Cross-Cultural Validation of the Turkish Version of the Decent Work Scale

Erkan Işık¹, Saliha Kozan², and Ayşe Negiş Işık³

Abstract
This study examined the psychometric properties of the Turkish version of the Decent Work Scale (DWS), a recently developed measure that assesses the psychological experience of the quality of one's work life. The proposed five-factor structure was verified with a sample of 326 Turkish working adults. Consistent with previous research, a five-factor bifactor model showed best fit to the data. The results of multigroup confirmatory factor analysis showed that the structure of the instrument was invariant across gender, income, and social class groups. Convergent and discriminant validity were supported by positive correlations with person–organization fit, job satisfaction, life satisfaction, and work meaning and by negative correlations with withdrawal intentions. Evidence of predictive validity was obtained by regressing the five subscales on four outcome measures. These findings suggest that the Turkish version of the DWS can be used for assessing decent work among Turkish working adults and cross-cultural psychological research.

Keywords
decent work, psychology of working, scale validation, measurement invariance, cross-cultural psychology

With the growing levels of social and economic inequality, instability, and precarity in the global workforce (Benach, Vives, Tarafa, Delclos, & Muntaner, 2016; Guichard, 2013; International Labor Organization [ILO], 2008, 2012; Standing, 2016), the concept of decent work has attracted noteworthy attention from researchers and stakeholders involved in the world of work. The Decent Work Agenda (ILO, 2008, 2012) has been an important initiative that has increased the momentum toward research on decent work as numerous scholars from economy, philosophy, and sociology have

¹ Department of Guidance and Psychological Counseling, Cyprus International University, Nicosia, Mersin, Turkey
² Licensed Counseling Psychologist, Konya, Turkey
³ Department of Educational Sciences, Cyprus International University, Nicosia, Mersin, Turkey

Corresponding Author:
Erkan Işık, Department of Guidance and Psychological Counseling, Cyprus International University, 99040, Nicosia, North Cyprus, Mersin 10, Turkey.
Emails: eisik@ciu.edu.tr; erkanthelight@gmail.com
discussed this concept using macrolevel perspectives (Barrientos, Mayer, Pickles, & Posthuma, 2011; Burchell, Sehnbruch, Piasna, & Agloni, 2014; Deranty & MacMillan, 2012; Standing, 2008).

Emphasizing psychologists’ crucial roles in promoting decent work through developing individual-level conceptualizations and interventions, vocational psychologists (e.g., Blustein, Olle, Connors-Kellgren, & Diamonti, 2016; Di Fabio & Kenny, 2016; Di Fabio & Maree, 2016; Guichard, 2013) have called for integrating a psychological perspective into the literature on decent work. In fact, decent work has been at the heart of the Psychology of Working Theory (PWT; Duffy, Blustein, Diemer, & Autin, 2016), which explores the roles of psychological, contextual, and economic factors in one’s career development, including their access to decent work. Specifically, Duffy and colleagues have listed five components of decent work building on the guidelines from the ILO (2008, 2012): (a) interpersonally and physically safe working environments, (b) hours that allow for adequate rest and free time, (c) organizational values that are in congruence with family and social values, (d) adequate compensation, and (e) access to adequate health care.

In an attempt to assess the components of decent work, Duffy and colleagues (2017) have recently developed the multidimensional Decent Work Scale (DWS) that confirmed a five-factor structure of decent work and demonstrated reliability and validity with two samples of working adults in the United States. Nonetheless, there is a need for studies that examine the applicability of the DWS in populations and cultures outside the United States. In the present study, our goal is to address this need by presenting the Turkish version of the DWS and assessing the validity of it with Turkish adults. Within the following sections of this article, we provide a psychological conceptualization of decent work drawing from the PWT model and discuss the relevance of a cross-cultural validation of the DWS for Turkish working adults.

A Psychological Perspective on Decent Work: The Psychology of Working Theory

The conceptualizations of decent work have been largely based on macrolevel perspectives focusing on global labor market indices such as unemployment and vulnerable employment (Blustein et al., 2016; Burchell et al., 2014; ILO, 2017a). These definitions of decent work, however, often fail to reflect the ways in which people experience or make meaning of their work lives (Sehnbruch, Burchell, Agloni, & Piasna, 2015; Standing, 2008). While the primary goal of the ILO’s (1999) decent work initiative was “to promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity” (p. 3), it has been critiqued for straying from this mission by switching from social conceptualizations of working toward market-driven descriptions that may disregard workers’ rights and/or interests (Blustein et al., 2016; Burchell et al., 2014; Deranty & MacMillan, 2012; Ribeiro, Silva, & Figueiredo, 2016).

The PWT model (Duffy et al., 2016) offers an inclusive, social justice–focused perspective on decent work that centers on the needs and experiences of working people including those with limited control over their career choices. Built on the tenets of the previously developed psychology of working framework (PWF; Blustein, 2006, 2013), the PWT locates decent work as a main outcome of the relationships among psychological, contextual, and economic factors, and examines how economic constraints and experiences of marginalization shape the attainment of decent work. In this model, one’s work volition (i.e., autonomy of work choice despite constraints) and career adaptability (i.e., ability to use resources to manage work-related tasks or stressors) are postulated to partially explain the relationship between contextual factors and decent work. In this sense, people with greater economic difficulties and marginalization experiences are less likely to feel volition and be adaptable and, in turn, are less likely to secure decent work. The PWT model also hypothesizes that psychological variables, namely, critical consciousness, social support, and proactive
personality, and economic conditions, can help to diminish the negative effects of contextual barriers on one’s access to decent work.

According to the PWT model (Duffy et al., 2016), decent work mediates the relationships between contextual factors and work and well-being outcomes in that when people obtain decent work, working can enhance their work fulfillment and overall well-being through the satisfaction of three basic human needs: survival and power, social connection, and self-determination. First, working has the potential to fulfill survival and power needs which relate to the physiological needs (e.g., food and shelter) and social capital that gives access to opportunities. Next, working provides opportunities for building social connections; therefore, it can help individuals meet their needs to connect with others and develop a sense of belonging to the larger society. Lastly, working can fulfill self-determination needs reflecting the need to involve in meaningful and value-congruent activities through experiencing autonomy, competence, and relatedness. Duffy and colleagues have postulated that by enabling the fulfillment of these needs, decent work can lead to work fulfillment and overall well-being.

Work in Turkey

Founded in the 1920s, Turkey has struggled with gaining economic and political stability throughout its history. In addition to the multiple economic crises that affected the large segments of the population in the past, the political challenges that have increased since 2016 have fueled the uncertainties about the economic growth (ILO, 2017b). Moreover, economic and political crises in the world, such as the Great Recession, international terrorism, and the refugee crisis deepened by the civil war in Syria, have put burdens on the Turkish economy and workforce (Ceritoglu, Yüncüler, Torun, & Tümen, 2017). In conjunction with these problems, the unemployment rate, which is currently over 10%, has increased in the past few years (Organisation for Economic Co-operation and Development [OECD], 2017). Youth unemployment rate, including people aged 15–24, is another vexing issue for the Turkish workforce as it is over 20% (Turkish Statistical Institute, 2017).

In addition to the persisting unemployment problem (Zeytinoğlu et al., 2012) and regional unemployment disparities (Filiztekin, 2009), OECD’s (2017) recent report underscores concerns regarding the quality of working in Turkey. Among the problems of the workforce in Turkey are high job insecurity, limited occupational safety and health, large informal employment characterized by inadequate social protection, limited labor market inclusiveness, and wide employment gap between 25- to 54-year-old men and disadvantaged groups (e.g., women, immigrant youth, and people with disabilities). These problems certainly reflect social inequalities that impact the lives of Turkish people who work or who seek work. For example, despite constituting an important proportion of the workforce, Turkish women deal with gender discrimination in a relatively patriarchal and conservative context where traditional gender roles are widely accepted (Aycan & Eskin, 2005; Sümer, 2006; Toker & Sümer, 2010). Women in Turkey face ambivalent sexism, a combination of hostile and benevolent sexism (Glick & Fiske, 2001), at both work and other realms of life (Toker, 2016), posing major barriers to their access to several domains of decent work including adequate payment/benefits and safe working conditions.

Similarly, sexual minorities in Turkey are prone to human rights violations and discriminatory incidents, which might encompass social rejection, workplace harassment, and termination of employment that prevent majority of this population from coming out at workplace (Göçmen & Yılmaz, 2017; Öztürk, 2011). Parallel with Blustein’s (2006, 2013) points on the lack of vocational choice among marginalized populations, Turkish people from disadvantaged backgrounds, especially poor and working-class individuals, have to take “any job,” although it may not be fulfilling or decent. Considering the implications of unemployment/underemployment and precarious working
conditions for health and well-being (Benach et al., 2016; Griep et al., 2016), these issues warrant attention in research on work-related experiences of Turkish individuals.

**Turkish Cultural Context**

Having deep roots in Central Asia, Turkish culture has blended with Middle Eastern, European, and Mediterranean cultures throughout the past millennium. The modern Turkish culture connects Eastern values and lifestyles with those from the West creating a distinctive fusion of vastly diverse cultures. With modernization, Turkish society has been transitioning toward individuation (İmamoğlu & Karakitapoğlu Aygün, 1999; Karakitapoğlu Aygün & İmamoğlu, 2002); notwithstanding, in comparison to the Western cultures, Turkish culture could still be described as collectivist (Sunar, 2002) in which one exists in relation to their family and community. While material interdependence between Turkish generations has deceased with urbanization and socioeconomic development in the past decades, psychological interdependence continues as it is embedded in the culture of relatedness (Kağtıbaşı, 2005).

In conjunction with its values around collective harmony and conformity, Turkish culture places strong emphasis on family ties and loyalty (Aslan, 2009). Accordingly, the role of working in relation to family responsibilities and other social positions in this cultural context might be different than its role in the Western cultures. Along the same lines, the work–life balance might have a different meaning for Turkish individuals than it has for individuals from more individualistic cultures. Taking these cultural aspects into account, it is possible that Turkish workers construe decent work differently than their North American counterparts; however, we also assume that the components of decent work, which were proposed based on the ILO’s standards (Duffy et al., 2016), are likely to be important to Turkish workers given that these components reflect the basic human needs that work has the potential to fulfill. Therefore, it is crucial to assess these assumptions and to further explore Turkish adults’ understandings of decent work.

An examination of the work-related experiences of Turkish working adults also requires paying attention to the aforementioned political and socioeconomic issues in Turkey, which are likely to affect people’s work lives and well-being. These cultural, socioeconomic, and political factors highlight the necessity of using contextually informed and culturally affirming approaches when investigating the work-related experiences of Turkish adults. Although the PWT has not been tested in the Turkish cultural context, we believe that its integration of the psychological, contextual, and economic factors as they interact with working (Duffy et al., 2016) fits well with our goal of exploring the experiences of Turkish adults. In addition, the PWT’s balanced approach to the individual and contextual factors that shape one’s work life aligns with the characteristics of the Turkish culture, which incorporate individualistic and collectivist values. Lastly, the PWT model’s emphasis on decent work as a central variable that mediates the relationships between contextual variables and work fulfillment and overall well-being seems to be compatible with our aim to assess decent work among Turkish adults.

As we concur with other scholars (e.g., Blustein et al., 2016; Guichard, 2013; Pouyaud, 2016) on contributing to the advancement of decent work through psychological theories and practices, in the present study, we aim at testing the cultural equivalence of decent work as described in the PWT and the applicability of the DWS (Duffy et al., 2017) to the Turkish adults. We believe that providing a self-report measure of decent work with evidence of reliability and validity can help Turkish psychologists and counselors better understand individuals’ work-related experiences by assessing their attainment of decent work. In addition, a psychometrically robust decent work measure has the potential to contribute to the psychological interventions that focus on enhancing Turkish individuals’ work lives by providing ideas regarding which specific decent work domain to target in research and practice.
For evidence of construct validity of the Turkish version of the DWS, we explored the relationships between decent work and outcome variables based on the PWT model (Duffy et al., 2016). Specifically, we hypothesized that people who reported higher levels of decent work would be more likely to perceive their work as a good fit, find meaning in work, be satisfied with their jobs, and be less likely to have intentions to withdraw from their jobs. Additionally, due to the role of decent work in people’s general well-being (Blustein et al., 2016; Duffy et al., 2016), we hypothesized that a greater level of decent work would be linked to greater life satisfaction. We also expected that, among the subscales of the DWS, scores on the Complementary Values subscale that measures the extent to which values of an individual’s organization are in line with their family and community values would be more strongly associated with scores from measures of organizational fit (Cable & DeRue, 2002) and work meaning (Steger, Dik, & Duffy, 2012) than the other subscales. To examine the predictive evidence of validity, we explored whether the subscale scores would predict the outcomes of decent work. We regressed the five subscales on the outcome measures (i.e., job satisfaction, life satisfaction, work meaning, and withdrawal intentions) and explored which components of decent work predicted these outcomes significantly when other components were accounted for.

**Method**

**Participants and Procedures**

The sample included 326 Turkish working adults living in Turkey and North Cyprus, the Turkish portion of the Mediterranean island of Cyprus which is located south of Turkey. Participants ranged in age from 18 to 60 (\(M = 30.4, SD = 9.3\)), and self-identified as male (\(n = 174, 53.4\%\)) and female (\(n = 152, 46.6\%\)). In terms of highest level of education earned, 15.6\% (\(n = 51\)) had less than high school education, 17.2\% (\(n = 56\)) had a high school diploma, 3.1\% (\(n = 10\)) had a vocational high school diploma, 14.1\% (\(n = 46\)) had a 2-year college degree, 36.8\% (\(n = 120\)) had a 4-year college degree, and 13.2\% (\(n = 43\)) had a graduate/professional degree. Participants’ monthly income ranged from 1,000 Turkish Liras (TLs) to 15,000 TLs (\(M = 2,875\) TLs, \(SD = 1,721\) TLs), and eight participants (2.5\%) declined to give information about their income. The sample included a wide array of occupations representing 94 unique job titles. Among the most frequently reported job titles were teacher (\(n = 46, 13.3\%\)), salesperson (\(n = 28, 8.1\%\)), and waiter (\(n = 25, 7.2\%\)).

After the IRB approval was received through the first author’s institution, an online link for the web-hosted survey page that included an informed consent and a questionnaire battery was sent to the potential participants. All of the data collection tools were in Turkish. We initially recruited 115 participants via word-of-mouth and personal contacts using a snowball sampling. Considering that Turkish people from lower socioeconomic backgrounds may lack access to the Internet or may find it inconvenient to complete the online questionnaires, we continued data collection by giving the hard copy of the questionnaire battery to the working adults in the community such as retail workers. To increase the sample size, we also provided training on the purpose of the present study and ethical issues pertaining to conducting psychological research (e.g., confidentiality, voluntary participation) to 54 undergraduate psychological counseling students who volunteered to collect data in the community.

Specifically, the students received 1 hr of instruction by the first author on how to inform participants about the study, obtain verbal/written informed consent, administer the batteries, and debrief participants. Following the instruction, they visited local shops, markets, and restaurants during off-peak hours, and administrated the batteries to volunteer workers with the permission of the employer. This method increased the diversity within the sample in terms of education, income levels, and occupations. All participants were debriefed about the purpose of the study after
completing the survey, and no incentives were offered for participation. Of the 320 questionnaire batteries distributed, 274 were returned (85.6% response rate). While the initial sample size was 389, we removed 55 surveys from the data set, either because they were incomplete or failed to respond to the two repeated items inserted for validity check in a similar way (i.e., within 1 scale point of the previous answer). Finally, we detected eight outliers using Mahalanobis distance and eliminated them from the data set, which resulted in a final total of 326 participants.

**Instruments**

**Decent work.** Decent work was measured using the 15-item DWS (Duffy et al., 2017), which was associated with five dimensions of decent work. These 3-item components include: interpersonally and physically safe working environments, access to adequate health care, hours that allow for adequate rest and free time, adequate compensation, and organizational values that are in congruence with family and social values. Sample items from each respective subscale are “I feel emotionally safe interacting with people at work,” “I have a good health-care plan at work,” “I am rewarded adequately for my work,” “I have free time during the work week,” and “My organization’s values align with my family values.”

The first and second authors, who are bilingual in Turkish and English, worked individually to translate the original version of the DWS from English to Turkish. Next, the Turkish translation of the DWS was back-translated to English by two independent translators. Lastly, the first two authors reviewed the original and back-translated scale items and reached consensus when eliminating discrepancies in item meanings. During the cross-cultural adaptation procedures, considerable attention was paid to the comprehensibility and relevance of the items to the Turkish cultural and working/organizational context. At the end of the translation process, none of the items from the original DWS were removed; however, a few items were slightly edited because some terms were not applicable in the Turkish working context (e.g., the words “health-care plan” in item 5 of the original scale was replaced with “health-care premiums” which are more common in Turkey). Participants were prompted to answer each item using a 7-point Likert-type scale ranging from strongly disagree to strongly agree. Four of the items were negatively worded, so they were reverse-scored with higher scores on the subscales and total scale indicating greater levels of decent work (see Appendix Table A1 for the Turkish version of the DWS).

In Duffy and colleagues’ (2017) study, the five subscales yielded the following internal consistency scores: safe working conditions (α = .79), access to health care (α = .97), adequate compensation (α = .87), free time and rest (α = .87), and complementary values (α = .95). The total scale was reported to have internal consistency reliability of α = .86. Duffy and colleagues’ (2017) second study examining the validity of the DWS found that the total scale score and subscale scores correlated in the hypothesized directions with analogous constructs (e.g., health-care satisfaction, work safety) demonstrating evidence for convergent and discriminant validity. Additionally, subscale scores predicted job satisfaction, work meaning, and withdrawal intentions indicating predictive validity of this scale. In another study exploring decent work among employed sexual minority adults in the United States (Douglass, Velez, Conlin, Duffy, & England, 2017), the estimated internal consistency reliabilities for the respective subscales were α = .84, α = .97, α = .84, α = .85, and α = .88, and the estimated internal consistency reliability for the total subscale was α = .85. Within the present study, the estimated internal consistency scores for each subscale were α = .80, α = .78, α = .80, α = .81, and α = .93, respectively.

**Work meaning.** The level of meaning participants found in their work was assessed with the 3-item Meaning Making through Work subscale of the Work and Meaning Inventory (WAMI; Steger et al., 2012) in which items are rated on a 5-point Likert-type scale varying from absolutely untrue to
The items were: “I view my work as contributing to my personal growth,” “My work helps me better understand myself,” and “My work helps me make sense of the world around me.” Steger and colleagues found that the total WAMI had high internal consistency reliability ($\alpha = .93$) with a coefficient of .82 for the Meaning Making through Work subscale, and as hypothesized, the scores on this measure correlated with indicators of work-related and general well-being. In addition, the Turkish version of the WAMI Meaning Making through Work subscale has evidenced some internal consistency reliability ($\alpha = .64$) where the overall WAMI had internal consistency reliability of .86, and test-retest reliability of .69. Scores on this scale positively correlated with the scores on a measure of job crafting (Akın, Hamedoğlu, Kaya, & Sarıçam, 2013). In this study, the estimated internal consistency reliability of scale scores was $\alpha = .85$.

**Perceived fit.** To assess participants’ fit with their jobs, we used the 3-item person–organization fit (P-O fit) subscale from Cable and DeRue’s (2002) 9-item subjective fit perceptions scale. This subscale prompts participants to rate the congruence between their personal values and their organization’s culture (e.g., “My personal values match my organization’s values and culture”) on a 7-point Likert-type scale ranging from strongly disagree to strongly agree. Previous research using the P-O fit subscale reported good reliability estimates ($\alpha = .91$ to .97) and found that it correlated with measures of organizational identification, citizenship behaviors, and turnover decisions (Cable & DeRue, 2002; Duffy et al., 2017). The reliability estimate for the P-O fit subscale in a previous study that examined this measure with Turkish employees was .89 (Behram & Dinç, 2015). Additionally, Behram and Dinç reported that the scores on the Turkish version of the P-O fit subscale negatively correlated with measures of withdrawal intentions and interpersonal conflict at work. In the present study, the reliability estimate for this subscale was $\alpha = .90$.

**Withdrawal intentions.** Participants’ intentions to withdraw from their occupations were measured using 3 items (Blau, 1985) rated from 1 (very unlikely) to 5 (very likely). The items in this scale were “I am thinking about leaving my current occupation,” “I am actively searching for an alternative to my occupation,” and “I intend to stay in my current occupation for some time.” Previous research using this instrument found estimated internal consistency reliabilities ranging from .70 to .87 and test–retest reliability of .60 (Blau, 1985, 1989, 2000). Scores on this instrument also correlated with measures of occupational/work commitment in predicted directions. İbrahimoğlu and Aydınceli (2013) found that scores from the Turkish version of this subscale to have internal consistency reliability estimate of .80 and negatively correlate with the measures of self-efficacy and job performance. In this study, the estimated score for the internal consistency reliability was $\alpha = .90$.

**Job satisfaction.** Job satisfaction was assessed with a single item asking respondents to rate their overall satisfaction with their current job on a scale from 1 (strongly disagree) to 7 (strongly agree). Previous studies demonstrated that single-item measures of job satisfaction are valid and inclusive way of assessing overall job satisfaction, which gives researcher the advantage of application to a wide array of occupations (Oshagbemi, 1999; Wanous, Reichers, & Hudy, 1997). In the studies that examined the Turkish version of the single-item job satisfaction measure, the scores on this measure positively correlated with measures of overall job satisfaction (Bilgiç, 1998; Eker, Tüzün, Dașkapan, & Sürenkök, 2004).

**Life satisfaction.** We used Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) to measure global life satisfaction. The SWLS consists of 5 items reported along a 7-point continuum from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating greater satisfaction with life. Sample items include: “In most ways my life is close to my ideal” and “The conditions of my life are excellent.” Diener and colleagues (1985) reported an estimated
internal consistency reliability of .87 and a 2-month test–retest reliability of .82. The Turkish version of the SWLS also demonstrated good psychometric properties, with estimated internal consistency reliabilities ranging from .81 to .89, and correlated with the measures of depression, self-esteem, positive and negative affect, work stress, and income in the expected directions (Durak, Şenol-Durak, & Gençöz, 2010). The estimated internal consistency reliability of the SWLS for this study was \( \alpha = .85 \).

**Results**

**Preliminary Analysis**

Prior to analysis, all study variables were screened for missing data, normal distribution, and outliers. The number of missing values was relatively small (\( \leq 0.9\% \) per item) and Little’s missing completely at random test suggested that the data were missing at random (\( p > .05 \)). Thus, we imputed missing values using Expectation Maximization algorithm provided by SPSS 22. Skewness and kurtosis values for the items and subscales ranged from -1.01 (item 3) to 0.24 (item 12) and -1.28 (item 4) to 0.06 (item 3), respectively, which fell within the acceptable range for univariate normality (Kline, 2016). However, the assumption of multivariate normality was violated as the Mardia’s coefficient was above the recommended cutoff value of <5 (Bentler, 2004).

**Factor Structure**

To test the factor structure of the multidimensional DWS, we conducted a series of confirmatory factor analyses (CFAs) using AMOS 22 with maximum likelihood estimation. Given the absence of multivariate normality, we used bootstrapping technique with 2,000 iterations to estimate the parameters. Because the \( \chi^2 \) test is sensitive to sample size (Kline, 2016), four fit indices were used for evaluating the models: the comparative fit index (CFI), Tucker–Lewis fit index (TLI), root mean square error of approximation (RMSEA), and the standardized root mean residual (SRMR). Values of CFI and TLI \( \geq .95 \), RMSEA \( \leq .06 \), and SRMR \( \leq .08 \) were considered as indicative of good fit (Hu & Bentler, 1999).

Three different types of CFA models were estimated: (a) a correlational model that consisted of five specific Decent Work subscales which were allowed to be correlated; (b) a higher order model that included one general higher order decent work factor subsuming all five lower order factors which were not allowed to covary; and (c) a bifactor model in which each of the 15 items is freely loaded on a general decent work factor as well as their five uncorrelated respective factors. To compare these models, we used CFI difference criteria of .01 as the \( \chi^2 \) difference is sensitive to sample size (Cheung & Rensvold, 2002).

**Correlational model.** The correlational model had good fit to the data, \( \chi^2(80) = 158.62, \ p < .001 \), CFI = .97, TLI = .96, RMSEA = .06, 90\% CI [.04, .07], and SRMR = .06. All factor loadings were significant (\( p < .001 \)) and above .30.

**Higher order model.** The higher order model had slightly worse fit than the correlational model, \( \chi^2(85) = 178.93, \ p < .001 \), CFI = .96, TLI = .95, RMSEA = .06, 90\% CI [.05, .07], and SRMR = .07, but the change in CFI was below the threshold (\( \Delta \text{CFI} = .007 \)), suggesting that the models were not practically different.

**Bifactor model.** The bifactor model had a better fit than the correlational model, \( \chi^2(75) = 125.91, \ p < .001 \), CFI = .98, TLI = .97, RMSEA = .05, 90\% CI [.03, .06], and SRMR = .05, and this change was significant in terms of the practical difference test, \( \Delta \text{CFI} = .019 \). Thus, the bifactor model with
one general decent work factor and five specific orthogonal factors of safe working conditions, access to health care, adequate compensation, free time and rest, and complementary values showed best fit to the data. All factor loadings, except for 2 items on the general factor, were significant, and the majority of the factor loadings (11 of 15) were higher on the specific factors than on the general factor (see Figure 1). As the bifactor model was the best fit to the data, we employed further reliability and measurement invariance analyses on this model.

**Reliability**

For reliability assessment, using a Microsoft Excel-based tool (Dueber, 2017), we calculated omega (ω), omega hierarchical (ωH), and explained common variance (ECV), which were suggested for bifactor models because of their advantages over Cronbach’s α (Rodriguez, Reise, & Haviland, 2016a). The ω is a model-based reliability estimate which takes into account the proportion of variance in an observed scale score that is attributable to all sources of common variance (Reise, Bonifay, & Haviland, 2013; Rodriguez et al., 2016a). The ω coefficient for the total DWS score was .91, suggesting that 91% of the variance in the total DWS score is explained by five factors and 9% is attributable to error. The ω reliabilities of the subscales were ωS = .80 for safe working conditions, ωS = .82 for access to health care, ωS = .83 for adequate compensation, ωS = .83 for free time and rest, and ωS = .93 for complementary values. Although there is no critical cutoff point for ω coefficient to evaluate acceptable reliability, a minimum of .50 and values closer to .75 are recommended for satisfactory and good reliability, respectively (Reise et al., 2013). Thus, the present findings that all coefficients were above .75 could be regarded as an evidence of high reliability.

The ωH was calculated to make a decision about the unidimensionality of the DWS, in which values over .80 (Rodriguez, Reise, & Haviland, 2016b) indicate that a substantial proportion of the variance in the total DWS can be attributed to a single factor. ωH for the total scale was .58. For further understanding, making a comparison between ωH and ω for the total scale score of .91

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**Figure 1.** Confirmatory bifactor model of the Turkish version of the Decent Work Scale. *p < .001.
is necessary. For the DWS total score, 64% (.58/.91) of the reliable variance is attributable to the general factor, and 33% (.91–.58) is attributable to the subscale factors. \( \omega_H \) for subscales (\( \omega_{HS} \)) reflecting subscale reliability estimates after controlling for the general factor ranged from .43 to .82. When \( \omega_S \) and \( \omega_{HS} \) values for the subscales of adequate compensation (.83 vs. .72) and free time and rest (.83 vs. .82) were compared, substantial variance was attributable to these subscales. \( \omega_H \) subscale values were lower for safe working conditions (.80 vs. .43), access to health care (.82 vs. .46), and complementary values (.93 vs. .51), yet variance explained by each subscale was high enough for their use as separate subscales. Lastly, the ECV was .30, indicating that the general DWS factor accounted for 30% of the common variance and 70% of the common variance was spread among the subscales.

### Factorial Invariance

To examine the equivalence/invariance of the bifactor model across gender, income, and subjective social class groups, we conducted a multigroup CFA (see Table 1). For income and social class comparisons, we first created subgroups by splitting the variables at their mean scores. Using participants’ mean monthly income of 2,875 TLs, we created two subgroups as high and low income. To make subjective social class comparisons, we used the mean score of 5.8 from the MacArthur Scale of Subjective Social Status which measures perceived social status by asking participants to indicate their place in a representative social ladder relative to others in their country on a 10-point scale (Adler, Epel, Castellazzo, & Ickovics, 2000).

In the next step, following a hierarchical procedure (Dimitrov, 2010; Vandenberg & Lance, 2000), we first tested a baseline model with no equality constraints across groups (M0: configural model). Considering gender groups, the configural invariance model fitted the data well, \( \chi^2(150) = 250.46, p < .001, \text{CFI} = .96, \text{TLI} = .94, \text{RMSEA} = .05, 90\% \text{CI} [.04 \text{ to } .06], \) and SRMR = .07. Regarding income groups, the results revealed that the model achieved good model fit, \( \chi^2(150) = 279.35, p < .001, \text{CFI} = .95, \text{TLI} = .93, \text{RMSEA} = .05, 90\% \text{CI} [.04 \text{ to } .06], \) and SRMR = .08. With regard to social class groups, the configural model had also good fit with the data, \( \chi^2(150) = 201.07, p < .001, \text{CFI} = .98, \text{TLI} = .97, \text{RMSEA} = .03, 90\% \text{CI} [.02 \text{ to } .04], \) and SRMR = .06. These results indicated that the factor structures were not different across gender, income, and social class groups.

### Table 1. Measurement Invariance Tests of the Bifactor Model Across Gender, Income, and Subjective Social Class Groups.

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA [90% CI]</th>
<th>Comparison</th>
<th>( \Delta \text{CFI} )</th>
<th>( \Delta \text{RMSEA} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M0 (configural)</td>
<td>250.46</td>
<td>150</td>
<td>.943</td>
<td>.959</td>
<td>.045 [.035, .055]</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M1 (metric)</td>
<td>291.77</td>
<td>180</td>
<td>.947</td>
<td>.955</td>
<td>.044 [.034, .053]</td>
<td>M0 vs. M1</td>
<td>.004</td>
<td>.001</td>
</tr>
<tr>
<td>M2 (scalar)</td>
<td>327.39</td>
<td>195</td>
<td>.942</td>
<td>.946</td>
<td>.046 [.037, .054]</td>
<td>M1 vs. M2</td>
<td>.009</td>
<td>.002</td>
</tr>
<tr>
<td>Income groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M0 (configural)</td>
<td>279.35</td>
<td>150</td>
<td>.925</td>
<td>.946</td>
<td>.052 [.043, .062]</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M1 (metric)</td>
<td>307.89</td>
<td>180</td>
<td>.938</td>
<td>.947</td>
<td>.047 [.038, .056]</td>
<td>M0 vs. M1</td>
<td>.001</td>
<td>.005</td>
</tr>
<tr>
<td>M2 (scalar)</td>
<td>351.77</td>
<td>195</td>
<td>.930</td>
<td>.939</td>
<td>.050 [.042, .059]</td>
<td>M1 vs. M2</td>
<td>.008</td>
<td>.003</td>
</tr>
<tr>
<td>Social class groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M0 (configural)</td>
<td>201.07</td>
<td>150</td>
<td>.970</td>
<td>.978</td>
<td>.032 [.019, .044]</td>
<td>—</td>
<td></td>
<td></td>
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<tr>
<td>M1 (metric)</td>
<td>228.85</td>
<td>180</td>
<td>.976</td>
<td>.979</td>
<td>.029 [.016, .040]</td>
<td>M0 vs. M1</td>
<td>.001</td>
<td>.003</td>
</tr>
<tr>
<td>M2 (scalar)</td>
<td>261.38</td>
<td>195</td>
<td>.970</td>
<td>.972</td>
<td>.032 [.021, .042]</td>
<td>M1 vs. M2</td>
<td>.007</td>
<td>.003</td>
</tr>
</tbody>
</table>

Note. TLI = Tucker–Lewis fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.
Subsequently, we tested metric invariance by constraining all factor loadings to be equal across groups (M1: metric model) and compared these results with those from M0. The metric invariance models also produced good data fits across gender, income, and social class groups (see Table 1). Furthermore, an examination of the changes in CFI and RMSEA between M0 and M1 revealed that the values did not exceed the recommended cutoff criteria of $|\Delta \text{CFI}| \leq .01$ and $|\Delta \text{RMSEA}| \leq .015$ (Cheung & Rensvold, 2002), thus supporting metric invariance. Lastly, we tested scalar invariance by constraining indicator intercepts and factor loadings to be the same across groups (M2: scalar model) and compared the results to M1. Similarly, the scalar invariance models yielded good fit and the drop in CFI and RMSEA values were in the accepted range ($|\Delta \text{CFI}| \leq .01$; $|\Delta \text{RMSEA}| \leq .015$), thus providing support for scalar invariance of the bifactor model across gender, income, and social class groups.

**Convergent and Discriminant Validity**

To further examine construct validity, we examined the correlations between the DWS subscale and total scale scores with P-O fit, job satisfaction, life satisfaction, work meaning, and withdrawal intentions scores (see Table 2). Drawing from the PWT model (Duffy et al., 2016) and Duffy and colleagues’ (2017) study on the initial validation of the DWS (Duffy et al., 2017), we expected the DWS total scale and five subscales scores to correlate positively with P-O fit, job satisfaction, life satisfaction, and work meaning and to correlate negatively with withdrawal intentions. We also expected that the scores on the Complementary Values subscale would be more strongly correlated with the scores on the measures of P-O fit and work meaning than the other subscales. As expected, the DWS total scale correlated positively with P-O fit ($r = .65$), job satisfaction ($r = .52$), life satisfaction ($r = .52$), and work meaning ($r = .53$) and negatively with withdrawal intentions ($r = -.43$). Regarding the subscales, low to high correlations were also found with P-O fit ($rs = .19$ to .62), job satisfaction ($rs = .19$ to .37), life satisfaction ($rs = .17$ to .36), work meaning ($rs = .16$ to .45), and withdrawal intentions ($rs = -.21$ to -.32) in the expected directions. Of note, complementary values produced the highest correlation with P-O fit ($r = .62$) and work meaning
(r = .45) as compared to the other subscales. Using Fisher’s r-to-z transformation, we compared these correlations with those obtained from the other subscales and found that these associations were significantly higher for P-O fit (zs = 2.89 to 6.77, p < .05) and work meaning (zs = 2.09 to 4.11, p < .05). Lastly, all subscales correlated moderately to strongly with the DWS total scale ranging from r = .39 (free time and rest) and r = .69 (access to health care).

**Predictive Validity**

We also examined how well the five subscales of the DWS predicted four outcome variables (i.e., job satisfaction, life satisfaction, work meaning, and withdrawal intentions) through a series of hierarchical regression analyses. Results showed that the five subscales explained 28%, 26%, 24%, and 20% of the variance in job satisfaction, life satisfaction, work meaning, and withdrawal intentions, respectively. In addition, all five subscales significantly predicted job satisfaction (βs = .11 to .27), life satisfaction (βs = .10 to .23), and work meaning (βs = .10 to .23) while controlling for the other subscales. Regarding withdrawal intentions, the only significant predictors were adequate compensation (β = −.25), free time and rest (β = −.15), and complementary values (β = −.15), when the effects of the other subscales were accounted for.

**Discussion**

The aim of this study was to develop the Turkish version of the DWS (Duffy et al., 2017) and assess cross-cultural validity of this measure with a sample of Turkish working adults. Our overall results were, by and large, consistent and comparable with those obtained from the original study and suggested that the Turkish version of the DWS displayed adequate psychometric properties in terms of validity and reliability. In particular, we first compared three alternative models of the DWS measurement structure: a first-order correlation model, a second-order model, and a bifactor model. Although all three models yielded good fit statistics, the bifactor model provided the best solution. Thus, in line with Duffy et al.’s findings, the DWS consisted of a global decent work factor and five specific orthogonal factors. With the exception of 2 items in free time and rest factor, all items loaded on both the general decent work factor and the respective specific factors, suggesting that the items represent a multidimensional rather than unidimensional conceptualization of decent work. One possible explanation for the two nonsignificant loadings on the general factor may be explained by the nature of bifactor models where each item may not equally represent both the specific and global factors (Morin, Arens, & Marsh, 2016). This is particularly true, as in our case, when specific factors are modestly intercorrelated (Reise, Morizot, & Hays, 2007). As such, the items tend to have large loadings on the specific factors and smaller loadings on the general factor. The plausibility of these 2 items may have decreased as the specific free time and rest factor explained a large portion of the variance.

Regarding the dimensionality of the Turkish version of the DWS, the bifactor results yielded strong support for the use of specific factors (all loadings were significant and above .30), but gave only limited evidence for the use of the general decent work factor. Although 13 of the 15 items loaded significantly on the general factor, five of them had non-salient loadings (<.30) on the general factor. According to Reise, Moore, and Haviland (2010), if the items load strongly on the general factor and weakly on the specific factors, subscales make little sense. Conversely, if the items have substantial loadings on both specific and general factors, it is appropriate to use subscales. Given that the majority of the factor loadings were higher on the specific factors than on the general factor, we concluded that assessment of five Decent Work subscales might be more relevant than assessing a global decent work factor. Results suggesting that only 30% of the common variance was
attributable to the general DWS factor, and 70% is spread among the five subscales also support this conclusion.

As testing measurement invariance/ equivalence is important in valid score interpretations (Dimitrov, 2010), we also examined whether the five-factor bifactor model was similar across gender, income, and subjective social class groups. In accordance with Duffy et al.’s (2017) findings, the results of multigroup CFAs demonstrated that configural, metric, and scalar models provided good fit for each group. Further, a comparison of the models revealed that the fit did not decrease substantially for any of the models across groups. Thus, the Turkish version of the DWS reached measurement equivalence across different gender, income, and subjective social class groups, suggesting that the scale operates in a similar way for each group.

Finally, we examined the construct validity of the Turkish version of the DWS by exploring relationships of the DWS total and subscale scores with P-O fit, job satisfaction, work meaning, and withdrawal intentions. Consistent with Duffy et al.’s results (2017), positive correlations with P-O fit, job satisfaction, and work meaning and negative correlations with withdrawal intentions lent support for construct validity. In addition, five subscales of the DWS explained significant variances in outcome measures of job satisfaction, work meaning, and withdrawal intentions. Following Duffy et al.’s (2017) recommendations, we also tested how well the five subscales of the DWS predicted overall well-being, which is an important outcome of decent work according to the PWT (Duffy et al., 2016). Similar results were found as the subscales accounted for 26% of the variance in life satisfaction, with all five subscales making unique significant contributions. Taken together, these results provide additional support for the convergent, discriminant, and predictive evidence of validity of the DWS.

The present study has a number of strengths that should be noted. To our knowledge, this is the first cross-cultural validity study to examine the psychometric properties of the DWS and the five-factor bifactor model in a non-U.S. and non-English speaking sample. Almost all of the study results confirm the findings of the original DWS study (Duffy et al., 2017). Additionally, our results evidence construct validity with a measure of well-being which is an important outcome of decent work according to the PWT model (Duffy et al., 2016). The present study has also strengths in terms of the considerable diversity in its sample as we put deliberate efforts into diversifying our sample during data collection. To this end, we included individuals with limited work choice (i.e., individuals from lower socioeconomic backgrounds) in addition to those with presumably greater privilege and choice based on their professions and income. By collecting data in the community, we were able to reach out to working adults from diverse socioeconomic, occupational, and educational backgrounds. This recruitment method also allowed us to include more individuals with lower income and limited Internet use/literacy in the sample.

**Implications for Practice**

While there is a need for future studies that explore the cultural differences in defining decent work as well as the validity of the Turkish version of the DWS, results of the present study suggest some initial implications for psychological practice in Turkey. The field of counseling in Turkey continues to face professional and systemic problems that hinder its effectiveness (Stockton & Güneri, 2011). Therefore, individuals may lack access to a vocational counselor to address their work-related problems. In addition to vocational counselors, other mental health professionals (e.g., counseling and clinical psychologists) trained in vocational psychology or career development may find this measure beneficial when helping Turkish individuals who struggle with issues in their work lives. Using the Turkish version of the DWS in counseling and psychotherapy, practitioners might determine whether clients’ jobs match with the ILO’s (2008, 2012) standards for decent work. Additionally, they can assess their clients’ access to the specific decent work components and tailor their
interventions based on their assessment results. While this measure has the potential to be an effective assessment tool in practice, it is essential to pay attention to how each client makes meaning of their work lives and what decent/indecent work entails for them.

Joining the social justice–oriented scholars in vocational psychology (e.g., Blustein, 2006, 2013; Duffy et al., 2016; Richardson, 2012), we also assert that an explicit integration of a social justice agenda into individual- and systemic-level psychological interventions is warranted, particularly in countries where prevalent social justice issues interfere with people’s attainment of decent and dignified work. As Duffy and colleagues (2017) suggested, the Turkish version of the DWS may be used as a tool to engage clients into discussions around the quality of their work lives which could be a pathway to increasing their awareness around the impacts of contextual and social justice issues on their work lives and overall well-being. Thus, the Turkish version of the DWS can serve as a valuable practical instrument to facilitate social justice–oriented psychological interventions. For example, a practitioner working with a Turkish woman who perceives her workplace as unsafe can utilize this measure to explore the potential role of contextual factors (e.g., gender-based discrimination at workplace) in affecting client’s feelings about her work environment and empower her to improve her work conditions. At the systemic level, practitioners and researchers might use this measure to identify the differential levels of access to decent work in various populations in Turkey and engage in social and political advocacy to promote systemic changes that would enhance the work lives of marginalized populations.

Limitations and Future Directions

Despite its strengths and valuable implications, results of the present study should be considered in light of its limitations. First, because we utilized cross-sectional data, no causal interpretations can be made. Next, all of the data were collected through self-report measures dependent on individuals’ responses to the items included in the questionnaires. Therefore, it is hard to determine how the construct of decent work would be represented in behaviorally observable means. It might be useful to explore data collected from other resources, such as individuals’ coworkers and employers, to uncover their work-related experiences. While the Turkish version of the DWS allows us to measure Turkish adults’ access to decent work, it is limited in its capacity to provide a complete picture of decent work in this population. For example, this measure does not give information as to why an individual feels interpersonally unsafe in their work environment. Conducting qualitative and mixed-method studies would enable researchers to answer some of these questions, as they would allow for a fuller understanding of decent work in different populations.

Another limitation of this study relates to using the snowball sampling procedures during data collection, which allowed us to recruit nearly one third of the participants; therefore, the sample of the present study is not fully random. Additionally, although the sample in this study was diverse in many ways, it is important to note that it was consisted of only Turkish individuals who work in various regions of Turkey and North Cyprus. Therefore, future research should test the applicability of the DWS with ethnic minorities and immigrants in Turkey given the increasing ethnic diversity in the country. For instance, it would be worth testing the validity of the DWS with refugees as Turkey is hosting the largest refugee population in the region with over three million Syrian refugees (OECD, 2017).

Moreover, the sample of this study was highly educated given that more than 53% of the participants had a 4-year college degree or higher. Therefore, the applicability of the DWS should be tested in populations that represent Turkish people from different educational levels proportionally. Given the social inequalities discussed earlier, it is also necessary to test the reliability and validity of the Turkish version of the DWS among marginalized populations in Turkey such as sexual minorities, individuals with disabling conditions, and people from underdeveloped regions.
(e.g., rural areas). Although the present study provides support for the reliability and validity of the DWS in Turkish working adults, future studies should explore the convergent and discriminant validity of this measure using measures of other potential antecedents and outcomes of decent work (e.g., work volition) as proposed in the PWT (Duffy et al., 2016). Future studies should also continue to examine the applicability of the DWS in other developing and non-Western countries to assess its use in the international arena.

Appendix

Table A1. Turkish and English Items of the Decent Work Scale.

<table>
<thead>
<tr>
<th>Decent Work Scale</th>
<th>Düzcün İş Ölçeği</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physically and Interpersonally Safe Working Conditions</td>
<td>Fiziksel ve İlişkisel Açından Güvenli İş Koşulları</td>
</tr>
<tr>
<td>1. I feel emotionally safe interacting with people at work</td>
<td>1. İş yerimdeki insanlarla etkileşimde iken kendimi duygusal olarak güvene hissediyorum</td>
</tr>
<tr>
<td>2. At work, I feel safe from emotional or verbal abuse of any kind</td>
<td>2. İş yerimde herhangi bir duygusal ya da sözel tacize karşı kendimi duygusal olarak hissediyorum</td>
</tr>
<tr>
<td>3. I feel physically safe interacting with people at work</td>
<td>3. İş yerimdeki insanlarla etkileşimde iken kendimi fiziksel olarak güvene hissediyorum</td>
</tr>
<tr>
<td>Access to Health Care</td>
<td>Sağlık Hizmetlerine Erişim</td>
</tr>
<tr>
<td>4. I get good health-care benefits from my job</td>
<td>4. İşim şayesinde iyi bir sağlık hizmeti alıyorum</td>
</tr>
<tr>
<td>5. I have a good health-care plan at work</td>
<td>5. İşyerim düzenli olarak sağlık primlerimi öder</td>
</tr>
<tr>
<td>6. My employer provides acceptable options for health-care</td>
<td>6. Herhangi bir sağlık sorunu yaşadığımda işverem beni olabildiğince destekler</td>
</tr>
<tr>
<td>Adequate Compensation</td>
<td>Yeterli Ücret</td>
</tr>
<tr>
<td>7. I am not properly paid for my work (r)</td>
<td>7. Yaptığım iş için yeterince maas almıyorum (r)</td>
</tr>
<tr>
<td>8. I do not feel I am paid enough based on my qualifications and experience (r)</td>
<td>8. Nitelik ve tecrübeme uygun maas aldığımı düşünmeyorum (r)</td>
</tr>
<tr>
<td>9. I am rewarded adequately for my work</td>
<td>9. Yaptığım iş karşılığında yeterince ödüllendiriliyorum</td>
</tr>
<tr>
<td>Hours that Allow for Free Time and Rest</td>
<td>Boş Zaman ve Dinlenme</td>
</tr>
<tr>
<td>10. I do not have enough time for non-work activities (r)</td>
<td>10. İş dışında etkinlikler için yeterince boş zamanın yok (r)</td>
</tr>
<tr>
<td>11. I have no time to rest during the work week (r)</td>
<td>11. Çalıştığım günlerde dılenenecek zamanım olmayor (r)</td>
</tr>
<tr>
<td>12. I have free time during the work week</td>
<td>12. Çalıştığım günlerde boş zamanım oluyor</td>
</tr>
<tr>
<td>Organizational Values Complement Family and Social Values</td>
<td>Kurumsal Değerlerin Kişisel ve Ailevi Değerlerle Uyumu</td>
</tr>
<tr>
<td>13. The values of my organization match my family values</td>
<td>13. Çalıştığım kurumun değerleri ailevi değerlerime uygundur</td>
</tr>
<tr>
<td>14. My organization’s values align with my family values</td>
<td>14. Çalıştığım kurumun değerleri ailevi değerlerimle tutarlıdır</td>
</tr>
<tr>
<td>15. The values of my organization match the values within my community</td>
<td>15. Çalıştığım kurumun değerleri yaşadığım çevrenin değerleri ile örtüşür</td>
</tr>
</tbody>
</table>

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References


