

The Adaptation and Validation of Quality of Work Life Scale to Turkish Culture

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Abstract The aim of this research is to adapt the Quality of Work Life Scale developed by Sirgy et al. (*Social Indicators Research*, 55, 241–302, 2001) to Turkish culture, and to examine its psychometric properties. The research has been conducted on 254 academics who are affiliated to the Faculty of Education and Faculty of Science and Letters of four different universities in Ankara, Turkey. In order to provide the lingual equivalence, bilingual group pattern was used, and an English version of the scale was applied to a group of 34 academicians who are fluent in both English and Turkish. Nearly 1 month after this application, the Turkish version of the same form was applied once again to the same 34 people. The construct validity of the scale was conducted by using the Confirmatory Factor Analysis method. As a result of the study, it was determined that the original scale and its Turkish form yielded similar results. The fact that internal consistency is high is proved. Croanbach alpha coefficient was found as 0.84. This result indicates that the internal consistency of the test and accordingly the reliability are high and close to the original QWL scale. As a result of the Confirmatory Factor Analysis applied, it was determined that the Turkish form gave a factorial structure which was similar to the original scale and that no problems occurred in the course of using the scale total points. It is concluded that this scale, with its extremely comprehensible language, will contribute to defining the level of quality of the work life of those who work in Turkey and understand their behaviors and attitudes towards their work.

This study is the expanded version of the chapter, titled *Adaptation of Quality of Work Life Scale to Turkish* from the doctoral thesis, *The Effect of Quality of Work on Organizational Commitment: An Analysis on the Academicians Working in Foundation Universities and State Universities* Hacettepe University, Institute of Social Sciences, Department of Sociology by Selda Tasdemir Afsar (thesis advisor: Esra Burcu). The paper was presented with the title, “Turkish Cultural Adaptation of Quality of Working Life Scale: A Case Study on Quality of Working Life of Academicians in Turkey” in International Society for Quality of Life Studies (ISQOLS) organized in Bangkok, Thailand in 8–10 December 2011 by Selda Tasdemir-Afsar and Esra Burcu.

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Introduction

The concept of Quality of Work Life was introduced into the work place in the late 1950s. The thought of Quality of Work Life has begun to take roots in the industrialized societies in the special context of working life at the end of 1950s and it has focused on the quality of the relationship between the employees and working places and the humanistic features of work and it has stressed on the improvement of working conditions of the employees in the beginning of 1960s. (Hannif et al. 2008; Davis and Cherns 1975; Martel and Dupuis 2006; Rose et al. 2006). This term ‘quality of work life’ is reputed to have originated from an international labour relations conference in 1972 at Arden House, Columbia University, New York (Davis and Cherns 1975). One of the conclusions of this conference was to acknowledge the necessity of coordinating efforts by the researchers and organizations concerned in order to build up a solid theoretical corpus in the area of QWL research. Thus, in August 1973, the International Council for the Quality of Working Life was created (Martel and Dupuis 2006).

In literature, QWL is generally discussed as a subjective construct and/or organizational, human and social aspects interact. According to Martel and Dupuis (2006), “the definitions of QWL most frequently quoted during the 1980s reveal a marked trend towards accepting the subjectivity of the construct. QWL was considered as a way of thinking about people, work, and organizations by Nadler and Lawler (1983). According to Kiernan and Knutson (1990), QWL is an individual’s interpretation of his/her role in the work-place and the interaction of that role with the expectations of others. A quality work life means something different to each and every individual, and is likely to vary according to the individual’s age, career stage, and/or position in the industry. At the end of the 1980s QWL was considered with a more holistic view of the role of the three structures (organizational, human and social). This integrative perspective considered QWL as a social movement with repercussions that extend beyond the strictly organizational framework (Kiernan and Knutson 1990). Besides, there are different definitions of QWL which come from various perspectives. Economists have shifted some of their attention to the responsibilities of work organizations to upgrade employees’ skills and provide them with opportunities for advancement. Social scientists have expressed concern with “underemployment”, arguing that a QWL environment includes challenging jobs commensurate with rising levels of education in the work-force (Mirvis and Lawler 1984). Behavioral scientists have extended this theme and proposed that a good quality job is “enriching” in the sense that it provides autonomy and responsibility to workers, good work relations and supervision, and affords them a chance to make work decisions and develop their interests and abilities (Mirvis and Lawler 1984).

In this context, the different definitions of QWL and its components are discussed. Walton (1975) proposed eight major conceptual categories relating to QWL as (1) adequate and fair compensation, (2) safe and healthy working conditions, (3) immediately opportunity for continued growth and security, (4) opportunity to use and develop human capacities, (5) social integration in the work organization, (6) constitutionalism in the work organization, (7), work and total life space and (8) social relevance of work life. Hackman

and Oldham (1980) mentioned about some psychological needs, such as skill variety, task identity, task significance, autonomy and feedback, related to the quality of work life. They suggested that such needs have to be addressed if employees are to experience a high quality of working life. Davis (1983) defines QWL as “the quality of the relationship between employees and the total working environment, with human dimensions added to the usual technical and economic considerations.” While some authors (Mirvis and Lawler 1984) defined the quality of work life as satisfaction with wages, hours and working conditions, describing the “basic elements of a good quality of work life” as safe work environment, equitable wages, equal employment opportunities and opportunities for advancement, Baba and Jamal (1991) pointed out job satisfaction, job involvement, work role ambiguity, work role conflict, work role overload, job stress, organizational commitment and turn-over intentions as the indicators of quality of work life.

QWL is a dynamic multidimensional construct that currently includes such concepts as job security, reward systems, training and career advancement opportunities, and participation in decision making. As such, Quality of Work Life has been defined as the workplace strategies, operations and environment that promote and maintain employee satisfaction with an aim to improving working conditions for employees and organizational effectiveness for employers (Lau and Bruce 1998). In the light of aforementioned definitions and QWL’s components, it is possible to reach such a definition about quality of work life: It is a phenomenon that causes a change in organization culture, provides the participation of decision makers, and prevents the alienation by integrating the factors such as wages, job satisfaction, motivation, technology used in business life, social security, continuing education, industrial relationships and working conditions in order to meet the physical, emotional and psychological needs of employees. Quality of work life is not only the opinions, attitudes and expectations of employees about their jobs. Quality of work life is the interpretation of all conditions in a workplace by employees as well as the perception of employees about these conditions.

Quality of work life is important because, firstly, QWL is closely related to the quality of life concept. Considering life as a whole makes it impossible to think working and living conditions as separate concepts from each other, as in the quality of work and quality of life. This stems from the fact that there is a strong multi-dimensional interaction between the working and living conditions (Schulze 1998). Anyone who has ever held a job knows what a major role it plays in one’s everyday life. Often, even beyond the hours of attendance required, work occupies one’s thoughts, determines one’s schedule for the day, gives one access to consumer products, contributes to one’s social identity and may even, in certain cases, determine one’s decision on whether or not to have a family (Martel and Dupuis 2006).

Secondly, the importance of QWL in most researches have been linked to behavioral responses, such as organizational identification, job involvement, job effort, job performance, intention to quit, organizational turnover, personal alienation, and employees’ job outcomes such as productivity, job satisfaction, employees’ organizational commitment, etc. (Efraty and Sirgy 1990; Efraty et al. 1991; Schulze 1998; Sirgy et al. 2001; Lee et al. 2007; Tasdemir-Afsar 2011). There is some evidence showing that a happy employee is a productive employee; besides, a happy employee is a dedicated and loyal employee (Sirgy et al. 2001).

The Quality of Work Life scale developed by Sirgy et al. (2001) is one of the scales included in the international literature in order to determine the quality of work life. The measure is based on the notion of need satisfaction and bottom-up spillover theory. The

measure reflects the composite of various needs satisfaction from the organization. Specifically, the measure is based on their conceptualization of the QWL construct as “employee satisfaction with a variety of needs through resources, activities, and outcomes stemming from participation in the workplace” (Sirgy et al. 2001:242).

This study aims at researching the applicability of Quality of Work Life Scale, developed by Sirgy et al. (2001), to Turkish culture and determining its psychometric features. According to Sireci and Berberoglu (2000), adapted tests and scales are a common strategy to make comparison between different people speaking different languages, and from different cultures in terms of achievement, skill, personality and other psychological characteristics. It is expected that the validation and adaptation of Quality of Work Life scale to Turkish culture will meet the need for a reliable and valid scale in studies for making intercultural comparisons about the quality of work life.

Method

Sampling

The study was applied to a large group in order to determine whether the scale structures of original form and Turkish form of the quality work life scale have similarities or not. In the study, two strata have been established among the universities in Ankara being public and foundation universities. The state universities are Ankara University and Hacettepe University, and the foundation universities are Baskent University and Bilkent University. Sampling included all the academicians of these four universities; at the levels of professor, associate professor, assistant professor, lectures and research assistants working in the faculties of Science, Letters and Education. During the 2009 spring semester, the scale and personal information forms were given by the researcher to a total of 1,557 academics in the related universities and then collected. The total number of questionnaires returned was 254, 168 of which are collected from the state universities (96 questionnaires from Hacettepe University, 72 questionnaires from Ankara University) and 86 from the foundation universities (47 questionnaires from Baskent University, 39 questionnaires from Bilkent University). The final response rate was 16.3 %. The majority of the respondents were women (64.2 %), and are 30 years or under (38.2 %), which is followed by the 31–35 age group with 22.8 %. More than half of the respondents are married (52.0 %). Again, almost half of the respondents are research assistants (49.6 %), and most of the respondents (34.6 %) worked in the same organization between 1 and 5 years.

Instruments

*Quality of Work Life Scale*¹

The QWL measure is based on *need satisfaction* approach and *spillover* approach. According to Sirgy et al. (2001), the *need satisfaction* approach to QWL is based on

¹ A mail was sent to M. Joseph Sirgy, one of the researchers who developed the scale, and the required permission was obtained to adapt it to Turkish culture, use in this research, and look for answers for the questions stated above. The required permission was received from Mr. Sirgy, himself, to adapt the scale to Turkish culture.

need-satisfaction models developed by Maslow, McClelland, Herzberg, and Alderfer. The basic tenet of this approach to QWL is that people have basic needs they seek to fulfill through work. Employees derive satisfaction from their jobs to the extent that their jobs meet these needs (Sirgy et al. 2001). According to the need satisfaction approach, the work of people can satisfy them when they can meet their physical needs such as hunger, thirst, need of security, love and belonging needs, esteem and status needs, knowledge need, aesthetics need, and above all, self-actualization need (Sirgy et al. 2001). The quality of work life of people who can meet and satisfy the basic needs in the working place will also be high. The Spillover approach assumes that the satisfaction in one specific field of life will affect the satisfaction in another field of life. For instance, the satisfaction of one person in work life may affect the satisfaction of that person in other fields such as family, spare time, social, health, economic, etc. (Sirgy et al. 2001).

QWL scale was conceptualized as a summation of satisfaction of seven categories of needs: (1) health and safety needs, (2) economic and family needs, (3) social needs, (4) esteem needs, (5) actualization needs, (6) knowledge needs, and (7) aesthetics needs. Following their conceptualization, organizations that score high on QWL are those that provide resources to meet the basic and growth needs of their employees. The need satisfaction measure consists of 16 items relating to the 16 need satisfaction dimensions of the seven needs—one item for each dimension. QWL was conceptualized in terms of satisfaction of seven needs. Mathematically stated (Sirgy et al. 2001:246–248): $QWL = NShs + NSeF + NSs + NST + NSa + NSk + NScs$

- **NShs:** satisfaction of **health and safety needs** which involves three need dimensions:
 - Protection from ill health and injury at work, i.e., safety at work.
 - Protection from ill health and injury outside of work, i.e., job related health benefits.
 - Enhancement of good health, i.e., encouragement at work of preventative measures of health care.
- **NSeF:** satisfaction of **economic and family needs** which involves three need dimensions:
 - Pay, i.e., adequate wages.
 - Job security, i.e., feeling secure knowing that one is not likely to get laid off.
 - Other family needs; i.e., having enough time from work to attend to family needs.
- **NSs:** satisfaction of **social needs** which involves two dimensions:
 - Collegiality at work, i.e., positive social interactions at work.
 - Leisure time off work, i.e., having enough time from work to relax and experience leisure.
- **NST:** satisfaction of **esteem needs** which involves two dimensions:
 - Recognition and appreciation of one's work within the organization, i.e., recognition and awards for doing a good job at work.
 - Recognition and appreciation of one's work outside the organization, i.e., recognition and awards by the local community and/or professional associations for work done within the organization or on behalf of the organization.

- **NSa:** satisfaction of **actualization needs** which involves two dimensions:
 - Realization of one’s potential within the organization, i.e., job is perceived to allow recognition of potential.
 - Realization of one’s potential as a professional, i.e., job is perceived to allow the person to become an expert in his or her field of expertise.
- **NSk:** satisfaction of **knowledge needs** which involves two dimensions:
 - Learning to enhance job skills, i.e., perceives opportunities to learn to do the job better.
 - Learning to enhance professional skills, i.e., perceives opportunities to learn to become an expert in one’s field.
- **NScs:** satisfaction of **aesthetics needs** which involves two dimensions:
 - Creativity at work, i.e., perceives opportunities to be creative in solving job-related problems.
 - Personal creativity and general aesthetics, i.e., perceives opportunities at work to allow personal development of one’s sense of aesthetics and creative expression.

Three samples were collected for this study by Sirgy et al. (2001). Two samples involved faculty and staff from two different universities, and the third sample involved accountants from various accounting organizations. The respondents were asked to respond to each item by checking a seven-point scale ranging from “Very Untrue” (value of 1) to “Very True” (value of 7). The *confirmatory factor analysis* was made by Sirgy et al. (2001) to test the construct validity of the original scale and it was found that 16 items were derived from seven factors and these seven factors were derived from only one factor. The relation between the quality of work life and organizational commitment, job satisfaction, the satisfaction in other life fields except job and general life satisfaction in order to test the predictive validity (based on criteria-predictive) of the scale since the quality of work life is considered as the processor of job satisfaction, the satisfaction in other life fields except job and general life satisfaction, job performance and organizational commitment. For this purpose, organizational commitment, job satisfaction, the satisfaction in other life fields except job and general life satisfaction were measured with tests and the relation between the results and the results of Quality of Work Life scale were analyzed. The results were found to be statistically significant. The Cronbach Alpha reliability co-efficient of Quality of Work Life Scale was calculated as 0.78.

Procedure

The answers for the questions that were analyzed in the adaptation stage of the quality of work life scale were:

- 1) Is there any meaningful relationship between the points gained as a result of application of the original source language (English) and target language (Turkish) of the quality of work life scale?
- 2) Is there any similarity between the scale structures of original form and Turkish form of the quality of work life scale? Are the reliability and validity coefficients gained from Turkish form of the scale are at sufficient level?

The test adaptation guide determined by the International Test Commission (ITC 2000) and the test adaptation stages determined by Hambleton and Patsula (1998) were taken into consideration in order to answer the above questions. Hambleton and Patsula (1998) pointed out the important points in adaptation studies: (1) deciding whether or not a test can measure the same construct in a different language and culture, (2) selecting translators, (3) deciding on appropriate accommodations to be made in preparing a test for use in a second language, and (4) adapting the test and checking its equivalence in the adapted form. In the frame of these points, three main points were completed.

- a) The translation of the articles of the scale was made and the linguistic equivalence of the scale were examined with experimental methods in order to analyze the psycholinguistic qualifications. The articles of the original scale and the translated form were applied on the sample who knows both two languages in an advanced level and the hypothesis related to the language differences between the original and translated articles was checked over;
- b) The psychometric features of the translated form, of which the language equivalency was determined, was analyzed and the reliability and validity of the translated test articles were checked over;
- c) The cultural features of the adapted test were analyzed and the factor structure and the factor-item load of the translated test were compared with the original form.

Results

Linguistic Equivalency of Quality of Work Life Scale

The following processes were done in order to answer the following question: *Is there any statistical meaningful relation between the points gained as a result of application of forms of source language (English) and target language (Turkish) of QWL?* The translation from the target language to the original source language is the most important point of the scale adaptation studies (Beaton et al. 2000). Because of this reason, first of all, the translation of the scale from source language (English) to target language (Turkish) was made. The next stage was the retranslation of the Turkish form to the source language (English). An important problem in the adaptation of scale is the selection of the translators; the translators should be fluent in both languages and cultures, and be informed about at least two qualifications of the scale as these may affect the quality of the translation. The translation and retranslation processes were completed by four persons.²

² Two of translators are expert on make and apply regulations about measurement and evaluation, develop and apply measurement tools and interpret their results. They have PhD degree on Educational Measurement and Evaluation. One of them attended to PhD Programme in University of Iowa in USA and the other attended to PhD Programme in Hacettepe University in Turkey. Besides, both of them studied as visiting scholar in some Universities in USA. One of them is Assistant Professor and the other is Associate Professor at Hacettepe University.

One of translator has PhD degree on Psychological Counseling and Guidance. He attended to PhD Programme in University of Florida in USA and he studied as visiting scholar in some Universities in USA. He is Associate Professor at Hacettepe University. His main field of study is well-being.

The other translator has PhD degree on Sociology. He attended to PhD Programme in Hacettepe University in Turkey. Besides, he worked as visiting researcher scholar in some Universities in England. His fields of study are labor, employment relationship, quality of work life.

After this stage, the form of the specialist opinion including each original item, the translation of these items to Turkish, and the retranslation to English was submitted to the evaluation of a group of specialists formed of three people. The specialists were asked to make a comparison between Turkish and English translation of each item in terms of language and meaning, and make statements related to the style. The specialists were asked to state their opinions about each item as ‘eligible’, ‘recover’ and ‘noneligible.’ The ‘recommendation’ column was added to the form of specialist opinion in order to take the translation and the retranslation recommendations of the specialists who marked ‘recover’ or ‘noneligible’ choices. In the frame of the comments and recommendation from three specialists, Turkish translation of article 2 in the original scale (*My job provides good health benefits*) was retranslated as *My job provides health insurance* by taking into consideration the social security system in Turkey. The required arrangements and changes were made in articles according to the comments of the specialists, and a final shape was given to the Turkish form of Quality of Work Life Scale.

One way to measure the reliability is to determine whether the respondent gives the same answer to the measurement tool when it is reapplied. The reliability of test-retest is found by giving the measurement tool to the same group in two different applications, and calculating the correlation of scores gained in these two applications. If the correlation between scores is high, then the measurement tool is accepted as reliable: It was found that the people who have positive (or negative) scores in the first application have positive (or negative) scores in the second application (Anastasi 1988; Ozguven 2004). The items of the original test and translated tests should be applied to a group who is fluent in both languages, and have features of the research group. The answers should be compared in order to determine the experimental linguistic equivalence of the adapted measurement tool. Accordingly, the *bilingual equivalence design* was used in this research in order to provide the linguistic equivalence. For this purpose, the English form of the scale was applied to a group of 34 people who work in Ankara, Hacettepe and Bilkent Universities, and are fluent in both languages. The Turkish form was applied to the same group after 4 weeks and the correlation between two applications was determined.

Pearson correlation coefficient was calculated in order to find the correlation between the scores gained as a result of application of source language (English) form and target (Turkish) language form of QWL. This was done to determine if there is a meaningful statistical relation between score averages gained as a result of applications of source (English) language and target (Turkish) language forms of QWL.

When Table 1 is analyzed, it is seen that the relation between the source language form scores and target language form scores of QWL is meaningful [$r=.88, p<.01$]. The difference between the scores gained from the source language form and target

Table 1 Comparison of scores of source language form and target language form of QWL

	N	\bar{X}	S	r	P
Application in English	34	74.52	11.83		
Application in Turkish	34	76.13	11.55	,88	.00

language form of the scale was calculated in order to measure whether the source language (English) and target language (Turkish) forms of QWL are equivalent or not.

When Table 2 is analyzed, it is seen that the relation between the source language form scores and target language form scores of QWL is not meaningful [$t=.58, p>.05$]. It was found that the source language form and Turkish form have linguistic equivalency as a result of both correlations.

Construct Validity of Quality of Work Life Scale

The equivalency scale was applied to a large group in order to give answer to the questions:

Is there any similarity between the scale structure of original form and Turkish form of QWL?

Is there any similarity between the internal consistency coefficient of original form and Turkish form of QWL?

The Confirmatory Factor Analyses (CFA) was applied in order to determine the similarity between the scale construct of the original form and the Turkish form of the quality of work life scale. It means that CFA was applied to evaluate the validity of the original scale construct, which was developed earlier according to the specific theoretical basics and of which the factor construct was determined, in Turkish culture. The CFA is used to provide the validity proof of the scale by testing the factor structure (Brown 2006). LISREL 8.71 software was applied on the data collected from 254 samples. The Maximum Likelihood Estimation Method was used. The measurement model tested is given below (Fig. 1).

The measurement model that was tested provided a model data adaptation in an acceptable order (Chi-Square $\chi^2(93)=191.53$, NC=2.06, Root Mean Square Error of Approximation (RMSEA)=0.064, Standardized RMR (SRMR)=0.049, Comparative Fit Index (CFI)=0.96). χ^2 , one of the model data adaptation indexes gained, is not used in the evaluation of model data adaptation since it is highly affected by the sample, however, it is conventionally reported. The other model data adaptation indexes NC is lower than 5, RMSEA is lower than 0.08, SRMR is lower than 0.08 and CFI is higher than 0.90, and this case points out model data adaptation in an acceptable level (Brown 2006). The alpha reliability co-efficient of dimensions, factor load of items, and error variances are given in Table 3.

When Table 3 is analyzed, it is observed that the factor loads were higher than 0.34 as a result of analysis of scores gained from measurement tool in terms of dimensions. It is seen that there is not any item working in the reverse direction according to these values. When the reliability co-efficient calculated from total points from scale is

Table 2 Comparison of Scores of Source Language Form and target Language Form of QWL

	N	\bar{X}	S	t	P
Application in English	34	74.52	11.83		
Application in Turkish	34	76.13	11.55	.58	.56

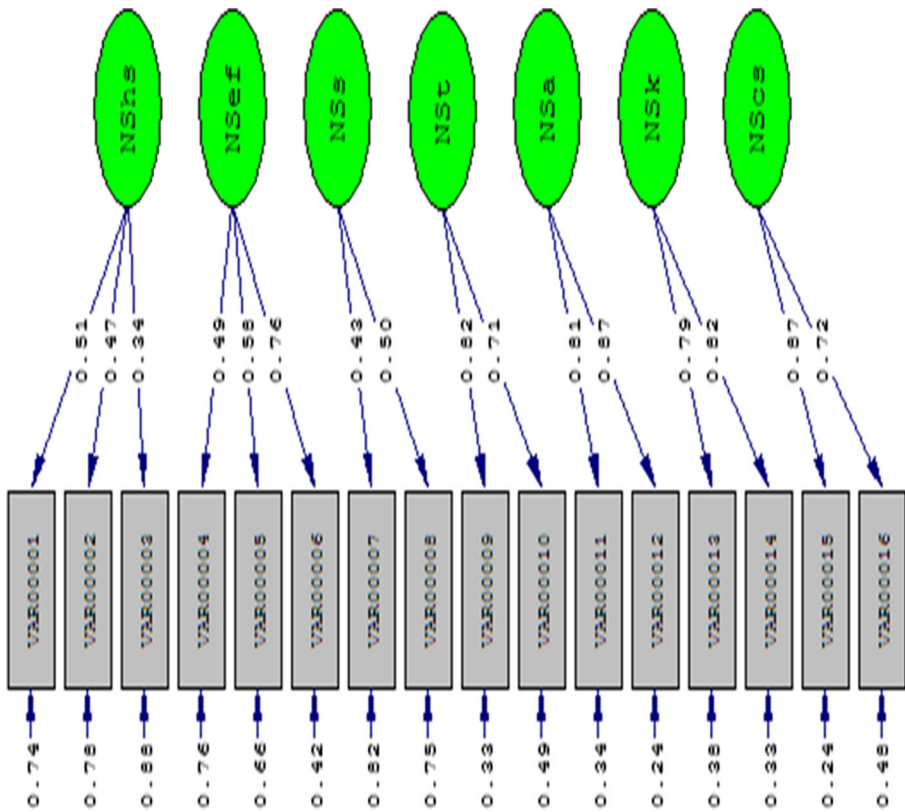


Fig. 1 The QWL measurement model tested with confirmatory factor analysis

Table 3 The alpha reliability coefficient of sub-dimensions of the Quality of Work Life Scale and factor loads of items and error variances

Dimensions	Alpha CoEfficient	Items	Factor loads	Error variances
NShS	0.40	1	0.51	0.74
		2	0.47	0.78
		3	0.34	0.88
NSeF	0.62	4	0.49	0.76
		5	0.58	0.66
		6	0.76	0.42
NSs	0.33	7	0.43	0.82
		8	0.50	0.75
NSt	0.73	9	0.82	0.33
		10	0.71	0.49
NSa	0.83	11	0.81	0.34
		12	0.87	0.24
NSk	0.78	13	0.79	0.38
		14	0.82	0.33
NScs	0.77	15	0.87	0.24
		16	0.72	0.48

analyzed, it is not wrong to look for answers to the research questions by using the total point as the variance. However, it is observed that the reliability level of the points from NShs and NSs dimensions of the scale is low. It is suggested not to include the points taken from these dimensions to the analyses to be done in the basic of these dimensions. The low reliability level of the points taken from NShs and NSs dimensions of the scale is important if any study will be conducted which is based on dimensions. When the total score is considered without performing a dimensional study, it is not important whether the reliability of these two dimensions is low.

It is recommended that the correlation between dimensions in CFA should be presented (Brown 2006). Because of this reason, the correlations between dimensions are given in Table 4. Particularly, if total one score is to be gained from the scale, then it is expected that the correlation between the dimensions should not be negative and it should not be very close to zero level or one.

As can be seen in Table 4, the whole correlation between the dimensions is positive. Accordingly, no dimensions are working reversely to another. The correlations vary between 0.25 and 0.86. This means that the dimensions of the measurement tool have relation with each other in a medium level and there is nothing that prevents obtaining a total score in terms of correlation between dimensions. It is mostly observed that the lower dimensions of the measurement tool form a meaningful total when they are summed up. Such a situation is also valid for the original scale. In fact, seven dimensions of the scale shape the structure of Quality of Work Life measured by the scale. The analysis to determine whether to have a total score is meaningful or not by summing the scores gained from the dimensions can be done by the second-order CFA (Brown 2006). For this purpose, the second-order CFA was applied on the data set obtained from Turkish scale. The model tested with the second-order CFA is given in Fig. 2.

The model data adaptation was provided according to the results of second-order Confirmatory Factor Analyses ($\chi^2(97)=290.61$, $NC=2.96$, $RMSEA=0.079$, $SRMR=0.066$, $CFI=0.94$). It was observed that the road co-efficient of dimensions is 0.56 or higher. This points out that a total score can be obtained by summing the scores of dimensions from the measurement scale. The alpha reliability co-efficient was calculated as 0.84 for the scores to be obtained from the scale. According to the reliability and CFA results of scores gained from scale and its dimensions, the reliability and validity of total score obtained from Quality of Work Life scale are on a sufficient level. In the analysis done in the dimensions, it is seen that the scores obtained from the dimensions other than NShs and NSs which are lower dimensions provide reliability on a sufficient level.

Table 4 Correlations between dimensions of the Quality of Work Life Scale

Dimensions	NShs	NSef	NSs	NSt	NSa	NSk
NShs	1.00					
NSef	0.52	1.00				
NSs	0.84	0.49	1.00			
NSt	0.36	0.61	0.84	1.00		
NSa	0.50	0.52	0.68	0.59	1.00	
NSk	0.46	0.51	0.53	0.45	0.86	1.00
NScs	0.25	0.35	0.28	0.34	0.54	0.70

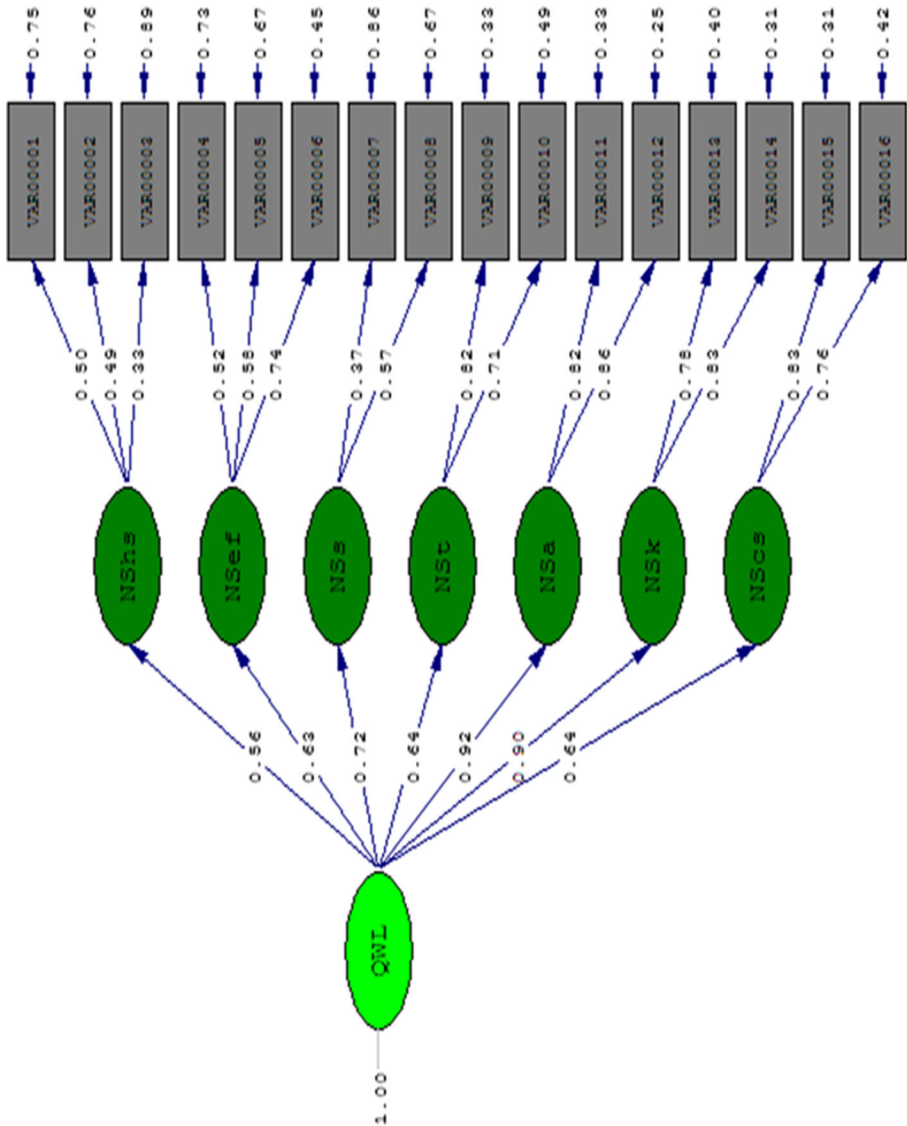


Fig. 2 Measurement model tested with second-order CFA

Discussion

The aim of this study was to adapt the Quality of Work Life Scale to Turkish culture and determine its psychometric features. As a result of the studies conducted, the points gained from the original source and target language forms of the scale were compared and a meaningful difference could not be determined in evaluating whether the original source language (English) and target language (Turkish) forms are equivalent or not [$r=.88, p<.01$], [$t=.58, p>.05$]. Based on this finding, the linguistic equivalency between the original form and translated form of the scale was provided.

The Confirmatory Factor Analysis was applied in order to determine the construct validity of the Quality of Work Life scale. It is observed that the factor loads were higher than 0.34 as a result of analysis of scores gained from measurement tool in terms of dimensions, and it is observed that there are not any items working in the reverse direction according to these values. In the study, it was found that the reliability level of the points from NShs and NSs is low and the points from the dimensions, except NShs and NSs sub-dimensions, present reliability on a sufficient level. However, the low reliability level of these two dimensions is not important, since the total score obtained from the dimensions of the scale is used in the original scale form instead of using them separately. It is not wrong to use the total point gained from this adapted scale in the studies to be conducted. It is not suggested to add the points taken from NShs and NSs dimensions to the analysis based on dimensions. Also, the road co-efficient of the dimensions was found 0.56 and higher and this points out that a total point may be found by summing the points of the dimensions from the measurement tool.

On the other hand, while the cronbach alpha reliability co-efficient of original Quality of Work Life Scale is 0.78, the cronbach alpha reliability co-efficient of this study is calculated as 0.84. This result indicates that the internal consistency of the test and accordingly the reliability are high and close to original QWL scale. On the other hand, the researchers who used the scale developed by Sirgy et al. (2001) found values close to the values found in this study. Koonmee and Virakul (2007) showed satisfactory internal consistency with an alpha value of .88 in their study. Chan and Wyatt (2007) translated the quality of work life scale from English to Chinese by using the method of back translation. But this scale was modified by Chan and Wyatt (2007). The need satisfaction measure consisted of 42 items relating to the need satisfaction dimensions of the six needs. Each of the nine items were used for health, safety, economic, and family needs, while each of the six items were used for social, esteem, actualization, and knowledge needs. In their study, the standardized alpha of QWL scale is .90. In the study of Nimalathasan and Ather (2010), the Cronbach alpha of the scale was calculated as $\alpha = .887$.

The results of the Confirmatory Factor Analysis of the scale which was adapted to Turkish culture show that the adaptation of the model to the actual data is in an acceptable level. The analysis done for the reliability show that the scale is reliable and can distinguish items on a high level. As a result of these processes, it was found that the scale (developed by Sirgy et al. 2001) measures the same structure in Turkish culture. It can be said that the Quality of Work Life Scale is a reliable and valid measurement tool for the studies which aim at determining the level of quality of work life of individuals. The adapted scale will make important contributions to the studies of the researchers who carry out studies about quality of work life. However, the psychometric characteristics of the adapted Quality of Work Life Scale were obtained from a limited and unique group (academicians). We recommend that researchers carry out standardization studies of the scale on larger and various groups in Turkey.

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