

Psychometric Evaluation of the Satisfaction With Life Scale (SWLS) in Azerbaijan

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Abstract

The Satisfaction With Life Scale (SWLS) is a globally recognized scale for the measurement of subjective well-being in more than thirty six languages. Currently there is no adapted version of the SWLS in Azerbaijani language. The aim of the present study was to complete forward and backward translations of the SWLS and maintaining equivalence to examine its psychometric properties in a sample of 374 subjects in Azerbaijan. The results showed that the Azerbaijani version of SWLS had good internal consistency (Cronbach's $\alpha = 0.81$) with confirmatory factor analysis showing a single factorial structure. The findings suggest that the Azerbaijani version of the SWLS is a valid instrument to use among Azerbaijan samples.

Keywords: satisfaction with life scale, validity, reliability, Azerbaijan

1. Introduction

The subjective well-being concept attracted worldwide attention in the aftermath of the positive psychology movement with growing number of research in the field (Diener, 1984; Diener, Sandvik, Seidlitz, & Diener, 1993; Diener, Suh, Lucas, & Smith, 1999; Seligman & Csikszentmihalyi, 2000). Subjective well-being as a construct is comprised of two major components (Pavot, Diener, Colvin & Sandvik, 1991). First, includes an emotional componnet that relates to an individual's experience of unhappiness and unpleasant affect; second, entails a cognitive component that involves an expression of what extent the individual perceives life as desirable, pleasing, and satisfying (Andrews, Withey, 1976; Diener, 1984; Diener, Emmons, Larsen, & Griffin, 1985).

The Satisfaction With Life Scale (SWLS) was first developed by Diener, et al, (1985) as a way to evaluate a person's judgment about their satisfaction with their life in a general sense. The SWLS is a short questionnaire consisted of five statements. Participants who completed the questionnaire judge how they subjectively feel about each of the statements on 7-point likert scale. The SWLS is not designed to assess satisfaction in just one of the aspects of life, such as work or relationships, but rather it helps understand satisfaction in all aspects of life as a whole.

The SWLS statements provide an opportunity for individuals to evaluate their lives according to their unique cultural values. The SWLS demonstrated positive psychometric features in many cultural contexts with widespread usage (Abdallah, 1998; Arrindell, Heesink & Feij, 1999; Atienza, Balaguer & García-Merita, 2003; Balgiu, 2019; Caycho-Rodríguez, et al., 2018; Durak, Senol-Durak & Gencoz, 2010; Esnaola, et al., 2017; Galanakis, et al., 2017; Hultell & Gustavsson, 2008; Neto, 1993; Pavot, et al., 1991; Pavot & Deiner, 1993; Sachs, 2003; Stevens, et al., 2012; Swami & Chamorro-Premuzic, 2009; Wu & Yao, 2006).

To date, there have been no studies of the subjective well-being construct in Azerbaijan. The objective of this study is to develop an Azerbaijan version of SWLS and to examine the validity and reliability of the scale in the Azerbaijan culture.

2. Methods

Sample. The study participants comprised 372 individuals, of whom 73.7 % (n=274) were females. Participants who

were randomly selected from the community sample, informed about the research and volunteered to participate were included in the research.

The Personal Information Form was used to gather sociodemographic information concerning the participant age, gender, marital status, and educational status of the participants. The age range of participants was 17–66 years, with mean age 29.2 (SD=11.56). The educational levels of the participants were: secondary school (8%, n=30); high school graduate, (12%, n=45); university graduate (76.3%, n=284); and master's degree (2.7%, n=10). No information was available concerning the educational level of the remainder 3 participants. The income levels included: <350 Azerbaijani manat (AZN), low (63.2%, n=235); 350-1000 AZN, middle (25%, n=93); >1000 AZN, high (7.5%, n=28); unspecified (4.3%, n=16). The marital status of the participants were: married, 34% (n=126); unmarried, 53.8% (n=200); engaged, 5.4% (n=20); divorced, 5.3% (n=20); and widowed, 1.3% (n=5).

Measures

Satisfaction With Life Scale (SWLS). SWLS is a 5-item scale, SWLS (Diener et al. 1985), was developed in order to measure the extent of a person's satisfaction as a whole about his/her life. According to the 7-point Likert scale (1- Definitely disagree, 7- Definitely agree), the participants are asked to respond to five statements given in the scale concerning the life quality. The lowest score of the scale is 5 while the highest is 35. The increase in the total score of the measuring scale indicates the increase in the life satisfaction. Considering the validity and reliability of the scale, Diener et al. (1985) reported that the internal consistency of the scale was 0.87, and the test-retest correlation was 0.82. Moreover, in the study, a single factorial model was found, which accounted for the 66 % of the total variance.

Translation Procedure

The SWLS was translated into Azerbaijani language using the back translation approach. First, the original English form of the scale was translated into Azerbaijani language by 3 experts with good commands of both languages. The Azerbaijani form was then back translated to English by 2 different experts. The understandability of the scale items were compared to the original form and necessary revisions were made. Based on these changes the Azerbaijani version of the instrument was tested.

Analysis of Data

Exploratory and Confirmatory Factor Analyses were conducted. Exploratory factor analysis was conducted via SPSS 24.0 program, and Varimax rotation technique was used in order to interpret the factors better. Model fit and fit indices were tested via LISREL 8.7 program method (Maximum Likelihood). Cronbach alpha was calculated concerning the reliability.

3. Results

Psychometric properties of the Azerbaijani version of the Satisfaction with Life Scale

Exploratory Factor Analysis

In order to determine the construct validity of the scale, initially, exploratory factor analysis was conducted. Kaiser-Meyer-Olkin (KMO) test was applied to test the compliance of the data to the factor analysis for the sample size. KMO > 0.60 is necessary for factorability (Tabachnick ve Fidell, 2013). As the result of the analysis, KMO value was determined as 0.827. It is interpreted as "good" if the value is in between 0.80-0.90 for the sample size (Çokluk, Şekercioğlu and Büyüköztürk, 2012). Chi-square statistic was significant at .001 level in the Barlett Sphericity test, which indicates that the distribution of data is appropriate (Tavşancıl, 2005; Tabachnick ve Fidell, 2013). Results concerning the exploratory factor analysis are presented in Table 2. Focusing on the expounded total variance, it is observed that there is one component with a value >1. This factor accounts for the 57.35 % of the total variance. The load values of the items range between 0.694 and 0.827. It is observed that the items satisfy the condition that the factor load should be 0.32 minimum (Tabachnick & Fidell, 2013).

Reliability Analysis

Internal consistency co-efficient was calculated for reliability analyses. Cronbach alpha co-efficient was found as 0.806 for the 5-item scale. The reliability co-efficient 0.70 and greater is considered sufficient for the reliability of test scores (Büyüköztürk, 2011; Tavakol ve Dennick, 2011). Descriptive statistics of the SWLS items are indicated in Table 3.

Table 1. Demographic characteristics of participants

Variable		N	%
Gender	male	98	26.3
	female	274	73.7
Marriage status	married	126	34
	unmarried	200	53.8
	engaged	20	5.4
	divorced	20	5.3
	widowed	5	1.3
Educational level	secondary school	30	8
	high school	45	12
	university	284	76.3
	master's degree	10	2.7
Income level	low	235	63.2
	middle	93	25
	high	28	7.5
	unspecified	16	4.3

Confirmatory Factor Analysis

Subsequent to the structural equation model, exploratory factor analysis, and reliability analysis, the structural validity of the scale was re-tested via Confirmatory Factor Analysis (CFA). One of the intended purposes of the CFA is verifying the previously identified theoretical structure (Jöreskog, 1993).

Primarily, the *t* values are examined concerning whether the latent variables account for the observable variables. If the *t* values are over 1.96, it is significant at .05 level, if they are over 2.56, it is significant at .01 level (Çokluk et al., 2012). In this case, it is possible to mention that the *t* value is significant at .01 level (Figure 1).

When the error variances of the observed variables were checked, no higher value was encountered (Figure 2) (Kline, 2011). In this stage, when the *p* value was examined, it was observed to be significant at 0.01 level. Although this result is not desirable, the *p* value is expected to be significant in larger samples (Çokluk et al., 2012).

Table 2. SWLS Items and Factor Loadings

Items	Factor Loadings
M1. Həyatım bir çox cəhətdən idealımdakına yaxındır <i>"In most ways, my life is close to my ideal"</i>	.775
M2. Həyat şərtlərim çox yaxşıdır <i>"The conditions of my life are excellent"</i>	.770
M3. (Mən) həyatımdan məmnunam <i>"I am satisfied with my life"</i>	.826
M4. Həyat(ım)da indiyə qədər istədiyim əhəmiyyətli şeyləri əldə etmişəm <i>"So far I have gotten the important things I want in life"</i>	.692
M5. Əgər həyata yenidən başlasaydım demək olar ki heç bir şeyi dəyişdirməzdim <i>"If I could live my life over, I would change almost nothing"</i>	.716

Table 3. Descriptive statistics for SWLS items

	Mean	SD	Skewness	Kurtosis	Corrected Item-Total Correlation
Item 1	4.37	1.78	-.51	-.89	.606
Item2	4.78	1.55	-.31	-.31	.613
Item3	5.07	1.55	-.90	.13	.686
Item4	4.73	1.64	-.62	-.55	.535
Item5	3.63	2.04	.18	-1.26	.554
Total	22.61	6.47	-.48	-.39	

The results about the other fit indices used in the model fit evaluation concerning the theoretical structure are presented in Table 4.

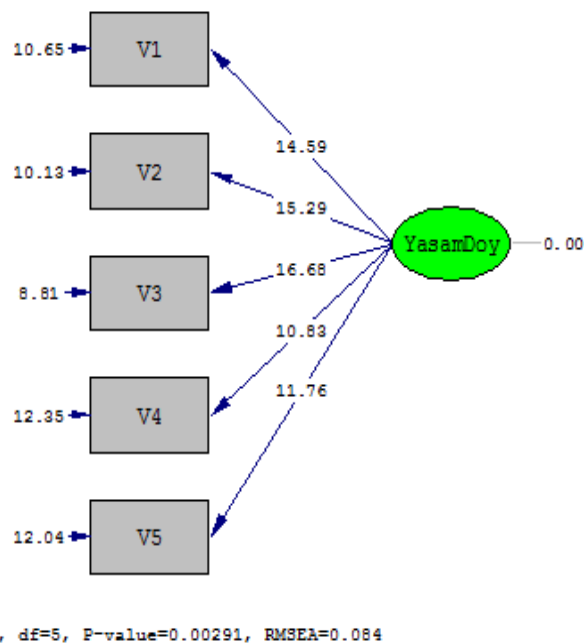


Figure 1. Path Diagram

Examining the RMSEA (Root Mean Square Error of Approximation) ($RMSEA < 10$) in the way scheme, it is observed to be corresponding to weak fit (Tabachnick & Fidell, 2013). In the evaluation of the model fit, it is suggested to interpret different statistics together. When the table is examined, it is observed that χ^2/sd rate ($3 < \chi^2/sd \leq 5$), which is preferred for wide samples, corresponds to acceptable fit (Kline, 2011), and CFI (Comparative Fit Index) ($0,95 \leq CFI \leq 1,00$), GFI (Goodness of Fit Index, GFI), ($0,95 \leq GFI \leq 1,00$) NFI (Normed Fit Index) ($0,95 \leq NFI \leq 1,00$), NNFI (Non-Normed Fit Index) ($0,95 \leq NNFI \leq 1,00$) correspond to perfect fit (Hu & Bentler, 1999, Tabachnick & Fidell, 2013). As per the SRMR (Standardised Root Mean Square Residual index, it corresponds to perfect fit (Brown, 2006).

Table 4. Fit indices

Model	Norm χ^2	CFI	GFI	RMSEA	NFI	NNFI	SRMR
Theoretical	3.61	.98	.98	.084	.98	97	.033

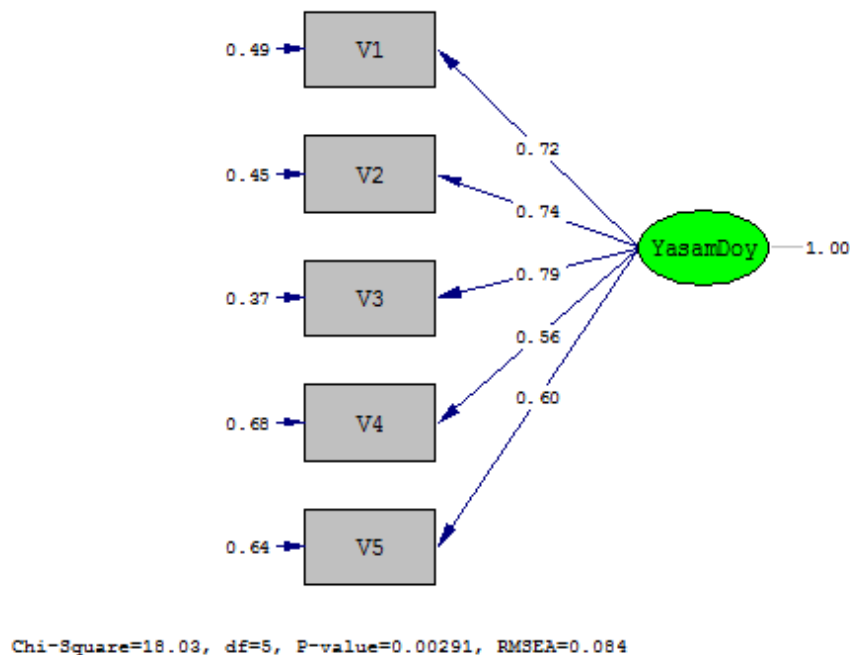


Figure 2. Path Diagram

The mean of the life satisfaction values obtained from the scale was determined as 22.57 (SD=6.52, ranges between 17 and 64). Moreover, as the conclusion of the analyses conducted for determining whether the life satisfaction differed according to the age, educational status, marital status, and gender, it was determined that life satisfaction did not differ according to those variables ($p > .05$). Based on the results of the One-Way ANOVA test, which was conducted for determining whether life satisfaction demonstrated significant difference according to the income level, it was found that ($F(2,353) = 5.85, p = .003$) the mean of the low-income ones ($M=21.69, SD=6.35$) was significantly lower than that of the participants with mid-income ($M=22.24, SD=6.50$).

4. Discussion

The objective of this study is to develop an Azerbaijani adaptation of the SWLS and to examine the psychometric features of the scale. Exploratory and Confirmatory factor analyses, which were conducted to test the validity and reliability of the SWLS scale for the Azerbaijani sample, revealed that the single factorial structure of the scale was verified for the sample. These results are in line with previous findings supporting a single-factor structure of the SWLS (Anaby, Jarus, & Zumbo, 2010; Arrindell et al. 1991; Wu and Wu 2008). The calculated internal consistency co-efficient, Cronbach $\alpha = 0.813$, provides support for the reliability of the Azerbaijani SWLS. In the intercultural studies, internal consistency of the SWLS ranges between 0.74 (Lopez-Ortega, Torres-Castro, & Rosas-Carrasco, 2016) and 0.92 (Glaesmer, Grande, Braehler, & Roth, 2011). Our study supports the findings of Diener et al (1985) that SWLS has cross-cultural validity and can be conducted on ethnically diverse groups.

In our sample, mean life satisfaction score is 22.57, which stands within the normal data of the normal populations. This score means that the Azerbaijan participants were slightly satisfied with their lives, reflecting “the widely replicated finding that nonclinical samples are above the neutral point in SWB” (Pavot and Diener 1993, p. 165). This result is similar to the findings of the previous studies (e.g., Anaby, et al., 2010; Diener et al., 1985; Glaesmer et al., 2011; Gouveia et al., 2009). Moreover, it is observed that life satisfaction level does not demonstrate a difference concerning the gender, age, educational status, and marital status variables. In their study, Arrindell, et al., 1999, also found that

there is no difference in life satisfaction level between gender, age, and educational status. However, concerning the life satisfaction level, there is a significant difference between the low-income participants and mid-income ones to the detriment of the low-income participants. This consequence coincides with the results of the intercultural SWLS studies (e.g., Deiner & Deiner, 1995; Oishi, Diener, Lucas, & Suh, 1999). Namely, there found a high relationship between the economic status and the life satisfaction in the countries of low-income. The results of the validity and reliability evaluations verified the use of SWLS for the different sample groups (e.g. age, gender etc.) in Azerbaijan.

4.1 Limitations

The study has a number of important limitations. First, the study sample was obtained from the normal population and therefore doesn't represent the clinical population. Second, a comparison could not be made with other scales in order to strengthen the structural validity of the scale, since there are not many scales translated into Azerbaijani language. Third, an examination of test-retest reliability could not be conducted due to difficulties of the retest. In order to increase the generalizability of the SWLS and develop its validity and reliability within the context of Azerbaijan, it will be useful to conduct further studies to over wider range of clinical populations. Moreover, in order to strengthen the structural validity of the scale, again, a comparison with other scales can be made in the future.

5. Conclusion

The findings of the present study demonstrate that the psychometric features of the SWLS are satisfactory in Azerbaijani and that the Azerbaijani version of the SWLS can be used as a tool in the evaluation of life satisfaction. The finding is consistent with the adaptability of the SWLS in other cultures (Pavot & Diener, 1993).

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