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URDU TRANSLATION AND VALIDATION OF 16-ITEM MEASURE TO ASSESS STATE WORRY FEATURES IN PAKISTANI ADOLESCENTS

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Abstract

In this study, the Penn State Worry Questionnaire (PSWQ) has been translated into Urdu and approved for usage with the intended audience. Originally this scale was developed by Meyer et al. (1990). Translation and validation were the study's two main sections. In phase 1, the PSWQ was translated applying a forward and back translation method from English to Urdu. This guaranteed the questionnaire's language and cultural equivalency for Urdu-speaking people. Establishing the PSWQ's Urdu version's psychometric qualities was the primary goal of phase 2. To guarantee the target demographic was represented, a sample of participants (N=500) was chosen from a variety of environments. A preliminary factor analysis was done to investigate the PSWQ's Urdu factor structure. To evaluate the fit of the model various goodness-of-fit indices were used for the data which include the adjusted goodness-of-fit index, goodness-of-fit index, incremental fit index, and comparative fit index. Additionally, RMSEA was computed. The results showed that the PSWQ in Urdu had a required level of reliability (Cronbach's alpha =.78). Confirmatory factor analysis supported the factor structure that is identified in the exploratory factor analysis EFA, this indicated a good fit of the model to the available data

(CFI =.965, goodness-of-fit indices: GFI =.946 IFI =. 965, RMSEA =.057, AGFI =.920). In terms of conclusion, the PSWQ in Urdu had sound psychometric features, demonstrating its validity and reliability for measuring worry in the target demographic. Its excellent translation and validation make it an important tool for clinicians and researchers working with Urdu-speaking people, improving their knowledge of worry-related notions and enabling reliable inspection of worry symptoms.

***Keywords**. Penn State Worry Questionnaire, Translation, Validation, Psychometric features, Urdu version.*

Introduction

According to the American Psychiatric Association (2013) excessive worry is a prevalent psychological condition characterized by ongoing, uncontrollable worries about many numerous components of life. It is linked to mental distress, difficulty addressing problems, a fear of uncertainty and decreased everyday functioning. It is becoming increasingly important to address excessive worry in Pakistan. According to non-clinical surveys, the occurrence of this in the public of United States is approximately 1.6%, with a lifetime prevalence of 5.9% .With a 3:1 ratio, females are more frequently impacted than males, especially in clinical settings. However, there is no appreciable gender difference in lifetime prevalence rates (APA, 2013). The occurrence of excessive worry is also becoming more common. A study done on a sample of 3,500 people living in different cities of Pakistan revealed rate of prevalence of 18% for GAD The research further indicated that teenagers (13 - 19) and young adults (20 - 29) displayed a significantly increased tendency for mental illness, including excessive worry. Being a developing country Pakistan faces numerous challenges about healthcare, education, unemployment, poverty, shortage of resource, and political instability (Hasan et al., 2018).

Prioritising mental health in Pakistan is vital given the rising frequency of excessive concern. To address the growing burden of excessive concern and its accompanying symptoms, early detection, diagnosis, and effective intervention options are crucial. People in Pakistan who are overly worried can vulnerable from increased access to mental health care, awareness campaigns, and evidence-based therapies. However, excessive worry leads to the major characteristic of Generalised Anxiety Disorder (GAD) as stated in the DSM-V TR. One of the most popular schools of thought asserts that worrying thinking is characterised by rehearsing probable bad outcomes and their effects repeatedly. Therefore, worrying would be considered an effort to avoid or be ready for potential unfavourable future events. According to this theory, worry is a cognitive avoiding reaction to perceived threat (Sibrava, 2006). These cognitive avoiding reaction obstructs the emotional process of threat-related information, which keeps a propensity for anxiety alive. The

pathological type of concern in GAD patients has been linked to severe impairments in daily functioning and quality of life. The notion that GAD is characterised by excessive concern has improved diagnosis as well as in some circumstances treatment success (Renna et al., 2018).

People in Pakistan speaks various local languages but official language is Urdu, which is also widely spoken in various states of India. It is a language extensively spoken throughout South Asia and among a lot of people and their children who work in the, Australia, Middle East, European nations and United Kingdom. Therefore, it is quite challenging for people with low levels of education or no education to grasp queries in English. All of the diagnostic tools are, sadly, not available in urdu and other local languages. Therefore, there is a need of a scale to be translated in local languages like Pashto, Punjabi, Sindhi and Saraiki and more particularly Urdu that may be easily used by people from Pakistan's rural and urban areas who are educated, ignorant, or less educated must be translated into Urdu. It removes the language barrier. By removing linguistic barriers, it encourages diversity and makes sure that a larger spectrum of people may contribute their opinions.

The Penn Worry State Questionnaire (PWSQ-16) was translated into Urdu for the Pakistani population and other populations who are able to comprehend Urdu but not English in the present research. In both clinical and non-clinical groups the instrument that is often employed to evaluate pathological worry is the Penn State Worry Questionnaire (PSWQ) by Meyer et al. developed in 1990. It is a 16-item self-report survey called the PSWQ measures the traits of pathological worry. It was created to assess a person's propensity for worry as well as frequency, intensity and the tendency for worry to be generalised rather than few situations. Every item is evaluated from 1 that refers to "not at all typical of me" to 5 "extremely typical of me" on a Likert scale. The remaining five items call for reversal scoring, while eleven are favourably rated. The sum of all item scores yields the final score, with larger values signifying higher degrees of psychological concern. PSWQ indicated good reliability with samples of children, community subjects, old age people with GAD and undergraduates (Carter et al., 2005).

A single factorial solution for the PSWQ scores in individuals with anxiety disorders (n = 436) was identified by Brown et al. (1992). They discovered two factors that contributed 51.1% and 7.7% of the variance, respectively, and had eigen values greater than 1.0. Nevertheless, after looking at a scree plot and noting the 16-item PSWQ's high internal consistency (a =.93). He claimed that the five questions on the reverse-direction PSWQ did not show a distinct construct but contained an element of technique of negative wording. According to Haslett-Stevens et al. (2004) reverse

scored items that are five in number do not constitute a separate anxiety construct hence supporting a unifactorial model. PSWQ 16-item unifactorial solution was kept by Van Rijsoort et al. (1999) in the Dutch version because of high level of internal consistency of the scale (a =.88) and widespread acceptance of the unifactorial solution.although data analysis was supporting two factor model (Factor 1 accounted for reliability of .92 and variance of 39.6% similarly Factor 2 had a lower internal consistency than the first factor and accounted for 13.6% of the variance).

This scale is translated and validated in multiple languages in various states. In his 1995 study, Stöber examined the PSWQ's psychometric characteristics as it was translated into German and given to 224 German community controls and college students . He made the choice to continue using the two-factor explanation, which accounted for variance of 36.5% and 10.7% respectively. It is similar to the factorial solution that Meloni and Gana in 2001 suggested in an Italian PSWQ. Fresco et al. (2002) conducted a CFA, of a sample of undergraduate students' on sample of 288 PSWQ scores. He also kept a two-factor explanation that they called "Worry Engagement," which was made up of 11 items with positive wording (a =.94), and "Absence of Worry," which was made up of 5 items with reverse scores (a =.70).) In a Chinese version similar factorial solutions were reached by Zhong, et al. (2009) when this scale is administered to a Chinese college students (n = 1243) and in 2008 Yilmaz et al. (2008) adapts this scale in Turkish administered on a non-clinical sample.

On the other end, Hopko et al. (2003) used a CFA on an older adult population and came to the conclusion that the data did not match well with existing one and two-factor explanations. Soon after, Carter et al. (2005) executed an EFA on a sample of 181 African-American college-going students from the USA and produced a three-factor solution for the PSWQ scores. These findings have sparked considerable debate on the subject, as has the three-factor approach that was put forth for the Norwegian PSWQ (Pallesen et al., 2006). Numerous research have focused on populations with Spanish as their first language. The PSWQ was administered to 98 bilingual persons with anxiety disorders as a sample in both English and Spanish (Novy et al., 2001). The coefficient alphas for the English and Spanish translations, respectively, were outstanding at.89 and.90. Both versions showed proof of discriminant and convergent validity, no research was done by the authors to assess the factorial explanation of the Spanish version. Nuevo et al. (2002) created a Spanish version of the PSWQ for older adults. The five items which were reversed scored in English were written in positive sense in this version. It has a unifactorial structure and a strong correlation with other anxiety measures. Additionally, this tool shows value of Cronbach's alpha =.95 that is strong internal consistency as well as good

discriminant and convergent validity. In 2009 again Spainish translation of the PSWQ was done for the analysis of the psychometric features by Sandn-Ferrero.

The goal of the present research was to establish the PSWQ-16's psychometric qualities in Pakistani culture and to translate and validate the PSWQ-16 into Urdu. Research tools in Urdu are quite valuable in Pakistan and its neighbouring nations, as well as for studying South Asians who live and work in Europe or any other region where Urdu is the language of choice. Therefore, the current research sought to be translated and validated the PSWQ-16 in Urdu for speakers of Urdu, specifically for those who are incapable to comprehend the scale in English, in accordance with Pakistani culture. Since Urdu being the national language of Pakistan, it is simple for Pakistanis to understand the scale in Urdu, especially for kids and teenagers. The three main objectives of this research are to translate and evolve the PSWQ-16 for use in Urdu, conduct factor analyses of the translated and adapted PSWQ-16 on native populations and demonstrate the PSWQ-16 in order to determine its psychometric properties and assess its concurrent and construct validity.

Method Sample

The writers enlisted the assistance of 500 volunteers from Khyber Pakhtoon khawan. 266 female (53%) participants made up the sample, while 234 male participants made up 47%. Teachers, students, participants in community service organisations, non-governmental (i.e., self-employed) personnel made up the sample's occupational status and jobless people. Ages of participants varied between 20 to 35.

Measure

The PSWQ is a questionnaire consisting of 16 items created to measure excessive and unmanageable concern (Meyer et al., 1990) Respondents answer questions on a scale from 1 to 5, where 1 denotes "not at all typical of me" and 5 denotes "very typical of me." Reverse-scored items are five, and the sum of those values results in a final score that ranges from 16 to 80, with maximum scores suggesting greater levels of worry.

Phase 1: English to Urdu Translation of PSWQ-16

Six multilingual experts consisting of assistant professors (three), professor (one), and lecturers (two) helped translate PSWQ-16 from its original source language of English to its intended target language of Urdu. So that word meanings could not alter, they then asked to translate it word by word. A committee of six psychology experts in clinical field consisting of associate professor (one), assistant professor (one), and lecturers (four) then carefully evaluates each item. The style, grammar, and word choice of each item were carefully evaluated by these specialists to make sure they were as true to the original test as possible. The scale was then translated backward using the Brislin (1976) approach as the following step. The

Urdu elements were to be translated back into English by two Urdu lecturers, two English lecturers, and one psychology lecturer. The PSWQ-16 original English edition was unknown to or unfamiliar to these instructors. Then, a small sample of 20 teenagers with 20 - 25 years of age were given these chosen items to complete. The outcomes showed that the scale items are clear-cut. Each item is logical and unambiguous, and they can all be used in further analysis.

Phase 2: PSWQ-16's Psychometric Characteristics

Cronbach's alpha was utilised to analyse the scale's reliability and establish the psychometric features of the PSWQ-16's Urdu translation. PSWQ-16 factor construct validity was assessed using Analysis of Moment Structure (AMOS 20; CFAs).

Procedure

The subjects were contacted and they provided their written, informed consent. The subjects were given the necessary instructions to complete the questionnaires as completely and honestly as possible. All participants were thanked for participating in the study after the data had been collected. Due to incomplete surveys, some data had to be discarded. After data collection, the proper statistical analyses were used to analyse the data. The principal dimensions of the scale and their factor structure were determined using EFA in SPSS-20. The factors of PSWQ-16 were evaluated using CFA in AMOS-22. The correlation between all scales was determined using the Pearson product-moment correlation coefficient, and the scores of adolescents with state worry and generalized anxiety traits were also correlated.

Results

These are the findings of the current study. The reliability analysis was carried out on PSWQ-16 Reliability levels were satisfactory for PSWQ-16. The total scale's alpha value was.78. Alpha value for factor 1, factor 2 and factor 3 were .90, .80, and Alpha value for and .72 respectively. The scale's primary dimensions and factor structure were determined using EFA. CFA is a common technique for factor analysis CFA was applied to assess the PSWQ-16's factor structure. All observed factors showed acceptable standardised regression values, or values greater than .35, based on the primary criteria (Field, 2009). As a result, the CFA factor loadings for PSWQ-16 dimensions in the current study were greater than .5. The factors are represented graphically below for thorough analysis:

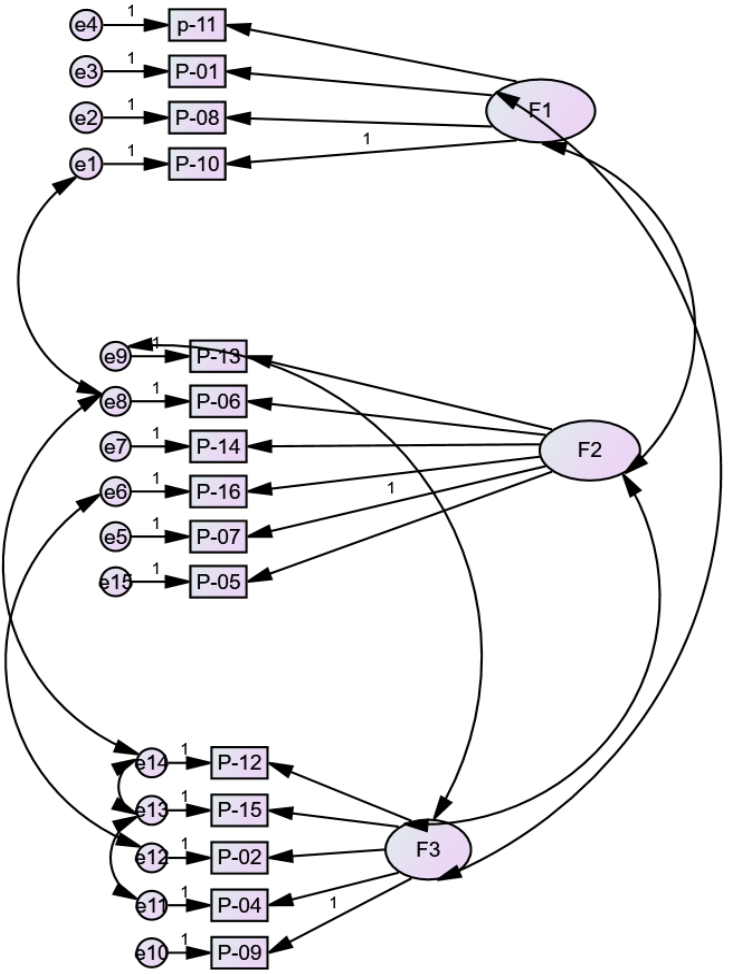

Figure 01: Graphical presentation of two dimensions PWSQ-16 Penn Worry State Questionnaire

Table 1. *Demographic Characters of Sample with PWSQ-16 (N = 500).*

Demographics	*Frequency*	*Percentage*
Age		
18 to 25	*305*	*61*

25 to 35	*195*	*39*
Gender		
Male	*234*	*47*
Female	*266*	*53*
Marital Status		
Unmarried	*89*	*18*
Married	*411*	*82*

Note: PWSQ-16 Penn Worry State Questionnaire

Table 02: *Communalities Values of Extraction Method by using Principal Components Analysis of PWSQ-16 (N = 500).*

Item No.	*Value*
P-01	*.906*
P-02	*.633*
P-03	*.591*
P-04	*.562*
P-05	*.570*
P-06	*.562*
P-07	*.527*
P-08	*.654*
P-09	*.511*
P-10	*.647*
p-11	*.885*
P-12	*.755*
P-13	*.644*
P-14	*.574*
P-15	*.777*
P-16	*.641*

Note: PWSQ-16 Penn Worry State Questionnaire

Table 3.

Factor Loading for Exploratory Factor Analysis by Using Varimax Rotation Analysis of PWSQ-16 (N = 500).

Item No	*Factor 1*	*Factor 2*	*Factor*
p-11	*929*		
P-01	*.929*		

P-08	*.808*			
P-10	*.788*			
P-13		*.749*		
P-06		*.680*		
P-14		*.671*		
P-16		*.628*		
P-07		*.584*		
P-05		*.558*		
P-12				*.852*
P-15				*.843*
P-02				*.643*
P-04				*.547*
P-09		*.587*		
% variance		*7.77*		
Kaiser–Meyer–Olkin measure		*.847*		
Cumulative variance		*64.411*		
Bartlett's test of Sphericity		*3.904< 0.0001*		

Note: PWSQ-16 Penn Worry State Questionnaire

Table 4.

Model Fit Indices for PWSQ-16 (N= 500)

Goodness-of-fit indices							
Models` χ2 (df)	*χ2 /df*	*AGFI*	*GFI*	*CFI*	*RMSEA*		*IFI*
PWSQ-16 (three factors)	*212.199(81)*	*2.620*	*.920*	*.946*	*.965*	*.057*	*965*

Note: PWSQ-16 Penn Worry State Questionnaire ; AGFI = adjusted goodness-of-fit index;CFI = comparative fit index; IFI = incremental fit index GFI = goodness-of-fit index; RMSEA = root mean square error of approximation.

Table 4

The Reliability ,CFA and Validity Results for Final Model of PWSQ-16 (N = 485).

Construct	*items*	*Factor loading*	*Cronbach's alpha (>.7)*	*CR (> 0.6)*	*AVE (>0.5)*

Factor 1	p-11	.929		.90	.87	75
	P-01	.929				
	P-08	.808				
	P-10	788				
Factor 2	P-13	.749				
	P-06	.680		80	83	56
	P-14		.671			
	P-16		.628			
	P-07		.584			
	P-05		.558			
	P-15		.843			
Factor 3	P-02		.643			
	P-04		.547	72	62	63
	P-09		.487			

Note: PWSQ-16 Penn Worry State Questionnaire, CR=composite reliability, AVE = Average variance extracted

***Table 05**: Correlation Among GAD-16 and GAD-07*

Scales	PSWQ	GAD
PSWQ	1	0.78
GAD		1

Note: PWSQ-16 Penn Worry State Questionnaire ; GAD-07 Generalized Anxiety Disorder

Discussion

The aim of the present study was to validate and translate PSWQ-16 in Urdu. The reliability level for the results was satisfactory that is .72. Then reliability analysis was carried out on PSWQ-16. PSWQ-16 demonstrated acceptable levels of reliability. The total scale's alpha value was.78.For Factor 1,2, and 3 alpha value was .90,.80 and.72 respectively. Results of EFA showed a four principal dimensions in factor structure. For evaluation of factors and model fit indices of three PSWQ-16 dimensions, CFA was used. Good composite reliability and convergent validity was

showed for all factors of PSWQ-16.The construct validity of the PSWQ-16 and its three dimensions was demonstrated by the fact that all of the items had a significant positive relationship with total scores. Goodness-of-fit indices were satisfactory in three dimensions of PSWQ-16. The value of χ2 /df is significant according to its accepted standardised value that its value was 2.620. as for as the chi-square test is concerned χ2 /df value is 1 is thought of as perfect; a value of χ2 /df less than 2 is deemed as good; if the value that is obtained is less than 5, considered acceptable; and unacceptable value is 5 or greater than this. The significance level of χ2 /df is associated with the sample size (Marques et al., 2014).The obtained values for AGFI was.920, GFI was .946, IFI was.965 and CFI was.965. These values are all higher than the standardised criterion value of.90. These values range from 0 to 1, according to Schumacher and Lomax in 2010, scaore close to 1 denote a perfect model fit. Table 4 displays values in the.90 to.95 range or higher. The obtained value of RMSEA in the current study was.019, indicating a good model fit of the PSWQ scale. According to Hu & Bentler. (1999), RMSEA offers 95% or 90% confidence that the model is within the appropriate fit range. As a result, the three dimensions of the PSWQ-16 and its three levels of model fit indices – IFI, AGFI, and parsimonious fit – all showed very good values. It was determined that the PSWQ-16 has psychometric properties falling in good and satisfactory range it is a brief, concise, and simple scale to administer. Three factors results in this study one is related to absence of worry and two others contains worry but factor 2 is related to worry about tasks to be accomplished and things in pending while factor 3 is related to general worry about future that is not in bound to any task. This study is supported by Carter et al. (2005) executed an EFA on a sample of 181 African-American college going students from the USA and produced a three-factor solution for the PSWQ scores.

Limitations and Suggestions:

It is suggested similar constructs should also be administered on the different population for authentication divergent validity.

Future researchers should collect sample from all regions of Pakistan with equal proportion so that increase external validity and generalization of the study.

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Ethical Statement:

Written informed consent was obtained from each participant so that it is known whether they are volunteer to take part in the study.

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