafted the manuscript. MRS, IK, NRA and US helped acqui¬sition of data and did statistical analysis. FN helped in drafting the manuscript. FN critically re-vised the manuscript and supervised the study. All authors contributed significantly to the submitted manuscript.