


Adapting the User-Friendly Social Capital Scale in Volunteering into Turkish

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ABSTRACT

This study aims to adapt to Turkish and perform the validity and reliability studies of the User-Friendly Social Capital Scale in Volunteering developed by Foley et al. (2012) in order to measure volunteers' social capital in Türkiye. The study group consists of 600 adults who participate in volunteering activities at least once a year in Türkiye for the exploratory factor analysis (EFA) of the scale. The bilingual equivalence studies for the scale were carried out with 33 adults. As a result of the validity studies' EFA, the scale was determined to have 16 items, with one factor explaining 78.20% of the total variance, and an eigen value greater than 1. The second study group included 603 adults for the confirmatory factor analysis (CFA), which determined the model to have good fit and all fit indices to be within appropriate ranges ($\chi^2 = 251.75$; $df = 101$; $\chi^2 / df = 2.49$; $RMSEA = .07$; $CFI = .94$). Meanwhile, the reliability studies found a Cronbach's alpha of $\alpha = .98$, a test-retest correlation of $r = .86$, a split-half reliability value between the two forms of $r_{1-2} = .92$, a Guttman value of $.96$, and a Spearman-Brown reliability of $k = .96$. These results show the Turkish version of the User-Friendly Social Capital Scale in Volunteering to have high levels of reliability and validity.

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Although the concept of social capital emerged at the beginning of the 20th century, it has become the subject of scrutiny over the last three decades for social scientists interested in how strong relationship networks can help civil society's development (Bonham, 2018). Social capital also began being used and discussed as a new form of capital alongside concepts originating from economics such as natural capital, real capital, and revolving capital, which had already frequently been used. Unlike the previous concepts regarding capital in economics, the concept of social capital has its roots primarily in sociology. The first use of the concept of social capital in its current sense was made by Hanifan (1916) in America, while Bourdieu was the one who introduced the concept of social capital in Europe alongside the better-known concept of cultural capital (Westlund, 2006). Social capital gained considerable international validity in the social sciences, especially with the various studies from Bourdieu, Coleman, and Putnam (Field, 2003).

The concept of social capital has also been used as a way to conceptualize the intangible resources, shared values, and trust that feed society in daily life. The concept has also been discussed within the disciplines of politics and sociology as a means of explaining the decline of social values and social cohesion in many Western societies. In essence, social capital refers to a productive value of social relations in which the concept of production is not only concerned with the production of goods and services, but also with the production of both public and personal welfare. Putnam (1993, p. 28) explained this in terms of "the characteristics of social organization, such as trust, norms, and networks, that social capital can increase the productivity of society by facilitating cooperative action." Because of this critical importance, few theoretical concepts have received more attention among social scientists in recent years than social capital. One of the features to have carried this concept to such a central and interesting position is that ordinary citizens care about their activities in the process of social change.

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Social capital is a multidimensional concept, and the meaning it represents is generally explained from a perspective that centers on the importance of social relations. According to this point of view, social networks involve ways to create cohesive communities through common norms and values and to facilitate cooperation within and between groups. In other words, social capital is about a person's access to various resources through social networks, where access to these resources is explained not by what a person knows, but by whom one knows. The social network to which people belong (i.e., the social network they are in) is about how they can benefit from more resources to improve themselves and their economic situation, as well as how they can use social networks for this (Bonham, 2018). In this case, the basic thesis of the theoretical background on which the concept of social capital is based can be summarized in the following short sentence: relationships are important. By making connections with one another and maintaining relationships over time, people can work together to achieve what they could not have accomplished on their own or could have only achieved with great difficulty. People tend to connect over a range of networks and share common values with other members of those networks. These networks can also be seen as a type and resource, a kind of capital. Apart from being useful within the social network, this capital can also be used in other settings as well. In general, the more people one knows and the more common the point of view they share with them is, the richer they are in terms of social capital (Field, 2003).

A positive correlation can be said to exist for a rise in social capital with the solution of social problems, the evolution of societies, social resilience, the sense of power created by acting together, and social well-being. Budescu and Uslaner (2003) stated that communities with higher levels of social capital can cooperate more frequently to overcome social problems, keep their management more responsive and honest, and improve democratic institutional performance. Societies low in social capital are unable to break the vicious circle and remain at the mercy of less responsive, less efficient, and less honest governments. In breaking this vicious circle and developing societies, voluntary organizations and group connections with multiple overlapping relationships in particular have important functions.

The fact that social capital has beneficial consequences for society makes finding ways to put these capital-related elements into practice worthwhile. While various ways exist for developing social capital, one indispensable process is volunteering (Chan et al., 2007). Putnam (1993) discussed in detail voluntary participation as a form of civic engagement in the 1960s and documented the evidence showing the public levels of civic engagement. In this context, Putnam concluded the most important component of civic participation to be the social capital generated by a wide variety of voluntary activities. Thus, volunteering plays a central role in building social capital. According to Putnam, a high level of voluntary participation in the social networks in a society results in an increase in trust in the other, as well as strong expectations for good law-abiding citizens. This finding will also clearly explain the escalation of debates around issues such as the factors underlying the growing interest in volunteering and the relationship between social capital and civil society. As a matter of fact, Degli and Sabatini (2013) stated an increase in social capital to play a positive role in the proliferation of voluntary organizations, the spread of civic attitudes and social trust, and the development of cooperative relations networks.

Volunteering has a controversial definition and varies according to cultural contexts. In essence, volunteering involves activities that are not carried out with monetary expectations but rather with the aim of benefitting individuals beyond close family members and that occur completely by an individual's free choice. Volunteering can occur through official institutions as well as by informal and completely non-governmental individuals and organizations. In other words, volunteering activities can be under the control of the state as well as be carried out by civilian personalities outside of state control (Van Hout et al., 2011). Volunteering has transformed into different forms in the modern period, and new functions have been assigned to volunteering. Today, the political and economic dimensions of volunteering have become more and more dominant. The new social conditions and order that had started in the 19th century and developed afterwards have had an important effect on the formation of this situation. In the new social order, volunteering has gradually gained modern appearances, and under the new social conditions, individuals are seen to turn to volunteer activities for expressing themselves, publicizing social demands, taking action to contribute to solving destructive problems, and strengthening civil initiative (Şentürk, 2016). Voluntary activities affect social capital both in terms of its conceptual background as well as its empirically observable results. Volunteer activities create a social impact on individuals and institutions, and one of these social effects is social capital.

Social impact is an important concept that allows an understanding of the possible consequences of volunteering activities to develop. This concept provides a critical approach not only to volunteering activities but also to all kinds of plans, projects, programs and policies that concern society and also plays a key role in understanding what the activities carried

out or planned to be realized actually mean for the relevant society and communities. Social impact assessments have come to the fore in the field of volunteering and civil society in recent years and are the main way of concretely demonstrating the social impact these activities create or can create. Social impact assessment refers to an analytical process that enables the structuring of all kinds of activities concerning a society and/or communities, that ensures the maximum benefit from these activities, and that minimizes the possible damage that may arise from activities (Turan Tüylüoğlu, 2016).

Measuring the impact volunteering has on social capital is difficult due to the establishment of contributing factors and the presence of many complex factors. This difficulty also arises from the measurement of social impact (Turan Tüylüoğlu, 2016). Volunteers' contributions to social capital, individual resilience within the relationship patterns of a volunteer and the group, the motivation (synergy) created by the relations between individuals and/or groups, and the degree of civic participation can be mentioned among the factors that determine the impact (Putnam, 1993).

While volunteering is still a growing area of interest for social scientists, little study has occurred on how volunteering can build social capital. In addition to social science research on areas such as social welfare, academic research on the benefits of volunteering have also increased. These studies are mostly input-based and use evidence such as the time people volunteer (number of hours) and the frequency of volunteering to measure the market value of volunteering in a given society. However, research is limited on what volunteers do and, more importantly, how volunteer action can create change in communities (Bonham, 2018). Therefore, a need seems to exist for exploring how volunteerism can transform societies and increase social capital.

The aim of this study is to adapt a previously developed measurement tool and to carry out the linguistic equivalence, validity, and reliability studies so as to be able to measure the contribution of the experiences of voluntary participation to the participants' social capital levels. In this context, the study adapts to Turkish and psychometrically analyzes the one-dimensional User-Friendly Social Capital Scale in Volunteering developed by Foley et al. (2012).

Method

This section will discuss the research model, the study groups, and data collection tool, as well as the data collection and data analysis processes.

Research Model

The research involves a scale adaptation study. Studies that carry out a scale adaptation involve the process of psychometrically analyzing measurement tools developed in different cultures by translating them into other cultures and languages (Deniz, 2007). In this context, the User-Friendly Social Capital Scale in Volunteering as originally developed by Foley et al. (2012) is adapted into Turkish within the scope of the research, with linguistic equivalence, validity, and reliability studies also being carried out.

Study Group

The study collected data from a total of 1,275 people within the scope of three separate analyses for the exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) regarding the construct validity and test-retest reliability calculations. In this context, 600 people were reached for the EFA, 603 people for the CFA, and 72 people for test-retest analysis. These adults participate in volunteer activities at least once a year.

Of the study group, 51.2% are male and 48.8% are female; 2.2% have at most a primary school, 3.4% a secondary school, 27.6% a high school, 22.9% an associate degree, 37.7% an undergraduate degree, and 6.2% a graduate degree education level. Of the study group, 36.2% stated attending a voluntary event once per year, 29.3% at least once per month, and 34.5% at least once per week. The mean age of the study group is = 29.68 years ($SD = 11.06$) with the median age calculated as 25 years. The youngest age is 18 and the oldest is 72, thus showing an age range of 54 years.

Measuring Tools Used

The original measurement tool was developed by Foley et al. (2012) to determine the social gains (social capital) resulting from individuals participating in volunteering activities. The data were obtained from practices conducted in Ireland with 84 volunteers, of whom 71 were deemed to be valid. The scale consists of 16 items and is a five-point

Likert-type self-report scale. Alternative answers were also designed with a five-point rating ranging from “1 = strongly disagree” to “5 = strongly agree.” All 16 statements were evaluated for face and content validity by seven experts, including a social capital research expert, two members of an academic institution, a volunteer center manager, a statistician, and two volunteer administrators. In addition, a pilot study was conducted in which four volunteers were asked to fill out the questionnaire and comment on the questionnaire’s relevance, applicability, misunderstandings, and guidelines. The Cronbach alpha of internal consistency for the scale was also calculated as $\alpha = .86$.

The study currently being carried out to adapt the scale to Turkish also applied a personal information form in order to obtain some of the participants’ demographic information (e.g., gender, education level, age, level of participation in volunteering activities).

Data Collection

Prior to collecting the data, permission to adapt the scale was obtained from the researchers who developed the original scale. After the translation, ethics committee approval was obtained from Kırklareli University. Finally, the Turkish version of the scale began being applied to volunteers after obtaining permission from the relevant units of the non-governmental organizations. For this purpose, a digital form was designed consisting of the items from the personal information form and the scale, with applications being carried out using the form online.

Data Analysis

EFA analyses were applied while adapting the scale to determine the factor structure in the context of the construct validity of the data, with CFA analyses were used to confirm the determined construct. Cronbach’s alpha, split-half reliability, and test-retest correlations were applied for testing the reliability.

EFA is a multivariate statistical method that tries to identify the fewest hypothetical constructs that can rigidly explain the observed covariance among a set of measured variables. In other words, EFA aims to identify the common factors that explain the structure among measured variables (Watkins, 2018) and is used to determine the factorability values of the User-Friendly Social Capital Scale in Volunteering, the common loads of the items, the factor structure and the amount of the explained variance, and the load values of the items.

CFA is generally used to verify the construct validity of a scale, especially for multidimensional scales. In order to do this, a covariance matrix is calculated over the scores from a set of subjects, after which the CFA is applied to test whether a putative factor structure contradicts this matrix. CFA is conducted using structural equation modeling (SEM), a very complex statistical procedure used for testing theoretical models over data (Prudon, 2015). CFA was used to determine the factor structure of the User-Friendly Social Capital Scale in Volunteering with regard to the fit indices.

Cronbach’s alpha is one of the most widely used reliability measures in the social and organizational sciences. The most common practice is for measures to represent multiple questionnaire or test items, in which case Cronbach’s alpha is used to refer to a measure’s reliability in terms of internal consistency (Bonett & Wright, 2015). An important technique in the development of psychometric tools also involves test-retest reliability, and ensuring that differences in measurement are due to reproducible differences between people regardless of time, target behavior, or user profile is also beneficial. While many different meanings are found to have been ascribed to reliability as a term across scientific disciplines, test-retest reliability in particular refers to the systematic examination of consistency, reproducibility, and agreement between two or more measurements performed for the same person using the same instrument. Test-retest studies help understand how reliable a measurement tool can be when used more broadly in research and/or clinical practice (Aldridge et al., 2017). According to the split-half technique, test and scale developers split a scale or test in half so that the first half makes up the first part of the entire test or scale while the second half makes up the remainder. Both halves are normally of equal length, and each is designed as an alternate form of the other. Reliability estimation is based on correlating the results from the two halves of the same test or scale (Chakrabarty, 2013). This study reports the reliability values of the User-Friendly Social Capital Scale in Volunteering by calculating the Cronbach’s alpha of reliability, the split-half reliability, and test-retest correlations.

Results

This part of the study involves the findings from the scale's adaptation, and in this context respectively provides the linguistic equivalence, exploratory factor analysis, confirmatory factor analysis, and reliability analysis results regarding the adaptation.

Bilingual Equivalence and the Obtained Results

For providing linguistic equivalence, the original items were first translated by four academicians with a terminological competence in both the English language and volunteerism. Following a group study in which these four translation texts were discussed together, a Turkish translation form was created with the agreed-upon items. This form was also back translated into English by a new academician with terminological competence in both the English language and volunteering. Because no inconsistencies were determined to be present in the translations, the Turkish version of the scale was given its final form. At this stage, the draft scale was examined by a Turkish language expert. After confirming no spelling or expression errors to be present in terms of language, a pilot study of the Turkish form was conducted with a group of 38 undergraduate students, and no negative feedback was encountered.

In order to determine statistically whether the Turkish and English (original) forms are linguistically equivalent, both forms were administered 11 days apart to 33 senior undergraduate students with proficiency in English as a foreign language who stated having had participated in volunteer activities at least once before. The data obtained from both applications were analyzed using the item-to-item paired samples t-test and Pearson correlations. As a result of the analysis, the correlation values for all items were found to be positively significant ($r_{\min} = .78$; $r_{\max} = .92$), with the differences between the means being insignificant ($t_{\min} = .42$; $t_{\max} = 1.02$; $p > .05$). These values were accepted as indicating the linguistic equivalence of the measurement tool, and thus the EFA could be started.

Exploratory Factor Analysis (EFA) Results

Before the EFA, the study examined the factorability values, which are indicators of the suitability of the data obtained from the study group ($N = 600$ people) for factor analysis. In this context, the Kaiser-Meyer-Olkin (KMO) sample adequacy value, Bartlett sphericity test value, correlation matrices, and anti-image correlation matrix values were examined, with the obtained results being presented below.

Table 1

Factorability Values

Indicators	Values
Kaiser-Meyer-Olkin (KMO) Sampling Adequacy	.97
Bartlett Sphericity test	13062.90; $p = .000$
Correlation Matrices	Min = .61; Max = .91
Anti-image Correlation Matrices	Min = .96; Max = .99

One factorability indicator is the KMO value. This value evaluates whether the sample size as a whole is sufficient for calculating the EFA and is expected to be $> .60$ ($> 60\%$). Meanwhile, the Bartlett sphericity test is used to compare data with an identity matrix, namely to assess whether the data is free of single-response bias. The p value for this test is expected to be less than $.05$ (i.e., the test should be significant; Hair et al., 2019). Meanwhile, correlations between items (correlation matrix) for the EFA should be greater than $.30$ (Yaşlıoğlu, 2017); and inverse image correlation values as a partial correlation value are also expected to be greater than $.50$ (Sipahi et al., 2008). As seen in Table 1, the KMO value is greater than $.60$ ($KMO = .97$), the Bartlett's value is significant ($13,062.90$, $p = .000$), the correlation values between items are greater than $.30$ (min. = $.61$), and the inverted image values are also greater than $.50$ (min = $.96$). These values reveal the data for all indicators to be suitable for factor analysis. After these results, the study examined communality in the data.

Table 2

Communality

Items	Initial	Extraction	Items	Initial	Extraction
Item 1	1.00	.735	Item 9	1.00	.816
Item 2	1.00	.629	Item 10	1.00	.791
Item 3	1.00	.786	Item 11	1.00	.828
Item 4	1.00	.689	Item 12	1.00	.832
Item 5	1.00	.794	Item 13	1.00	.808
Item 6	1.00	.842	Item 14	1.00	.823
Item 7	1.00	.829	Item 15	1.00	.862
Item 8	1.00	.681	Item 16	1.00	.768

Common load values indicate the extent to which an item is related to all other items, with higher values being desirable. These values can vary between .00 and 1.00 and are expected to be greater than .50, with those less than .30 being considered to be low (Pallant, 2007). All these values were determined to be greater than .50 in this study, with the lowest common load value being .63. The obtained values show all items to contribute extremely strongly to the common variance. After these results, the study calculates the explained total variance values of the data, with the results being presented as tables and figures.

Table 3

Total Variance Explained and Item Loadings

Comp.	Initial Eigenvalues			Extraction Sums of Squared Loadings			Item Loading	
	Total	Var. %	Cum. %	Total	Var. %	Cum. %	Item No.	Loading
1	12.512	78.201	78.201	12.512	78.201	78.201	1	.857
2	.582	3.635	81.836				2	.793
3	.483	3.019	84.855				3	.886
4	.378	2.361	87.215				4	.830
5	.324	2.023	89.238				5	.891
6	.292	1.825	91.064				6	.918
7	.215	1.345	92.408				7	.910
8	.198	1.238	93.647				8	.825
9	.171	1.071	94.718				9	.903
10	.157	.981	95.699				10	.889
11	.152	.948	96.647				11	.910
12	.141	.883	97.530				12	.912
13	.133	.829	98.359				13	.899
14	.099	.616	98.974				14	.907
15	.089	.555	99.529				15	.928
16	.075	.471	100.000				16	.876

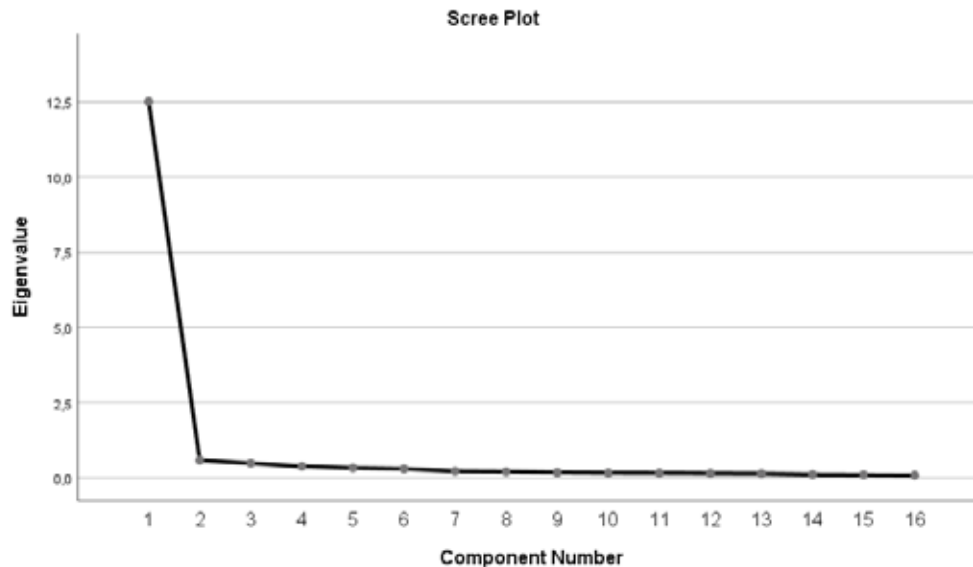


Figure 1. Scree plot.

The explained variance table is also important regardless of the factor analysis method, and having the explained variance exceed 50% of the total variance is an important criterion of the factor analysis (Yaşlıoğlu, 2017). According to Tavşancıl (2002), this value should be between 40-60% in the social sciences, and each item is expected to get a load value greater than .30 (30%) from the factor in which it is included.

As can be seen in Table 3 and Figure 1, only one factor was present, and it explains 78.20% of the total variance with an eigen value greater than 1.00. The eigen value of the second factor was .58. These values reveal the scale to have a one-dimensional structure. Meanwhile, the scree plot also supports this single factor structure. In addition, the load values for the items in the single-factor structure all exceed .30 (min. = .793). The scale has no reverse-scored items. As a result, the scale has been decided to possess a single-factor model with an eigenvalue of 12.51 that explains 78.20% of the total variance. After these analyses, CFA was started. CFA was made with a separate study group, and the results are presented below.

Confirmatory Factor Analysis (CFA) Results

This part of the research includes the results from the CFA, another analytical method that has been used to test the construct validity of the User-Friendly Social Capital Scale in Volunteering (GSSÖ). The User-Friendly Social Capital in Volunteering Scale (GSSÖ) to be tested in the analysis consists of 16 items and a single factor.

Normality

One of the basic assumptions of CFA analysis is that the variables meet the normality assumption. In meeting this assumption, having the central agglomeration measures (i.e., arithmetic mean, mode, and median) and the skewness and kurtosis values be as close to .00 as possible are accepted as descriptive indicators (Tabachnik & Fidel, 2013). George and Mallery (2019) stated skewness and kurtosis values between ± 2.00 to be usable as an indicator of normal distribution.

For this purpose, before proceeding to the CFA, the normality test for the User-Friendly Social Capital Scale in Volunteering (GSSÖ) was conducted to determine which test techniques would be used when analyzing the data. The normality analysis also examines extreme values in the data over the z values, with no extreme values being observed to be present. The results obtained from the normality analyses are presented in Table 4.

Table 4

Descriptive Values Calculated for the Normality

Indicator	GSSÖ
Frequency	603
Mean	66.85
Median	69.00
Standard Deviation	14.01
Range	64
Skewness	-1.789
Kurtosis	1.641

The skewness and kurtosis values for the data from the Volunteering User-Friendly Social Capital Scale (GSSÖ) have been examined, with both being calculated between ± 2.00 . These values confirm the distribution to resemble normal distribution.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is a method of analysis that is frequently used when developing measurement models and provides significant convenience. This method involves a process for creating a latent variable based on the observed variables using a pre-created model. The method is generally used in scale development and validity studies or in studies that aim to verify a predetermined structure (Yaşlıoğlu, 2017).

CFA reveals how well the tested model explains the presented data using goodness-of-fit indices, which provide data on whether a model is acceptable or not. If the obtained data are in the appropriate reference ranges, the model is acceptable; otherwise, suggestions are followed regarding how to modify the indices, and the fit indicators of the model are improved. Models that do not have acceptable reference values are rejected (Kline, 2011; Schumacker & Lomax, 2010).

The most commonly used goodness-of-fit indices in CFA are the chi-square test statistic (χ^2), degrees of freedom (df), chi-square / degrees of freedom (χ^2 / df), root mean square error of approximation (RMSEA), normed fit index (NFI), comparative fit index (CFI), and goodness of fit index (GFI) and are used as the references in this study (Çokluk et al., 2012; Koyuncu, 2019; Şimşek, 2007).

Before starting the CFA, the structure was tested for multivariate normality. A multivariate critical ratio (C.R.) < 10.00 in the multiple normality test for CFA can be considered to acceptably show the structure to have multivariate normality without looking at other values (Kline, 2011; Mardia, 1974). In this context, a normality test for multiple variables was first applied to the scale, with the results being given in Table 5.

Table 5

Multivariate Normality Test

Items	Min	Max	Skewness	CR	Kurtosis	CR
Item 01	1.000	5.000	-1.513	-11.167	2.064	6.347
Item 02	1.000	5.000	-1.363	-13.662	1.734	8.693
Item 03	1.000	5.000	-1.723	-11.274	1.055	5.314
Item 04	1.000	5.000	-1.433	-14.362	1.428	7.157
Item 05	1.000	5.000	-1.516	-11.197	2.057	6.309
Item 06	1.000	5.000	-1.508	-11.117	1.965	6.849
Item 07	1.000	5.000	-1.983	-11.878	1.202	1.063
Item 08	1.000	5.000	-0.960	-9.621	.086	.431

Items	Min	Max	Skewness	CR	Kurtosis	CR
Item 09	1.000	5.000	-1.385	-13.888	1.677	6.404
Item 10	1.000	5.000	-1.224	-12.293	1.177	5.952
Item 11	1.000	5.000	-1.334	-13.378	1.480	7.419
Item 12	1.000	5.000	-1.720	-17.246	2.915	4.612
Item 13	1.000	5.000	-1.424	-14.275	1.753	6.788
Item 14	1.000	5.000	-1.852	-11.567	3.528	7.682
Item 15	1.000	5.000	-1.731	-11.352	3.073	5.403
Item 16	1.000	5.000	-1.182	-11.847	.835	4.185
Multivariate					30.206	11.377

As seen in Table 5, the multivariate critical ratio for 16 items is 11.928, thus the structure has been evaluated to acceptably meet the conditions for multivariate normality. Due to the research data showing multivariate normality, the maximum likelihood method (Golob, 2003; Schumacker & Lomax, 2010) is preferred most often when multivariate normality is achieved in CFA, with the goodness-of-fit indicators first being examined for model fit.

The model indicators were found to have acceptable reference values in the first CFA test of the User-Friendly Social Capital Scale in Volunteering. The CFA shows excellent fit and good fit indicators in Table 6 (Çokluk et al., 2012; Gürbüz, 2019; Kline, 2019; Schumacker & Lomax, 2010, Subas & Cetin, 2017).

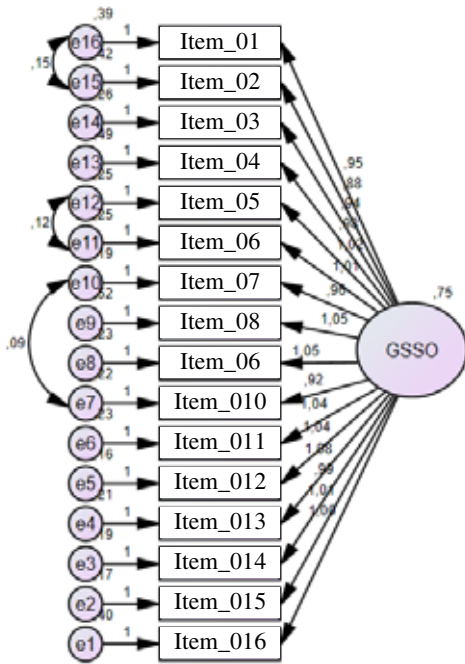
Table 6

User-Friendly Social Capital Scale in Volunteering CFA Measurements and Goodness-of-Fit Indicators

Fit indicators	Excellent	Good	Values	Status
χ^2			251.750	
p value	$.05 \leq p \leq 1.00$	$.01 \leq p \leq 0.05$	.000	Acceptable
df			101	
χ^2 / df	$\leq \chi^2 / df \leq 3.00$	$3 \leq \chi^2 / df \leq 5.00$	2.492	Excellent
RMSEA	$\leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .08$	.073	Good
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	.94	Good
CFI	$.95 \leq CFI \leq 1.00$	$.90 \leq CFI \leq .95$	.94	Good
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI \leq .95$	.919	Good
AGFI	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI \leq .90$	.896	Good

As a result of the CFA carried out to test whether the factor structures created by the EFA for the User-Friendly Social Capital in Volunteering Scale (GSSÖ) form a holistic structure; As a result of examining the model's goodness-of-fit indicators that were obtained based on the reference intervals specified in the literature, the model has been evaluated as being statistically appropriate. Even though the chi-square value was expected to be meaningless in the CFA, this value can be calculated as significant in cases with a sample size of $N > 250$ (Yaşlıoğlu, 2017). For this reason, the study has evaluated the significance of the chi-square value to be explainable based on the sample size.

Reference values closer to 1.00 indicating better fit between the theory and collected data. This situation shows no requirement exists to obtain the exact same values that were given. Hair et al. (2010) emphasized the research sample size and number of factors, structures, and variables (number of questions) evaluated in a study to be able to affect fit indices. Having a large number of structures in a model and increasing the number of observed and latent variables are the factors that make obtaining fit indices difficult. Improvements in the covariance values between the observed and latent variables are shown using error terms (Dikbaş Torun, 2019). In order to increase the adequacy of the fit indices in the analysis results, modification processes were required for three paired items.



$\chi^2 = 251.750; df = 101; \chi^2 / df = 2.492; RMSEA = .073; CFI = .94$

Figure 2. CFA results for the standardized path diagram of the User-Friendly Social Capital Scale in Volunteering (GSSÖ).

Figure 2 shows the path diagrams between the measurement model used for the User-Friendly Social Capital Scale in Volunteering (GSSÖ) and the latent and observed variables. The path diagram was created using the AMOS graphic menu, and the standardized values are expected to at least .70 and less than 1.00 (Brown & Moore, 2013; Jöreskog et al., 2016; Kline, 2019).

Table 7

User-Friendly Social Capital Scale in Volunteering (GSSÖ) Standardized Regression Table

Regression Weight		Estimate	SE	CR	Estimate	
Item 16	<---	GSSO	1.000			
Item 15	<---	GSSO	1.014	.036	27.920*	.907
Item 14	<---	GSSO	.987	.036	27.059*	.890
Item 13	<---	GSSO	1.080	.039	27.460*	.898
Item 12	<---	GSSO	1.036	.037	28.289*	.915
Item 11	<---	GSSO	1.040	.039	26.786*	.884
Item 10	<---	GSSO	.921	.036	25.874*	.864
Item 09	<---	GSSO	1.049	.039	26.848*	.885
Item 08	<---	GSSO	1.046	.047	22.329*	.781
Item 07	<---	GSSO	.958	.036	26.734*	.883
Item 06	<---	GSSO	1.013	.039	26.085*	.869
Item 05	<---	GSSO	1.022	.039	26.065*	.869
Item 04	<---	GSSO	.977	.045	21.950*	.771
Item 03	<---	GSSO	.945	.037	25.259*	.851
Item 02	<---	GSSO	.884	.041	21.694*	.765
Item 01	<---	GSSO	.948	.041	22.915*	.796

**p<.001

Table 7 shows the standardized regression weights between the factors and associated items to vary between .765 and .915 and to be statistically significant ($p < .001$). In addition, the critical value is considered to be 1.96 statistically, and the value here well exceeds that. Analysis results show each of the parameters explaining personality to be significant.

The CFA analysis expects each item to have a correlation value of close to .70 or higher with the scale factors. The lowest acceptable regression load is expressed to be .50 (Hair et al., 2010). As seen in Table 7, the regression loads for the scale items meet the determined criteria, with the lowest load being Item 02 at .765. In this case, the construct validity of the scale can be said to have been confirmed with the structure in Table 7, whose standardized regression weights for the scale are within acceptable ranges and significant at the level of $p < .001$.

Table 8

Variance Values of the Suggested Model in the CFA Test

Variance	Estimates	SE	CR
GSSÖ	.750	.063	11.964*
e1	.404	.024	16.608*
e2	.165	.011	15.481*
e3	.192	.012	15.829*
e4	.210	.013	15.681*
e5	.157	.010	15.292*
e6	.227	.014	15.919*
e7	.215	.013	16.122*
e8	.228	.014	15.899*
e9	.525	.031	16.726*
e10	.194	.012	15.900*
e11	.249	.016	16.083*
e12	.255	.016	16.087*
e13	.488	.029	16.763*
e14	.256	.016	16.303*
e15	.416	.025	16.776*
e16	.391	.024	16.652*

* $p < .001$

Table 8 shows the CFA results for the User-Friendly Social Capital Scale in Volunteering (GSSÖ); the variance and covariance values of the scale are within acceptable ranges and statistically significant at $p < .001$. The single-factor structure of the scale was confirmed as a result of the CFA analysis performed to determine whether the items of the User-Friendly Social Capital Scale in Volunteering (GSSÖ) form a holistic structure. Afterward, reliability analyses were performed to determine the scale's reliability, with the obtained values presented below.

Table 9

Reliability Coefficients

Scale	Cronbach's Alpha	Part-1 Alpha	Part-2 Alpha	r_{1-2}	Spearman Brown	Guttman	Teŝt-reteŝt
GSSÖ	.977	.950	.966	.922	.960	.960	.861

As can be seen in Table 9, the reliability coefficients of the scale were determined to be quite high. Cronbach's alpha was determined as $\alpha = .98$, the split-half values as $r_{1-2} = .92$, the Spearman Brown value as $S = .96$, and the Guttman value as $G = .96$. These obtained values confirm the scale to have high reliability. Samples of items included in the scale are given in the Appendix.

Discussion

This study has adapted the User-Friendly Social Capital Scale in Volunteering as originally developed by Foley et al. (2012) into Turkish and conducted linguistic equivalence, validity, and reliability analyses. The scale shows a one-dimensional structure, with higher scores indicating an individual to have higher components of social capital. This increase can be accepted as indicating the individual to have become better in terms of community spirit, trust in volunteering, sense of belonging, participation, social relationships, skills development, well-being, trust, awareness of others, awareness of diversity and acceptance of other cultures, disability or special needs as a result of volunteering activities.

The developed scale is seen to be a valid and reliable tool for measuring the extent to which volunteering contributes to social capital. Data from this scale can be used as a dependent variable for a wide variety of research designs, including causal and comparative studies, as well as studies aimed at measuring social capital in volunteering based on demographic, organizational, and individual characteristics. The tool can also be used as an assessment tool for assessing volunteer development and assisting volunteer management processes, and both formative and summative data are obtainable.

The operations performed for the adapted scale are much more comprehensive and detailed than the original scale. For example, while only expert opinions were included for the validity analyses in the original scale, many analysis results are found that provide evidence for validity regarding the adaptation study. Meanwhile, the same is true for the reliability analyses. While the original scale only analyzed only the alpha of internal consistency, this study analyzed four different reliability indicators. The differences in detail create a limitation when comparing the original scale and the adapted scale to one another. The adapted scale can be said to provide higher reliability value when compared using the alpha coefficient as the only available numerical indicator. This difference is likely due to the sample groups. In any case, the adapted scale provides much more detailed and qualified evidence for its validity and reliability than the original scale.

The scale also noteworthy exhibited a single-factor structure in the EFA. This situation can be thought to have arisen from the structure of social capital, being the concept the scale items are measuring. When examining the items, items that differ with small nuances in content may have affected this situation. In fact, this was also confirmed in the correlation matrices and counter-image correlation values. For many items, these values show high correlation. In addition, the relatively small number of items should not be denied to be able to cause a similarity regarding respondents' responses, one which positively affects the consistency. However, its 16-item structure also represents the main advantage of this scale. It is short, easy to apply, and does not impose much burden on a volunteer.

Volunteering has an incredible variety of purposes. In this respect, different cultures have carried volunteering to different points. One example of this is the perspective that sees volunteering as a charitable service, especially one that avoids providing personal benefit, with people's volunteer activities being used to seek answers to certain expectations, both from the addressee as well as the volunteer themselves. From this point of view, the scale can be suggested for use in geographies with different beliefs and value judgments, and these results can then be compared. The results obtained can contribute not only to social capital, but also to the discussion of the content of the concept of volunteering, which is thought to have a positive effect on improving social capital.

Although the obtained data are seen to show a high level of validity and reliability regarding the adapted scale, the benefits of the qualitative perspective should not be denied. One of this study's suggestions is to conduct mixed studies in which the scale is used but the results are supported by data obtained using qualitative methods.

Ethical approval

This study was approved by the Ethics Committee of Kırklareli University (Date: 12.03.2023 No: E-35523585-302.99-68587).

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Appendix

The User-Friendly Social Capital Scale in Volunteering

GÖNÜLLÜLÜKTE KULLANICI DOSTU SOSYAL SERMAYE ÖLÇEĞİ

(Sample Items)

Aşağıda gönüllülük faaliyetlerine ilişkin bazı ifadeler verilmiştir. Her maddeyi dikkatlice okuyunuz ve size ne derece uygun olduğuna dair görüşünüzü ilgili değeri karalayarak işaretleyiniz.

Maddeler	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Gönüllülük faaliyetleri girişimci yönümü güçlendirdi.	①	②	③	④	⑤
Gönüllü olmak bana aidiyet duygusu hissettiriyor.	①	②	③	④	⑤
Gönüllülük sosyal hayata daha fazla katılmama vesile oldu.	①	②	③	④	⑤
Gönüllü faaliyetlerde katılım duygusu bana iyi geliyor.	①	②	③	④	⑤
Gönüllü olarak katıldığım etkinlikler yeni beceriler edinmemi sağladı.	①	②	③	④	⑤
.....					