

Translation and Validation of Dutch Workaholism Scale

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The aim of the current study was to translate Dutch Workaholism Scale (DUWAS; Schaufeli, Shimazu, & Taris, 2009) in to Urdu language and to establish construct validity of the scale in Pakistani culture. For this purpose study was completed in two phases. In the first phase of the study DUWAS was translated in to Urdu through back translation method following the steps suggested by Sousa and Rojjanasrirat (2011). For the purpose of establishing construct validity of DUWAS, in the second phase of the study data was collected from 317 working men ($n = 194$) and women ($n = 123$) of different occupations including doctors, university teachers, lawyers, bankers, and nurses. Data was collected through convenient sampling from KPK (Peshawar, Mardan), Rawalpindi, and Islamabad. Before collecting the data participants were informed about the purpose of the study and were asked to sign a consent form. After data collection it was analyzed by using Amos for the purpose of establishing construct validity of Urdu version of DUWAS. Results showed that the Urdu version of original 10 item DUWAS didn't show good fit. But after the removal of two items (9 and 10) on the basis of poor squared multiple correlations, model showed good fit. Further reliability analysis through SPSS also showed satisfactory values of Cronbach's alpha. Additionally no gender differences were found as well as no differences among working men and women from different professions were revealed on workaholism. Overall this study helped us to establish a valid and reliable measure for future studies on workaholism in Pakistan using DUWAS.

Keywords. Dutch Workaholism Scale, construct validity, Pakistan

Work is common and essential for the majority of people and offers them numerous positive things. It is the source of income, gives identity to an individual, and fulfills the life of an individual with purpose. Despite the several positive dimensions of work, still, it

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could have negative effects when it becomes over important for people i.e., when people suffers from workaholism (Schaufeli, Taris, & Van Rhenen, 2008). An increase in the prevalence of workaholism is of great concern because of the negative consequences associated with workaholism. However, in Pakistan this inclination of individuals toward overwork is not taken in to account nor the concept of workaholism is understood rather it is taken as a positive phenomenon (Rahman, Idress, Khan, Mehmood, & Aftab, 2014). So there is an unmet need to address the phenomenon in terms of its measurement tool for the purpose of carrying out future research studies.

Workaholism is defined as an uncontrollable desire to work tirelessly at the cost of physical and mental health as well as decreased happiness, relationship problems, and poor performance at social level (Oates as cited in Spence & Robbins, 1992). After the initial advancement in the definition of workaholism, different researchers attempted to define the concept. For Schaufeli et al. (2009) workaholism is a craving just like alcoholism; individuals suffering from workaholism feel an inner compulsion and drive to work hard in order to eliminate the feelings of shame and distress that arises in the absence of working. Such individuals are involved in work not due to the reason that they enjoy it, or they are externally motivated rather they are obsessed with work because of their own internal drive.

In order to further clarify the definition of workaholism Ng, Sorensen, and Feldman (2007) carried out a systematic and thorough review of literature which leads them toward a comprehensive definition of workaholism comprising of three major components: affective component or affect, cognitive component or cognition, and behavioral component or behavior. *Affective component* of workaholism is related with the affect of an individual associated to the work, for example pleasure experienced by an individual while working and the feelings of guilt and anxiety when not working are affective components of workaholism. Yet Ng et al. (2007) described that it is actually the act of working not the nature of work that give pleasure to workaholics. Affective component of workaholism not only constitute enjoyment and pleasure related to work, but it also consists of negative affect related to non working situation.

Another component of workaholism is its *cognitive dimension* which refers to all the cognitive or intellectual processes that compel an individual to work longer than others. According to Scott, Moore, and Miceli (1997) continuous thoughts about work when an individual is not working is the important constituent of workaholism or it is an internal drive or motivation to involve in excess working (Spence & Robbins, 1992). So cognitive dimension involves preoccupation with

work, even one knows that working excessively is not necessary for the task they are involved in. Apart from affective and cognitive involvement of an individual in work there is another dimension which is *behavioral dimension*. It reflects the act of unnecessary work involvement that seriously interferes with one's personal life (Ng et al., 2007).

More recently Schaufeli, Taris, and Bakker (2008) defined workaholism in terms of two basic components which covered all the dimensions proposed previously. These two dimensions are: working excessively and working compulsively. *Working Excessively*. According to Schaufeli et al. (2009) working in excessive manner reflects the behavioral dimension of the workaholism that shows that workaholics are more likely to spend a great amount of time on work related activities and that they work above their economic needs as well the demands of the organizations with which they are affiliated. *Working Compulsively*. It is the cognitive component of the workaholism and is characterized by preoccupation and frequent thinking about work in the absence of doing any work (Schaufeli et al., 2009).

Further Schaufeli et al. (2008) suggested that working long hours because of economic and family problems, societal requirements, or because of one's desire to be successful in career doesn't reflect that an individual is workaholic until these long working hours are accompanied by addiction or compulsion to involve in work. Keeping different definitions of workaholism in view different researchers developed different measurement instruments that address different features of the phenomenon. For example according to Andreassen (2014) Dutch Workaholism Scale (DUWAS) measures workaholism in terms of obsession or compulsion while Bergen Work Addiction scale measures the phenomenon in terms of addictive behavior. As there are various tools available to measure workaholism but Dutch Workaholism Scale (10 item version) is most widely used and have good psychometric properties so it was decided to translate and validate this most widely used instrument to facilitate future researches on workaholism in Pakistan.

Regarding construct validity of DUWAS previously studies were performed in different cultures. For example Schaufeli, Bakker, Heijden, and Prins (2009) conducted confirmatory factor analysis on a sample of Dutch medical residents. The hypothesized correlated two-factor structure of the DUWAS was supported by the findings of this study.

Similarly Schaufeli et al. (2009) study also supported the two factor model. The study performed confirmatory factor analysis on data from Dutch and Japanese working individuals of different occupations (e.g., engineers, managers, nurses). Results showed that the two factors of DUWAS i.e., Working compulsively and Working excessively fitted equally well to the data of both countries.

Further a research was conducted on working individuals from various occupations (e.g., industry and commerce, education, services) by Libano, Llorens, Salanova, and Schaufeli (2010). The two factor model of DUWAS was fitted well. More recently two factor model of DUWAS was fitted well by a research carried out by Ovadia, Balducci, and Moshe (2014) on Hebrew white-collar workers. In contrast the study of occupationally diverse sample by Andreassen, Hetland, and Pallesen (2013) revealed that the model fit of DUWAS was not achieved. But overall studies on factorial validity of DUWAS supported the two factor model of the scale in different cultures with diverse populations.

In Pakistan there is no such reported study to date so keeping the literature in view current study was conducted in order to establish construct validity of DUWAS on individuals from different professions because workaholism is higher among these different professionals (Griffiths, 2005; Taris, Van Beek, & Schaufeli, 2012). Also gender wise comparison was done in relation to workaholism as literature suggested no differences among working men and women in relation to workaholism (Burke, 1999; Taris et al., 2012). Further comparison among individuals from these different professions was done in order to explore any difference between working men and women from different professions in relation to workaholism.

Overall it can be infer from the literature that for the developed countries the increasing inclination of workaholism has become an issue of concern. Pakistan with its economic instability, existing instable conditions, and ever increasing competition is particularly affected by workaholism. But the conviction of workaholism is still vague. Working for long hours is always appreciated. So it is necessary that the people who are responsible to administer various kinds of organizations can distinguish between hard and obsessive workers in order to make efforts to recognize the harmful effects of this complex attitude in organizations. The issue has currently come under renewed investigation in Pakistan and there is a lot of room for further research to create awareness in the society about this particular aspect of work (Asghar, 2007; Khan & Shah, 2016). However before conducting a research on any new phenomenon an initial step is to construct, modify, and validate a measure before using it for research

study (Clark & Watson, 1995). So the current study intended to translate and validate the already developed DUWAS rather than developing a new one because it is more expensive and time consuming task. The scale was translated into Urdu because it is our national language and almost every educated person can easily comprehend it well as compared to English so it is necessary to have a measuring instrument that is easily comprehensible by the population under study. The reason for establishing construct validity of DUWAS in Pakistani context is to have a valid instrument that can facilitate future studies on the neglected phenomenon of workaholism and to investigate that whether the items of DUWAS function in a similar way in our culture as it works in other cultures. The current study also intended to find gender differences in relation to workaholism keeping in view the notion that more women are entering in to professional life so it is important to study workaholism among both men and women (Burke & Mattis, 2005; Snir & Harpaz, 2009). Additionally the study explored differences among different professionals on the variable of workaholism. So the current study was designed with the following objectives:

1. To translate Dutch Workaholism Scale (DUWAS; Schaufeli et al., 2009).
2. To establish construct validity of Urdu version of DUWAS.
3. To see gender and professions related differences among working men and women in relation to workaholism.

Method

Overall the study was completed in two phases; the first phase involves translation of the Dutch Workaholism Scale, and the second phase includes establishment of construct validity of DUWAS (Urdu version).

Phase I: Translation of Dutch Workaholism Scale

Sousa and Rojjanasrirat (2011) guidelines for translating instruments were followed.

Step 1: Forward Translation. In this step translation of DUWAS was done by five bilinguals. Three of the translators were M.Phil in psychology, selected from National Institute of Psychology

Quaid-i-Azam University, Islamabad, one with M.Phil in English from University of Peshawar while the fifth one had a PhD degree in Urdu from University of Peshawar. Before giving the instrument to the bilinguals they were requested to translate them in to Urdu language in such a way that meaning inherent in the translations could be comprehensible and also to pay special attention to the equivalence of content between both versions. Further, they were requested to translate every item without any substitution or modifications of original items. After receiving translations from all the bilinguals, committee approach was done in order to select the most appropriate translations.

Step 2: Evaluation of Translated Items by committee of Experts. The aim of this step was to recognize and resolve the inadequate translation of the items. For this purpose all the five translations of each item of DUWAS were written down under their respective item and were evaluated in a committee. Three members constituted the committee: The research student and two bilingual experts; a professor and a Ph.D scholar from National Institute of Psychology, having command on both the languages (English and Urdu). All the translated items were evaluated in the committee and the most appropriate items were selected on the basis of comprehension and semantic relevance with the original items. At the end selected items that conveyed the meaning nearer to the original items were written down in order to translate them back to English language.

Step 3: Back translation of the selected items in to English. To verify the accuracy of Urdu translation it was translated back into English language. In this stage the translated version of the scale was given to five independent translators (other than those involved in initial translations) and they were instructed to translate them in to English as accurately as it is possible. Three of the translators were M.A English from university of Peshawar while two of them were M.Sc in Psychology from National Institute of Psychology, Islamabad. All the five translations were received.

Step 4: Evaluation of Back-translated Items by Committee of Experts. All the received back translations of the scales were jotted down under their respective original items in order to evaluate them in terms of their accuracy of translation. Committee consisted of the same members from National Institute of Psychology. No ambiguity

was found in the translation of DUWAS when the comparison of back translations and original instrument was done except item number nine for which semantic relevance with the original item was lacking so this item was modified and then given for back translation to three bilinguals after evaluating back translations and original item, Urdu version of the DUWAS was finalized.

Phase II: Establishing construct validity of the Urdu version of DUWAS

Sample

A convenience sample was used which included 317 working men and women from KPK (Peshawar, Mardan), Rawalpindi, and Islamabad. Total sample ($N = 317$) included 57 (18%) doctors, 66 (20.8%) university teachers, lawyers are 58 (18.3%), 86 (27.1%) bankers, and 50 (15.8%) nurses. In terms of gender representation, sample consisted of 194 men (61.2%) and 123 (38.8%) women. Age ranged from 18 to 65 years ($M = 32.6$; $SD = 9.27$).

Instrument

Dutch Workaholism Scale (DUWAS). It was originally developed by Schaufeli et al. (2009) and is translated in the current study. DUWAS is a 10 items scale with two subscales: Working excessively (item nos. 1, 2, 3, 4, 5) measures the behavioral dimension of workaholism and Working compulsively (item nos. 6, 7, 8, 9, 10) measures obsessive or cognitive dimension of workaholism. All items are scored on a 4-point rating scale, ranging from 1 “never” to 4 “always”. Score ranges from 10 to 40 and is obtained by summing the scores on both the dimensions. Higher scores on the scale is the indication of greater level of workaholism. There is no reverse score item in the scale. Reliability analysis revealed that both workaholism scales have sufficient internal consistency ranging from .68 to .78 for Working excessively and Working compulsively in Dutch and Japanese sample (Schaufeli et al., 2009).

Procedure

For the purpose of collecting data working men and women from different occupations i.e., doctors, university teachers, lawyers, bankers, and nurses were approached. For this purpose participants were approached via their respective organizations i.e., hospitals,

universities, and banks while lawyers were approached in their chambers. Before data collection written permission from heads of above different organizations were taken in order to avoid any problem in the data collection. Respondents were also informed that the research is for academic purpose and they have the right to withdraw from the study at any stage.

Results

Confirmatory factor analysis (CFA) was carried out to determine the construct validity of DUWAS. Further Cronbach alpha coefficient was calculated to examine the reliability of DUWAS. In order to find gender wise differences *t*-test was applied while ANOVA was carried out for the purpose of making comparisons among working men and women from different professions on the variable of workaholism.

Confirmatory Factor Analysis. As one of the objectives of the current study was to establish the construct validity of the instruments therefore confirmatory factor analysis (CFA) using Amos with maximum likelihood estimation was conducted for DUWAS. Several Fit Indices including chi-square (χ^2), relative/normed chi-square (χ^2/df), root mean square of approximation (RMSEA), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), and Tucker-Lewis Index (TLI) were inspected in order to assess overall goodness of fit for each model. χ^2 assess whether the proposed model holds accurately and precisely in the population (Brown, 2006). Prudon (2014) suggested for a significant model fit χ^2 should be non-significant however it is highly effected by the size of the sample (i.e., model fit solutions involving large sizes of the sample are more likely to be rejected on the basis of significant χ^2 value) thus for the assessment of fit of the model other fit indices are mostly preferred (Brown & Moore, 2013). The (χ^2/df) is another fit index that can identify an over identified model and a model that requires modifications and does not fit the given data. Values in the range of 1.0 - 5.0 are considered as acceptable (Schumacker & Lomax, 2004). RMSEA is an “error of approximation” as it evaluates the degree of reasonable fit of the model in the population. Brown (2006) recommended that when all other indices indicate good model fit, a value of 0.08 can be acceptable. Value of GFI and AGFI ranges between 0 and 1, with values near to 1 is the indication of good fit of the model (Hooper, Coughlan, & Mullen, 2008). CFI, TLI, and IFI are comparative fit indices that evaluate a given assumed model against an independence or null model (Schumacker & Lomax, 2004). For

CFI and TLI researchers have suggested that values of less than .90 is the indication of poor fit of the model, values in the range of .90 –.95 represents acceptable fit of the model (Bentler, 1990). Further IFI values closer to .95 are suggestive of good fit of the model (Hu & Bentler, 1999). All these indices were examined in order to assess fit of the DUWAS model. Before assessing the fit of the model cases with missing data were removed from the analysis (listwise deletion) as Amos do not analyze missing data. Table 1 presents the fit statistics for DUWAS.

Table 1

Confirmatory Factor Analysis for Dutch Workaholism Scale (N = 309)

Models	χ^2 (df)	χ^2 /df	GFI	AGFI	IFI	CFI	RMSEA
M1 (Original 10 items scale)	100.32(34) <i>p</i> .000	2.95	.94	.92	.86	.85	.08
M2 (Modified 8 items scale)	49.49 (19) <i>p</i> .000	2.60	.96	.93	.92	.92	.07

Note. GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index
IFI=Incremental Fit Index; CFI=Comparative Fit Index; RMSEA=Root Mean Square Error of Approximation.

It is evident from the Table 1 that goodness of fit was achieved for DUWAS in Pakistani culture with modification in the scale. Model 1 i.e. original scale with 10 items shows that chi-square statistics was statistically significant: χ^2 (34) =100.32, *p* <.05. So other fit indices were examined. All are in the acceptable ranges. But the values of CFI =.85 and IFI=.86 are not in acceptable range. Keeping in view the values of these indices item loadings and squared multiple correlations were examined (Table 2) before going into inspecting modification indices because of the reason that according to Hooper et al. (2008) items with value of squared multiple correlation (below .20) is a sign of very high degree of error, so it should not be included in the analysis and such items can be identified by evaluating them individually. So item 9 and 10 were removed from the scale on the bases of low squared multiple correlations (less than .20). Reason for the low loadings may be that these items are measuring the thinking aspect of the individual when they actually are not working so it can be possible that the current sample didn't consider this as an aspect of working behavior. After removal of the items fit indices were examined that shows good fit of the model IFI = .92; CFI = .92 (Table 1). The factor loadings and squared multiple correlations for DUWAS are given in Table 2.

Table 2
Factor Loadings and Squared Multiple Correlations for Dutch Workaholism Scale (N = 309)

Item No.	λ	SMC
1	.49	.25
2	.51	.27
3	.72	.52
4	.48	.23
5	.46	.22
6	.59	.35
7	.48	.23
8	.74	.55
9	.29	.08
10	.32	.10

Note. λ =Factor Loading; SMC=Squared Multiple Correlation; Boldface letters indicate low λ and low SMCs.

The factor loadings and squared multiple correlations for DUWAS are given in Table 2. Table 2 shows that squared multiple correlations of item (9 and 10) are below threshold also item nine showed low loading.

After establishing construct validity of the DUWAS internal consistency of the modified DUWAS was examined using Cronbach alpha coefficient. Table 3 shows Cronbach's Alpha Reliability estimates of DUWAS.

Table 3
Cronbach's Alpha Reliability Estimates of Dutch Workaholism Scale (N = 309)

Scale/Subscale	No of items	Alpha Coefficients
DUWAS	8	.71
WE	5	.66
WC	3	.64

Note. DUWAS = Dutch Workaholism Scale; WE = Working Excessively; WC = Working Compulsively.

Table 3 shows internal consistency of DUWAS and its subscales using Cronbach's alpha coefficients are in acceptable range (Nunnally, 1978; Salvia, Ysseldyke, & Bolt, 2010).

Gender differences on Workaholism

Additionally gender differences were found on the variable of workaholism. Table 4 shows gender differences on the variable of workaholism among working men and women.

Table 4

Gender differences in Relation to Workaholism among Working Men and Women (N = 317)

Variable	Men (n = 194)		Women (n = 123)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Workaholism	20.48	4.00	21.01	4.59	1.0	.27	-1.49	.42	.12
Working Excessively	11.87	2.78	12.24	3.16	1.1	.28	-1.03	.29	.12
Working Compulsively	8.60	2.10	8.77	2.30	.67	.50	-.66	.32	.07

Note. *df* = 315; *CI* = Confidence Interval; *LL* = Lower Limit; *UL* = Upper Limit.

It is evident from the Table 4 that no statistically significant differences were found between working men and women on the variable of workaholism.

Differences across various groups of occupation in relation to workaholism

As the sample consisted of working men and women from different occupation i.e. doctors, university teachers, lawyers, bankers, and nurses. In order to make comparisons among working men and women of different occupations one way analysis of variance (ANOVA) was carried out. Table 5 shows differences across various groups of occupation in relation to workaholism. It is evident from the table that no statistical significant differences are found on the variable of workaholism among working men and women working in different professions (i.e. doctors, university teachers, lawyers, bankers, and nurses).

Table 5
Differences across Various Groups of Occupation in Relation to Workaholism among Working Men and Women (N = 317)

Variable	Categories of Occupation	N	M	SD	F(df)	p	η ²
Workaholism	Doctor	57	20.71	3.76	1.70	.14	.02
	University teachers	66	21.09	3.95	(4,312)		
	Lawyer	58	19.93	4.25			
	Banker	86	20.23	4.07			
	Nurse	50	21.78	5.17			
Working Excessively	Doctor	57	12.07	2.89	2.09	.08	.03
	University teachers	66	12.43	2.89	(4,312)		
	Lawyer	58	11.34	2.68			
	Banker	86	11.71	2.79			
	Nurse	50	12.72	3.38	.52		
Working Compulsively	Doctor	57	8.64	1.80	(4,312)	.72	.01
	University teachers	65	8.65	1.95			
	Lawyer	58	8.58	2.38			
	Banker	86	8.52	2.28			
	Nurse	49	9.06	2.48			

Note. *df* = Degree of Freedom; η² = Eta Squared.

Discussion

The main objective of the present study was to translate and to establish a valid instrument to measure workaholism. For this purpose Dutch Workaholism Scale (DUWAS; Schaufeli et al., 2009) was selected as it is a valid and reliable measure suggested by literature (Andreassen, 2014). In the first phase of the study DUWAS was translated in Urdu which is our national language and educated class can read, write and comprehend it easily so for this purpose back translation suggested by Sousa and Rojjanasrirat (2011) was done. The reason for translating the scale through back translation method was to get items of the translated version of DUWAS closer to the original scale in semantic relevance as well as content similarity.

After translating the scale next phase was to establish construct validity of DUWAS in Pakistani culture in order to help future researchers interested in the phenomenon of workaholism. Confirmatory factor analysis (CFA) was done in order to establish construct validity of DUWAS. Examination of all the fit indices showed that model of initial 10 item DUWAS was not fitted well to the data but after removing item (9 and 10) of DUWAS model showed good fit. Previous studies on construct validity of DUWAS also

showed that the model of DUWAS showed good fit when error terms of these two items were allowed to correlate (Libano et al., 2010; Ovadia et al., 2014). Similarly results of study conducted by Andreassen (2014) also showed poor loadings of item no 10. The decision to remove these items in the current study were made following recommendations of Hooper et al. (2008) that removal of items with low squared multiple correlations is desirable as these items are the indication of high level of error.

The reason for the low loadings may be that as these two items are measuring feeling component of workaholism i.e., how workers feel when they are not working so it is possible that workers in our culture didn't perceive it as part of workaholism when they are not involved in working. This reflected the need to explore the construct of workaholism and its nature as perceived by working individuals in Pakistan in future studies on workaholism in Pakistani culture. Further internal consistency of DUWAS and its subscales were examined using Cronbach's alpha coefficients, which were in satisfactory range. So the current study provided evidence for the valid and reliable measure of workaholism in Pakistan. Additionally current study revealed no significant gender differences in relation to the variable of workaholism. This finding is in line with the literature (Burgess, Burke, & Oberklaid, 2006; Taris et al., 2012). Most of the time it is considered that female are more workaholics because of their anxious nature (Butucescu & Uscatescu, 2013) but in the current study no gender differences were found because when female come in to work environment the gender differences are not taken into account and a working women is expected to contribute the same way as a working men so it can be the possible reason for no differences among working men and women on workaholism.

Further no differences were found among working men and women of different occupations in relation to workaholism. The reason for no differences among working men and women of different occupations in relation to workaholism may be that occupations does not have any impact on the workaholic tendency of an individual rather it is the characteristics of the individual itself.

Conclusion

Workaholism is a phenomenon that is most relevant to the developing country like Pakistan but this is a neglected area which needs to be studied. For this purpose a valid and reliable measure is required. Therefore the current study attempted to translate and validate DUWAS which is widely used in western researches. After

translation of DUWAS in Urdu language it was subjected to CFA which showed that DUWAS showed good fit after removal of two items that indicates that these two items do not function in Pakistani culture in a way similar to other cultures. This further indicated to study the construct validity of DUWAS in more detail in future studies.

Limitations and Suggestions

Sample was selected conveniently from limited geographical area of Pakistan so generalizability of the results can be a limitation. Future studies should consider this limitation of the study. Further the factor structure of DUWAS can be studied in more detail by future researchers.

Implications

The current study is important in this regard that it is an initial attempt towards establishing a valid measure to assess workaholism in Pakistani culture. Further it also provided the evidence that the factor structure of DUWAS as suggested originally is not applicable for Pakistani population so it needs further clarity.

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