



Psychometric Properties of the Turkish Version of the Bergen Work Addiction Scale

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Abstract

The aim of the present study was to examine the psychometric properties of the Turkish version of the Bergen Work Addiction Scale (BWAS-T). The study sample comprised 448 participants (279 females and 169 males) who completed a survey including the BWAS-T, Workaholism Battery (WorkBAT), Dutch Work Addiction Scale (DUWAS), and Depression Anxiety Stress Scales (DASS). The Turkish version of BWAS had good internal consistency (Cronbach's $\alpha = .76$). As expected, score on the BWAS-T was positively correlated with scores on the Drive subscale of the WorkBAT and Working Excessively and Working Compulsively subscales of the DUWAS. No relationship was found between the BWAS-T and Work Enjoyment subscale of the WorkBAT. Regarding concurrent validity, scores on the BWAS-T were strongly correlated with those on the DASS and its subscales. The factor structure of the BWAS-T was also tested using confirmatory factor analysis which found support for the original unidimensional factor structure. Results demonstrated that the reliability and validity of the Turkish version of the BWAS were robust. Limitations and recommendations for further studies are discussed.

Keywords Work addiction · Bergen Work Addiction Scale · Workaholism · Psychometrics

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Working is both common and necessary for most people and it provides positive outcomes such as providing income, a sense of purpose in life, planning and filling the day, and forming relationships (Andreassen, 2014). From an organizational perspective, both engagement and desire for working hard are appreciated assets in working life (Torp et al., 2018). Working hard may be treated positively if hard workers are dedicated to and enamored by work, but it may be treated negatively if those workers are obsessive, cannot relax, or are self-centered (Scott et al., 1997). Work engagement is regarded as “good,” whereas workaholism is regarded as “bad” types of working hard (Shimazu & Schaufeli, 2009). Engaged workers do not lose control and they have a balanced lifestyle as compared to the work addicts although both types of workers put large amounts of time and effort into work (Atroszko et al., 2017).

Terms such as “work addiction,” “workaholism,” and “excessive overwork” are often used interchangeably (Andreassen, 2013). “Workaholism” is a term coined by Oates (1971) in order to express “addiction to work, the compulsion or uncontrollable need to work incessantly” (p.11). Some scholars state that real workaholics have high work involvement and work drive, but low work enjoyment (Spence & Robbins, 1992). These people work harder than what is demanded both in terms of their job prescriptions and expectations of people with whom or for whom they work. Their motivation is not related with external factors such as financial or career expectations, rather their hard working is out of an inner drive or need (Schaufeli et al., 2008).

Griffiths et al. (2018) drew attention to the more positive descriptions of workaholism in the relevant literature and argued that research which highlighted happy or enthusiastic workaholics do not conceptualize workaholism as an addiction. Long-term negative consequences of excessive work must outweigh its short-term advantages in order to define work activity as a genuine addiction (Griffiths, 1996). Relevant research demonstrates support for the negative consequences of work addiction. Relationships between work addiction with different variables such as stress, anxiety, sleep disturbance (Hancock et al., 2019), obsession (Emhan et al., 2012), work-family conflict (Molino et al., 2016; Taylor et al., 2019; Torp et al., 2018), and burnout (Molino et al., 2016; Taylor et al., 2019) have been reported among various samples. In a recent meta-analysis, it was found that workaholism was significantly related to work-related, family, and individual outcomes (Clark et al., 2016). For the work-related outcomes, workaholism was associated with lower job satisfaction and higher job stress, and for the family outcomes, it was associated with higher marital disaffection and lower family satisfaction. When individual outcomes were considered, workaholism was positively associated with burnout and negatively to emotional/mental and physical health, and life satisfaction. The authors concluded that promoting the benefits of being a workaholic was not useful based on the results of their study.

The negative consequences of workaholism necessitate more extensive research. Increased scientific interest in workaholism (Molino et al., 2016) is welcome. However, knowledge on the topic is still arguably limited (Schaufeli et al., 2009). Lack of consensus in the definition and measurement of the construct has hampered empirical research into workaholism (Clark et al., 2016). Operational definitions of workaholism are not similar in empirical studies (Griffiths & Karanika-Murray, 2012). Therefore, reaching a consensus on how to measure it may be a reasonable starting point. Various psychometric scales such as the Work Addiction Risk Test (WART (Robinson, 1989)), Workaholism Battery (WorkBAT (Spence & Robbins, 1992)), and the Dutch Work Addiction Scale (DUWAS (Schaufeli et al., 2009)) were developed in order to assess work addiction.

However, the aforementioned scales focus on different aspects of excessive working behavior and many of the items lack genuine addiction criteria. Therefore, Andreassen et al.

(2012) developed the Bergen Work Addiction Scale (BWAS) using the criteria in the components model of addiction (Griffiths, 2005a, 2005b). The items in the components model of addiction have been also used to define other behavioral addictions such as gambling disorder and gaming disorder as well as being used as the basis of other scales to assess behavioral addictions (Andreassen et al., 2012). Furthermore, it has been used to determine appropriate cut-off scores for categorization of work addiction based on the polythetic approach. The original validation study demonstrated that the BWAS had good psychometric properties (Andreassen et al., 2012). Further validation studies have also reported robust psychometric properties of the scale in Hungarian (Orosz et al., 2016) and Polish (Atroszko et al., 2017).

To contribute to the growing consensus on work addiction assessment, the aim of the present study was to adapt the BWAS (Andreassen et al., 2012) into Turkish. In a sample of 29,080 participants from 45 different nations, it was reported that the psychological importance of the work for an individual was associated with cultural factors through socialization processes of the individuals (Lu et al., 2016). Therefore, reaching a consensus on how to assess work addiction necessitates contribution of empirical research from different cultures. Global understanding of workaholism includes individual, structural, and situational characteristics (Griffiths & Karanika-Murray, 2012) which can be influenced by cultural dynamics. The findings of the present study derived from a Turkish population may increase the confidence establishing common criteria that define construct of work addiction above and beyond cultural differences. Validating these criteria across different cultural samples will improve the field's understanding of the work addiction construct and will contribute to the maturation of related empirical research. Given that work addiction emerges as a controversial and complex issue which requires the understanding of individual, situational, and structural factors (Griffiths & Karanika-Murray, 2012), such factors also examined in the present validation study. The present study hypothesized that:

Hypothesis 1: The Turkish version of the BWAS would show good reliability and validity with a unidimensional factor structure.

Hypothesis 2: The Turkish version of the BWAS would be positively correlated with the Drive subscale of the WorkBAT, the Working Excessively, and Working Compulsively subscales of the DUWAS, and the weekly working hours of the participants.

Hypothesis 3: There would be no significant relationship between the Turkish version of the BWAS and Work Enjoyment subscale of the WorkBAT.

Hypothesis 4: Work addiction would be positively associated with depression, anxiety, and stress.

In addition, the relationships of work addiction with individual, situational, and structural factors were explored.

Method

Participants

The sample comprised 448 participants with a mean age of 38.75 years ($SD_{\text{years}} = 9.92$). Of the participants, 62.3% ($n = 279$) were females and 37.7% ($n = 169$) were males. For purposes of

inclusion, participants were required to (i) consent to participate; (ii) understand spoken and written Turkish; and (iii) have been working for at least 1 year. In terms of educational status, 0.2% were graduates of primary school ($n = 1$), 3.6% were graduates of high school ($n = 16$), 53.1% were graduates of university ($n = 238$), and 42.6% were postgraduates ($n = 191$). Most of the sample (85.7%) had never been given any psychological or psychiatric diagnosis in their lifetime ($n = 384$), whereas the remainder had (14.3%; $n = 64$). The list of diagnoses included attention-deficit and hyperactivity disorder ($n = 3$), mood disorders ($n = 33$), anxiety disorders ($n = 21$), obsessive-compulsive disorder ($n = 3$), post-traumatic stress disorder ($n = 1$), sleep disorders ($n = 2$), and eating disorder ($n = 1$). Over nine-tenths of participants (93.1%) reported non-use of any psychiatric medication ($n = 417$), whereas the remainder did (6.9%; $n = 31$).

The mean number of working years among participants was 14.2 ($SD_{\text{years}} = 10.79$). The participants were asked to answer about some structural characteristics of their work such as number of hours per day and number of days per week they work, and their occupation. The mean number of working hours per day was 7.88 ($SD_{\text{hours}} = 1.92$) and the mean number of working days per week was 5.14 ($SD_{\text{days}} = .79$). In terms of occupation, 4.9% were laborers ($n = 22$), 5.6% were business owners ($n = 25$), 28.6% were civil servants/technicians/specialists ($n = 128$), 0.7% were military ($n = 3$), 44.4% were paid qualified specialist (e.g., attorneys, doctors, architects, and engineers) ($n = 199$), 9.4% were self-employed qualified specialists (e.g., attorneys, doctors, architects, and engineers) ($n = 42$), 5.8% were retired but still working ($n = 26$), and 0.7% had other occupations (e.g., sportsman) ($n = 3$). With regard to job positions, two-thirds of participants (67.9%) held non-managerial positions ($n = 304$), 11.8% were managers working with one to five employees ($n = 53$), 15.6% were managers working with five or more employees ($n = 70$), and 4.7% were other ($n = 21$). Finally, 8.5% participants categorized themselves as novices ($n = 38$), 37.5% were moderates ($n = 168$), and 54% were experts ($n = 242$).

Measures

Demographic Information The survey included demographic questions (i.e., age, gender, education level, employment status, monthly income, history of psychiatric/psychological diagnosis, and use of psychiatric medication). Moreover, questions relating to structural and situational characteristics of work were asked (e.g., number of hours worked a day, number of days worked a week, and type of occupation). The participants also rated themselves on a five-point Likert scale from 1 (*totally disagree*) to 5 (*totally agree*), or that the item was not applicable: (i) how satisfied they were with their relationships with co-workers, (ii) how satisfied they were with their relationships with their manager(s), (iii) how satisfied they were with the physical comfort and surroundings of their workspace (e.g., heating, seating, and eating facilities), (iv) how satisfied they were with esthetics of their work environment (e.g., lighting, décor, and color in workspace), (v) how satisfied they were with their financial rewards (e.g., salary, medical insurance, pension, and other benefits), and (vi) how satisfied they were with their personal facilities (e.g., training possibilities and being inspired).

Bergen Work Addiction Scale (BWAS) The self-report seven-item BWAS was developed to assess work addiction (Andreassen et al., 2012) and items are scored on a five-point response format ranging from 1 (*never*) to 5 (*always*) with higher scores indicating higher levels of being at risk of work addiction. The items comprise core symptoms of behavioral addictions as suggested by Griffiths (2005a) considering the previous 12 months (e.g., “How often during

the last year have you thought of how you could free up more time to work?”, “How often during the last year have you worked in order to reduce feelings of guilt, anxiety, helplessness and depression?”). In the original study, the internal reliability scores were .84 and .80 for two different samples (Andreassen et al., 2012). The psychometric properties of the scale in the present study are reported in the “Results” section.

Workaholism Battery (WorkBAT) The WorkBAT is a 25-item self-report scale that was developed by Spence and Robbins (1992) to assess workaholism. Each item is scored on a five-point response format ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). It has three subscales comprising work involvement (WI), drive (D), and enjoyment of work (WE). Example items include “I feel guilty when I take time off work” and “I spend my free time on projects and other activities.” The Turkish version reported a two-factor solution with nine WE items established and 11 D items and Cronbach’s α was .83 (Ersoy-Kart, 2005). Ersoy-Kart (2005) proposed that the WI subscale cannot be assessed among Turkish samples. In the present study, the subscales had good internal consistency values ($\alpha = .82$ for WE and .75 for D).

Dutch Work Addiction Scale (DUWAS) The 17-item self-report DUWAS (Schaufeli et al., 2008) assesses work addiction via two constructs: working excessively (WE) and working compulsively (WC). Each item is scored on a four-point response format from 1 (*almost never*) to 4 (*almost always*). Higher scores obtained from the scale indicate higher levels of work addiction. The Turkish version (Doğan & Tel, 2011) found support for the two DUWAS items but the scale was reduced to 14 items after psychometric testing. The Cronbach’s alpha was .85 for the whole scale. Example items include “I seem to be in a hurry and racing against the clock” and “It’s important to me to work hard even when I don’t enjoy what I’m doing.” The Cronbach’s alphas in the present study were .81 for WE, .82 for WC, and .89 for the total scale.

Depression Anxiety Stress Scales (DAAS-21) The 21-item self-report DASS-21 was developed to assess symptoms of depression, anxiety, and stress (Henry & Crawford, 2005) with seven items for each subscale. Each item is scored on a four-point response format regarding their experience during the previous week from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). The scale can be used in both adult clinical and non-clinical populations (Szabo, 2010). Higher scores of each subscale indicate higher levels of depression, anxiety, or stress. The Turkish version of the DASS-21 has robust psychometric properties (Yilmaz et al., 2017). More specifically, the Cronbach’s alpha values were .87, .85, and .81, respectively. The Cronbach’s alphas in the present study were .88 for depression, .81 for anxiety, .88 for stress, and .93 for the total scale.

Procedure and Ethics

For the adaptation of the BWAS into Turkish (BWAS-T), the translation-back translation method (Brislin et al., 1973) was used. The English version of the BWAS was translated into Turkish by the first two authors of the present study and the scale was then translated back into English by two academics who were blind to the original version of the scale and had advanced proficiency in both languages. The back translation was then examined in terms of compatibility of content and style by the authors of the study. Prior to data collection, necessary ethical approval was provided by the research team’s university of ethics committee.

Participants were recruited via online sharing on various social networking sites (Facebook, Instagram, WhatsApp, and LinkedIn), and directed to an online survey (hosted by *Qualtrics*) that took approximately 15 min to complete. At the initial page, an informed consent form was provided so that all participants confirmed their voluntary participation prior the survey. Responses were completely anonymous and confidential, with no identifiers collected.

Statistical Analysis

Statistical analyses were run with the Statistics Package for Social Sciences (SPSS) Program (Green et al., 1997) and LISREL 8.71. To analyze differences among the demographic variables, a number of *t* test analyses and one-way analysis of variance (ANOVA) were utilized. The Cronbach's alpha coefficient was used to assess internal consistency of the scale. Confirmatory factor analysis (CFA) was utilized to test BWAS-T's construct validity.

Results

Descriptive Statistics, Correlations, and Group Comparisons

The mean scores and standard deviations for individual, situational, and structural characteristics of work variables and the resulting correlations are shown in Table 1. Work addiction correlated significantly with age, working years, working hours per day, and working days per week, having satisfactory relationship with managers, being satisfied with physical comfort and surroundings, esthetics, financial rewards, personal improvement, and total satisfaction score. However, there was no correlation between work addiction and having satisfactory relationship with co-workers.

Analysis indicated that there was a statistically significant difference in work addiction between women and men ($t(446) = 4.50, p < .001$). Results showed that women ($M = 19.23, SD = 5.14$) reported significantly higher scores on work addiction than men ($M = 17.05, SD = 4.65$). Moreover, there was a statistically significant difference in work addiction in terms of history of psychiatric/psychological diagnosis ($t(446) = -3.64, p < .001$). Participants who had a psychiatric/psychological diagnosis at least once in their lifetime ($M = 20.51, SD = 4.78$) reported significantly higher work addiction scores than who did not ($M = 18.06, SD = 5.03$). For group comparisons, significant differences among work addiction scores were found only for the familiarity with job ($F(2, 445) = 8.39, p < .01$). A Scheffé post hoc test revealed that the participants who were novices in their jobs ($M = 21.21, SD = 4.92$) reported significantly higher scores on work addiction than who were moderate ($M = 18.71, SD = 5.19$) and expert ($M = 17.76, SD = 4.84$).

Factor Structure

Confirmatory factor analysis (CFA) was conducted via LISREL 8.71 to determine the whether the unidimensional factor structure obtained in the original BWAS study (Andreassen et al., 2012) would be retained in the Turkish sample. The input to LISREL was in the form of covariance matrix produced by SPSS. Data fit indices of chi-square (χ^2), ratio of χ^2 to degree of freedom (*df*), root mean square error of approximation (RMSEA), standardized root mean square residual (sRMR), comparative fit index (CFI), goodness of fit index (GFI), and non-normed fit index (NNFI) were assessed in the analyses. According to the results of the first CFA, chi-square value

Table 1 Descriptive statistics for individual, situational, and structural characteristics of work variables and correlation coefficients

Variables	Correlation coefficient with BWAS-T	<i>M</i>	<i>SD</i>
Age	– .16**	38.75	9.92
Working years	– .11*	14.2	10.79
Working hours per day	.28**	7.88	1.92
Working days per week	.19**	5.14	.79
Having satisfied relationship with co-workers	– .05	3.99	1.09
Having satisfied relationship with manager(s)	– .14**	3.79	1.28
Being satisfied with physical comfort and surroundings	– .10*	3.82	1.13
Being satisfied with esthetics	– .12*	3.55	1.22
Being satisfied with financial rewards	– .12*	3.12	1.20
Being satisfied with personal improvement	– .06	3.25	1.24
Total satisfaction	– .14**	21.52	5.12

For all correlations $N = 448$, * $p < .05$, ** $p < .01$, and *** $p < .001$

was significant, $\chi^2(14) = 121.12$, $p < .05$, and other fit indices were less than acceptable [$\chi^2/df(121.12/14) = 8.65$; RMSEA = 0.13; sRMR = 0.07; CFI = 0.90; GFI = 0.93; NNFI = 0.85]. However, after freeing covariances between item 7 and items 6 and 1, and between item 5 and items 3 and 1 following the suggestions of modification indices, second CFA results revealed acceptable fit to the data [$\chi^2/df(24.55/10) = 2.46$; RMSEA = 0.06; sRMR = 0.03; CFI = 0.98; GFI = 0.99; NNFI = 0.97] except the significant χ^2 value ($p < .01$). The loadings of the items were 0.41 and above. The factor structure of BWAS-T is shown in Fig. 1.

Reliability

Cronbach's alpha value and corrected item-total correlation coefficients were computed in order to investigate the reliability of the BWAS-T. Cronbach's alpha value was good ($\alpha = .76$). Moreover, corrected item-total correlation coefficients supported the reliability of the BWAS-T ($r \geq 0.34$). Details of these results are shown in Table 2.

Convergent and Discriminant Validity

Correlations of the BWAS-T with the Drive subscale of the WorkBAT, WE, and WC subscales of the DUWAS, in addition to the weekly working hours of the participants, were examined in order to test the convergent validity of the scale. As expected, BWAS-T scores of the participants were positively and significantly correlated with the study variables ($p < .001$). Since work enjoyment is not a defining characteristic of workaholism (Andreassen et al., 2012), the Work Enjoyment subscale of the WorkBAT was utilized to show their distinction. As expected, this correlation coefficient was not significant ($p > .05$). The highest correlation coefficients of the BWAS-T scores were with working excessively and working compulsively subscales of the DUWAS as can be seen in Table 3.

Concurrent Validity

To examine the concurrent validity of the BWAS-T, correlations between the BWAS-T score and the total DASS scores and its subscales were examined. As expected, there were strong

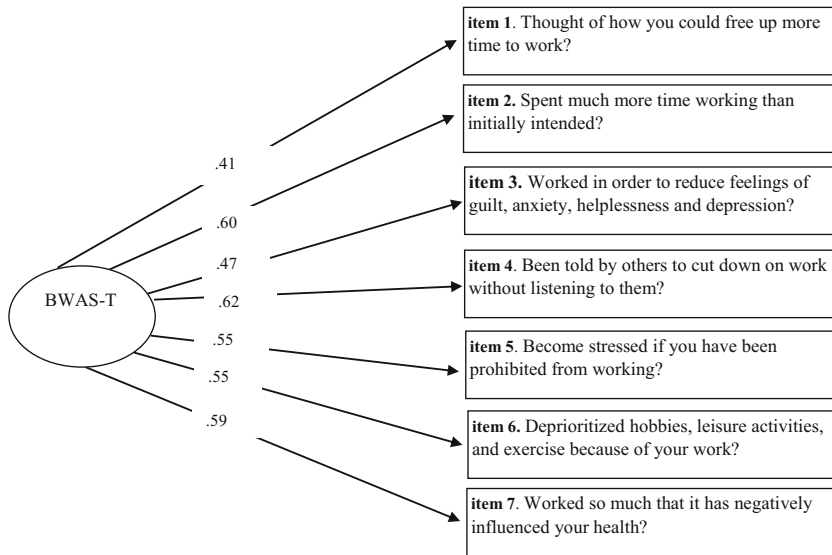


Fig. 1 Factor structure of the Turkish version of Bergen Work Addiction Scale

positive correlations between the total scores of the BWAS-T and the DASS ($r = .43, p < .001$). Similarly, the BWAS-T showed strong positive correlations with all factors of the DASS, the correlations ranged from $r = .34$ to $r = .41$ ($p < .001$). Table 3 shows the correlations, along with the mean and standard deviation scores of these measures.

Addiction Criteria

To assess addiction, the polythetic format was used, adhering to the original study (Andreassen et al., 2012). For each item, a score of 4 (often) was used as the cut-off point on the five-point Likert scale. In the polythetic format, meeting at least half of the criteria (salience, tolerance, mood modification, relapse, withdrawal, conflict, and problems) is needed. That is, an individual who answered at least 4 (often) for four criteria out of seven was considered as a work addict. Consequently, 18.1% ($n = 81$) were classified as work addicts who endorsed the “often” or “always” options on at least four items of the BWAS-T, whereas 81.9% ($n = 367$) were non-addicts who endorsed “often” or “always” options on less than four items on the scale. The distribution of BWAS-T scores regarding “often” or “always” responses are detailed

Table 2 Reliability of the Turkish version of the Bergen Work Addiction Scale

	α if item deleted	corrected item-total r
BWAS-1	0.76	0.34
BWAS-2	0.73	0.50
BWAS-3	0.74	0.43
BWAS-4	0.73	0.51
BWAS-5	0.72	0.53
BWAS-6	0.72	0.52
BWAS-7	0.72	0.53
$\alpha = 0.76$		

Table 3 Turkish version of Bergen Work Addiction Scale's correlations with research variables

Variables	Correlation coefficient with BWAS-T	<i>M</i> (SD)
WORKBAT-enjoy	-.04	29.15 (6.35)
WORKBAT-drive	.37***	34.00 (6.39)
DUWAS-working excessively	.61***	23.23 (5.80)
DUWAS-working compulsively	.50***	18.37 (4.88)
Total DASS	.43**	12.30 (10.22)
DASS-anxiety	.37***	3.28 (3.41)
DASS-depression	.34***	3.48 (3.93)
DASS-stress	.41***	5.54 (4.42)
Weekly working hour	.29***	41.24 (13.20)

For all correlations $N = 448$, * $p < .05$, ** $p < .01$, and *** $p < .001$

in Table 4. According to the results of the t -test analysis ($t = -4.81$, $p < .001$), the work addict group ($M = 47.47$, $SD = 14.22$) worked significantly more hours a week compared to the non-addict group ($M = 39.85$, $SD = 12.57$).

Discussion

The aim of the present study was to examine the psychometric properties of the Turkish version of the BWAS (BWAS-T). To test the hypotheses concerning the reliability and validity of the BWAS-T, a confirmatory factor analysis was performed, and an internal reliability value was calculated. In addition, the study examined the relationship of the BWAS-T with the Drive subscale of the WorkBAT, WE, and WC subscales of the DUWAS, and the weekly working hours of the participants. In addition, the relationship of the BWAS-T with depression, anxiety, and stress was also investigated.

The results of the present study provided support for all four hypotheses. The findings also showed that the original seven-item one-factor solution had good fit to the data. Moreover, all standardized factor loadings were above .40. These factor loadings across the even items indicated that the corresponding items are good indicators of the underlying latent construct (i.e., work addiction). Notably, the dimension of salience (“How often during the last year have you thought of how you could free up more time to work?”) had relatively low loading,

Table 4 Work addiction prevalence and comparison in terms of weekly working hours

	Number of items with scores 4 (often) or 5 (always)	<i>n</i>	%	<i>M</i> (SD) weekly working hours	<i>t</i> test
Non-addicts	0	153	34.2	36.85 (11.45)	$t = -4.81$ $p = .000$
	1	77	17.2	40.98 (11.60)	
	2	79	17.6	42.80 (13.11)	
	3	58	12.9	42.18 (14.36)	
		367	81.9	39.85 (12.57)	
	4	42	9.4	45.25 (12.32)	
	5	23	5.1	46.37 (14.43)	
Work addicts	6	12	2.7	51.63 (12.68)	
	7	4	0.9	64.63 (25.76)	
		81	18.1	47.47 (14.22)	

whereas relapse (“How often during the last year have you been told by others to cut down on work without listening to them?”) had the highest loading value. In addition, reliability analyses indicated good results.

The study findings also supported the convergent and discriminant validity of the BWAS-T. Consistent with the original study (Andreassen et al., 2012), the BWAS-T was positively correlated with the Drive subscale of the WorkBAT. Moreover, the BWAS-T was positively correlated with the WE and WC subscales of the DUWAS. Similarly, a high correlation coefficient between BWAS and WART Compulsive Tendencies was found in the original study (Andreassen et al., 2012). These findings indicate that the BWAS includes somewhat compulsive aspects of working behavior. In the literature, evidence has increasingly indicated the importance of the inhibitory system in the brain for compulsive behavior of drug addiction (Lubman et al., 2004). However, inhibitory dysregulation in behavioral addictions remains unclear. Therefore, further neuroimaging studies are recommended to support descriptive findings such as those of the present study. It is also worth noting that there was no significant correlation between the BWAS-T and the WE subscale of the WorkBAT. This finding supports the view that although the terms “workaholism,” “work addiction,” and “non-enthusiastic workaholism” have been used to characterize chronic pattern of over-engagement in work (Andreassen et al., 2012), work addiction should be considered theoretically different than other constructs (Griffiths et al., 2018).

Additionally, the BWAS-T was strongly correlated with the DASS-21 and its subscales. This may be related to that fact that where any behavior is classified as a true addiction, the disadvantages of its long-term effects significantly outweigh the advantages (Griffiths et al., 2018). The findings also showed that the participants with a psychiatric/psychological diagnosis at least once in their lifetime reported higher scores on work addiction as compared to other participants who do not. This result supports previous findings showing the positive relationship between work addiction and a wide variety of psychological problems such as attention-deficit and hyperactivity disorder, depression (Atroszko et al., 2017), stress, anxiety, and sleep disturbance (Hancock et al., 2019).

Regarding the cut-off criterion used, 18.1% of the study sample were operationally categorized as addicted to work. Andreassen et al. (2012) stated that being in a leadership position was positively correlated with the prevalence of work addiction. Similarly, two-thirds of the participants in the present study (i.e., 67.9%) reported as working in non-managerial positions. However, there was no significant difference on work addiction scores between non-managerial group and managerial group. In the present study, it was also found that the number of weekly working hours among the work addict group was significantly higher than the non-addicts. This result supports the salience component of work addiction. The findings of the present study also showed that work addiction was positively correlated with self-reported number of hours worked per day and of days per week. The behavioral domain of work addiction involves long working hours, which has been supported by other previous studies (Andreassen et al., 2012; Atroszko et al., 2017).

As aforementioned, the relationship among situational, structural, and individual characteristics of work and work addiction was also investigated. It was found that when the number of working years increased, the level of work addiction decreased in the present study. This may be explained in a sociocultural context. At younger ages, individuals with no familial duties can feel a sense of accomplishment. However, the same working behavior of an older individual is likely to be criticized by family members or significant others (Griffiths, 2005b). Similarly, the findings indicated a negative correlation between work addiction and age. In

other words, as the age of participants increased, their level of work addiction decreased. This result is consistent with previous research (Andreassen et al., 2016) and may be explained by possible changes in the life of the individual as they get older (e.g., better financial situation, increased sense of accomplishment, and support of spouse) (Sussman, 2012).

In addition, some sociodemographic variables may facilitate work addiction (Sussman, 2012). Previous studies have found that work addiction is more prevalent among females than males (Buelens & Poelmans, 2004; Burke & Matthiesen, 2009). Similarly, women reported significantly higher scores on work addiction than men in the present study. However, men have more opportunity to work longer hours and engage in less housework in Turkish culture which has patriarchal characteristics (Kağıtçıbaşı, 1981). This result may be due to the proportion of women and men in the present study. If participants of further studies are recruited from equal numbers of members, more representative results can be acquired statistically.

Work addiction was negatively correlated with having satisfactory relationships with manager(s), whereas no significant correlation between work addiction and having satisfactory relationships with co-workers was found. This result may be interpreted in the light of assumption that one component of addictive behaviors is conflict in relationships (Griffiths, 2005a). While someone addicted to work devotes energy on work, she/he may not have any time to form meaningful relationships with other colleague, and therefore, it may not be a matter of concern. On the other hand, if that individual works with a manager, it requires the maintenance of the relationship. In terms of being satisfied with the physical comfort and surroundings of workspace, esthetics of the work environment, and financial rewards, work addiction was also negatively correlated with these three variables. Overall, these facilities may be expected to increase work motivation and enjoyment. However, work addiction may not include such positivity in its nature.

Overall, the findings of the present study supported the psychometric characteristics of the BWAS among a Turkish sample. However, the present study has some limitations. First, the sample may not be representative to all classes in terms of occupational type. Although many different occupations were represented in the present study, their proportions were not necessarily representative in terms of population characteristics. Second, test-retest analysis would have strengthened the findings regarding reliability. Third, the findings of this study were based on self-report. Since relying solely on self-report is controversial issue in the literature (i.e., there are many well-known methods biases), qualitative studies (e.g., interviews, case studies) may enrich findings of future studies.

Declarations

Ethical Approval Prior to data collection, ethical approval was sought by the research team's university ethics committee and the study was carried out according to the principles of the Helsinki declaration.

Conflict of interest The authors declare that they have no conflicts of interest.

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