Pro-Social Behavior Scale (PSBS): Development Study[1]

M . Yüksel Erdoğdu[2] İlknur Ecem Baykut[3]

In this study, it was aimed to develop a measurement tool to measure the prosocial behaviors of adolescents. The research was carried out on 540 students studying at secondary and high school levels in Istanbul and Küçükçekmece districts. After the exploratory factor analysis, it was observed that the scale consisted of 4 sub-dimensions: empathy, altruism, sympathy and self-worth. The theoretical structure of these four dimensions of the scale was supported by confirmatory factor analysis. The variance explained by all items of the scale was measured as 66.75. In order to support the validity level of the scale, it was observed that the correlations between the item discrimination values of the items calculated with the t-test and the subscale scores were significant. The external validity of the scale was compared with the previously developed prosocial behavior scale and significant relationships were found between them. Cronbach Alpha values were calculated for the reliability study of the scale, and it was observed that the reliability values of the scale, including the total scale scores, ranged between .74 and .91. In the light of the psychometric data obtained as a result, a measurement tool with high reliability and validity values was developed for adolescents.

INTRODUCTION

Prosocial behaviors are behavior patterns which aim to cooperate with others (Wilson 2007), which include physical or emotional help for the benefit of others (Eisenberg et al., 2015; Flouri & Sarmadi, 2016; Underwood & Moore , 1982) and which bring people of different age groups together in peace and productivity (Lay & Hoppmann, 2015). In this context, in general, prosocial behaviors are voluntary behavior patterns that aim to help, to cooperate and to understand others without expecting any benefits.

Since they are associated with sociocognitive and socioemotional skills, prosocial behaviors play an important role in ensuring the adaptation of individuals to the society and in developing cooperation (Eisenberg et al., 2015). In addition to preventing antisocial behaviors, the development of these behaviors also has an important place in the continuation of existence of societies (Caprara et al., 2014). It is accepted that this type of behavior acts as a protective force against individuals' conduct problems such as aggressive behaviors (Carlo et al, 2014) and anxiety and depression (Haroz et al., 2013). In general, it is stated that prosocial development progresses depending on age starting from infancy (Crocetti et al., 2016; Zahn et al., 1992). Although there are limited number of studies on prosocial development in adolescence (Luengo Kanacri et al., 2013), it can be expected for prosocial development to increase with the development of abstract reasoning (Eisenberg & Spinrad 2014), increased peer relationships (Steinberg and Morris 2001), social interaction and autonomy resulting from decreased family pressure (Carlo et al., 2012) in adolescence. According to Pratt et al., (2004), although prosocial behavior develops until the age of 20s, the rate of development of prosocial behavior decreases in young adulthood.

When studies conducted on the formation and development of prosocial behavior are examined, it can be seen that genetic and biological factors and socio-cultural environmental factors are effective in the development of this behavior. It is advocated that some biology based emotions develop before psycho social behavior and heredity and genetic effects have decisive roles on these behaviors (Buck, 2002; Mednick et al., 1984). Findings such as emotional and conduct disorders interacting with other factors and creating differences in prosocial behaviors between individuals (Penner, et al., 2005), children with positive emotional disposition showing more prosocial behaviors (Eisenberg et al., 2000) and the presence of relationships between personality and temperament traits and prosocial behaviors (Penner et al., 1995; Rothbart et al., 2000) support these thoughts. Although the presence of biological factors is accepted in the formation of prosocial behaviors, it can be seen that the advocators of this view do not ignore sociocultural effect. It can be seen that children who are securely attached to their parents, those whose social skills are more developed and those who are socialized show prosocial behaviors more frequently (Cassidy et al., 2003; Guajardo et al., 2009; Hastings et al., 2007). It is also observed that healthy relationships between siblings (Stoneman et al., 1986), altruism and cooperation among

1 Article, presented orally on 7th International Mardin Artuklu Scientific Researches Conference on 25.07.2021
2 Istanbul Sabahattin Zaim University, myerdogdu@gmail.com, orcid.org/0000-0001-6403-5630
3 Istanbul Sabahattin Zaim University, ecembaykut@outlook.com,orcid.org/ 0000-0001-9822-3736

friends (Laireiter & Lager, 2006; Persson, 2005), educational practices children receive in their education life (Solomon et al.,, 2000) develop prosocial behaviors.

Although there are different findings relating to the dimensions of prosocial behavior, common aspects can also be seen. Carlo et al. (2003) stated that prosocial behavior has six sub-dimensions. These are "public" behaviors defined as engaging in voluntary behavior in a way that is visible to others, "hidden" behaviors defined as helping without others noticing, "emergency" behaviors aiming to help in emergencies, "emotional" behaviors which occur in situations with intense emotionality, "submissive" behaviors defined as helping when asked and "altruistic" behaviors which occur without waiting for anything in return. There are also views which suggest that prosocial behaviors consist of altruism, empathy, sympathy, perspective taking and self-worth sub-dimensions (Beaty, 1998; Knafo & Israel, 2010). While altruism is defined as the act of goodness that benefits another person without expecting anything in return (Batson, 2014), empathy is the situation of understanding the mood of another and the situation where the concern felt about this situation and the resulting reaction are similar to the ones felt by the other person (Eisenberg et al., 2006). In general, altruism and empathy are accepted as the most important factors in the formation of prosocial behavior (Del Barrio et al., 2004). Sympathy, which is another dimension of prosocial behavior, is considered as feeling the mood of a person rather than understanding and sharing this situation with that person (Bloom & Lambie, 2020; Gerace, 2020; Wispe, 1986); while empathy requires understanding, sympathy expresses agreeing and being non-objective (Eisenberg, 2000). Perspective taking expresses behaviors which aim to help others by understanding their behaviors (Eisenberg at al., 2006; Griese, 2011). In developing empathy and sympathy with these behaviors, individuals create positive effects to their personality and prepare the basis for the formation of prosocial behaviors (Carlo et al., 2003). Finally, self-worth is considering oneself as worthy and being aware of one's competence (Staub, 1981). According to Rosenhan (1970), positive social behaviors develop as a result of self-worth and the individual is motivated to help others by taking a firm stand (cited from McDaniel, 2020). When the sub-dimensions of prosocial behavior are examined, it can be seen that particularly altruism and empathy have been discussed more frequently.

When studies on the prosocial behaviors of adolescents are examined, it can be seen that secondary school students who play games with prosocial content develop prosocial behaviors (Gentile et al., 2009), children who are raised in more disciplined family environment have higher empathy skills and thus show more prosocial behaviors (Krevans & Gibbs,1996), adolescents show more prosocial behaviors than younger children (Holmgren et al., 1998), those with prosocial behaviors physically tease their friends less (Gembeck et al., 2005) and they are more willing in caring for and helping others (Pratt et al., 2004). According to research results, it can be seen that prosocial behaviors develop individuals' social relationships and lead to more easy going behaviors. According to Grusec et al. (2011), prosocial behaviors form the basis of social competence and social relationships because those with prosocial behaviors have more compatible (Clark & Ladd, 2000) and more positive relationships (Spinrad et al., 2006) with their peers. Study results show the importance of having prosocial behaviors for adolescents during adolescence when there are intense family and friend conflicts, peer bullying and exclusion affect individuals negatively and aggressive behaviors are more frequent. In this context, it is very important to determine the prosocial behavior levels of adolescents and the variables which may negatively affect the development of prosocial behaviors. It was found that there is limited number of measurement tools in literature measuring the psychosocial behaviors of adolescents.

In this study, with the development of adolescent prosocial behavior scale, it is expected to make important contributions to the field, to create awareness about measuring prosocial behaviors and to make important contributions to experts working in the field by finding out the variables that affect prosocial behavior positively and negatively with the scale developed.

METHOD

Since the aim of the research was to develop a psychosocial behavior scale for adolescents, the research was organized in a relational model.

Participants

The data of this study were obtained from 540 students studying in 4 high schools with different socio-economic levels in Küçükçekmece town of İstanbul during 2020-2021 academic year. 65 (12%) of the students were 8th graders, 123 (23%) were 9th graders, 185 (34%) were 10th graders, 61 (11%) were 11th graders and 106 (20%) were 12th graders. Age range of the students was 13-18 and mean age of the students was 14,21 (

Sd=1,27). 274 (51%) of the students were female, while 266 (49%) were male. In general, 139 (26%) of the students were from low socio-economic level families, while 289 (53%) were from moderate socio-economic level families and 112 (21%) were from high socio-economic level families. Parents of 455 (84%) students were living together, while 71 (13%) were divorced and 14   (3%) were living separate for different reasons. 399 (74%) of the students stated that they had sufficient number of friends, while 113 (21%) stated that they had insufficient number of friends and 28 (5%) said they were undecided.

Development of prosocial behavior scale for adolescents

Although there are different strategies in scale development, it is generally stated that the integrative approach, in which construct validity is adopted at the highest level, is the most appropriate in classical and modern test development methods (Clark & Watson, 2016; Simms & Watson, 2007). In this approach, in general a comprehensive literature review is made, constructs are determined, item pool is created, expert opinions are taken, necessary adjustments are made with pilot applications and finally the psychometric construct of the scale is revealed (Crocker & Algina, 1986).

For this purpose, a comprehensive literature review was made about prosocial behavior and its subscales and an item pool of 51 questions was prepared for expert opinion. Following this, the questions were given to faculty members who professors in Turkish and psychology departments were to show whether the scale was suitable for the target and the items were clear and understandable in terms of language. In the light of the feedback received, 14 items were deleted from the scale because 12 items did not fully reflect the characteristics intended to be measured and 12 items were insufficient in terms of language. The remaining 25 items were prepared in 5 Likert-type style and they were applied to 20 high school students between the ages of 13 and 18 who were thought to represent the sample group for a pilot application. During the application, the questions students did not understand, the questions students expected explanation for and how long it took the students to complete the measurement tool were noted. It was found that students answered the questions in 14 minutes and 1 question was deleted from the scale form because students had difficulty in understanding the question and thus the scale was reduced to 24 questions.

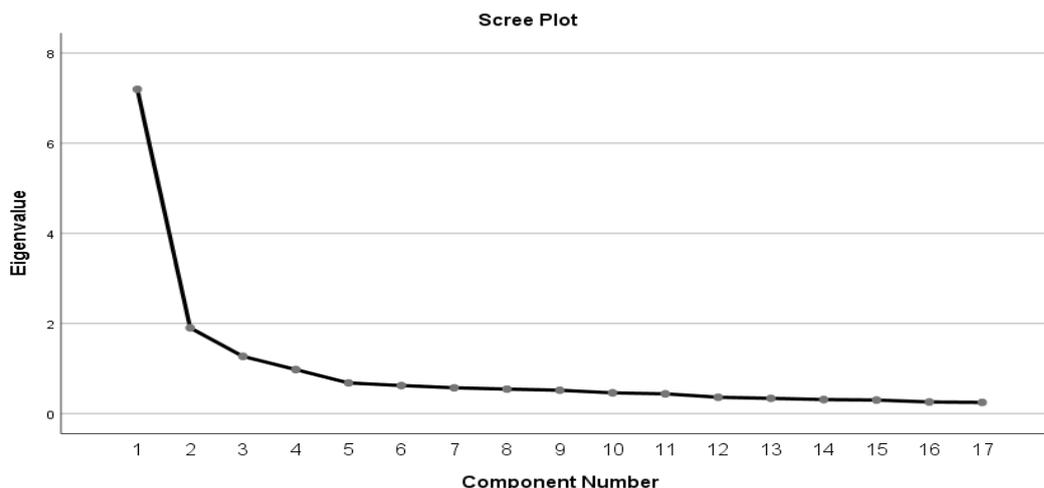## The procedure and data analysis

Before scale application, ethical documents and required permissions were taken from the related institutions (Istanbul Sabahattin Zaim University Ethics Committee, Date:13/08/2021, Number: E-20292139-050.01.04-11547). The application was made in the classroom environment of the students and took about 10 minutes. The measurement tools were applied to 542 students, the forms of 2 students were not analyzed because they responded randomly or did not respond to some of the items and statistical procedures were carried out on 540 forms. Since the scale items were applied to approximately 500 people and the sample size was limited, if the group was divided into two for EFA and CFA, biased results might occur (Doğan & Soysal, 2017) and analyzes were conducted on a single group.

Skewness (,582 - ,105) and kurtosis (,001 - ,210) values were calculated to test the normality distribution of scale scores and the scores were considered to be distributed normally because the values obtained were between ±1,5 (Tabachnick & Fidell, 2007). For validity of the scale, factor analysis, which is one of the multivariate statistical methods that allow creating and interpreting fewer variables from a large number of variables that are considered to be correlated, was conducted (Hair et al., 2014). Exploratory factor analysis (EFA) was performed to group together the items that are thought to be correlated or to identify new constructs (Stevens, 2009). For this purpose, item loads were examined and the items with an item load factor of >,30 were considered to be included in that factor (Klinie, 2011). Confirmatory factor analysis (CFA) was performed to test the accuracy of the constructs obtained with exploratory factor analysis and the fit indices of the items obtained were examined. According to the classical test theory, the items in the scale should have a feature that can distinguish between those which have that feature and those which do not. This gives information about the internal consistency (Büyüköztürk, 2011) and external validity (Simms, 2008) of the test. For this reason, the students were ranked according to the highest and lowest score taken from the scale and the distinctiveness of each item was calculated by showing the means of the 27% groups from the upper and lower groups with unrelated t test. In addition, external validity was tested by calculating the correlations between subscales of the test and item total test scores. For reliability, Cronbach Alpha values and internal consistency coefficients of each subscale and total scores of the test were calculated.

RESULT

Results on validity

Before the exploratory factor analysis was performed, the Kaiser Meyer Olkin (KMO) value was calculated for the convenience of the sample size, and the obtained value was measured as .92. The value obtained is of acceptable size for exploratory factor analysis. The Barlett test was used to determine the level of correlation between the variables in the scale and to test the compatibility of the results with the data matrix. Chi-square values found by using Bartlett test were found to be significant (χ^2=4618,36, p<0.001). In the light of obtained data, exploratory factor analysis (EFA) of the scale was performed and 24 items with an item load of >.30 were found. However, it was found that some of the items were grouped in more than one factor, analysis was repeated by deleting 7 items and finally 17 items with an eigenvalue of >1 were included in the study.

As a result of the analysis performed on the scale items, it was observed that the items were collected in four factors with an eigenvalue greater than 1.

Scree Plot

The results of the analysis (Rotated Component Matrix) made with the remaining 17 items after the rotation to clarify all factors of the scale are shown in Table 1.

Table 1:EFA results of Adolescent Prosocial Behavior Scale (PSBS)

Items	Communalities	Rotated Component Matrix *			
		1st factor	2nd factor	3rd factor	4th factor
45	,710	,818			
46	,742	,818			
47	,733	,820			
50	,660	,705			
51	,610	,725			
20	,704		,784		
21	,751		,818		
22	,704		,794		
25	,706		,736		
31	,565		,514		
1	,663			,773	
2	,696			,624	
5	,668			,644	
6	,639			,713	
7	,531			,529	
36	,625				,655
39	,640				,678
Explained variance	66,75	20,86	20,25	15,41	10,22

*Values of <±0,30 were not shown.

As can be seen in Table 2, the first 5-item factor obtained as a result of EFA was called "altruism" because it consisted of items which gave importance to individuals' thinking of others rather than themselves; the second
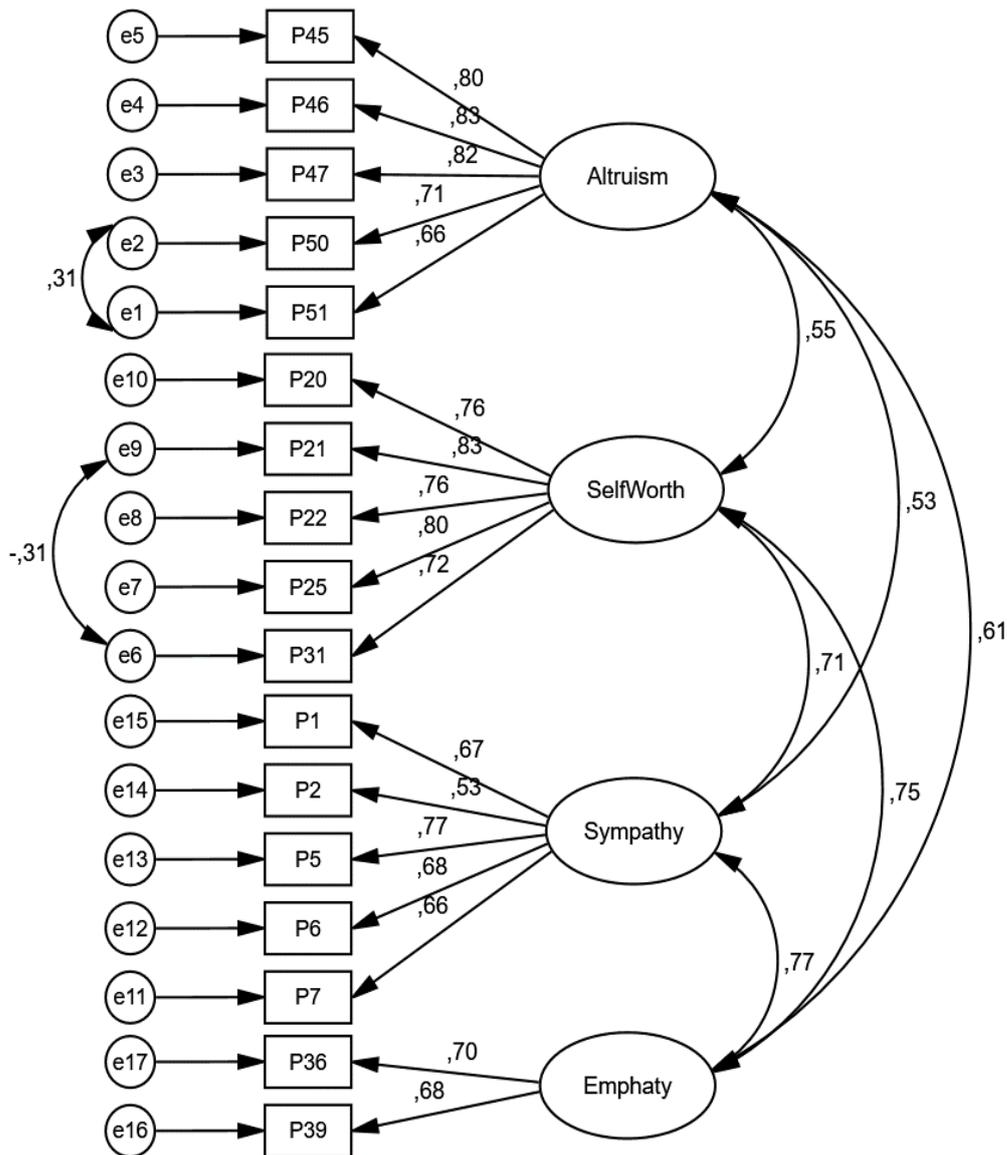
factor with 5-items was called "self-worth" because it measured individuals' considering themselves valuable and important; the third factor with 5-items was called "sympathy" because it was associated with individuals' feeling the same emotions with other individuals; and finally the fourth factor with 2 items was called "empathy" because it measured individuals' understanding the emotions of other individuals. Factor loads of the first factor ranged between ,725 and ,820; factor loads of the second factor ranged between ,514 and ,818; Factor loads of the third factor ranged between ,529 and ,773; and the factor loads of the fourth factor ranged between ,655 and ,678. The variance explained by the first factor was 20,86, while the variance explained by the second factor was 20,25, the variance explained by the third factor was 15,41, the variance explained by the fourth factor was 10,22 and the total variance explained was measured as 66,75.

Another method to be considered while testing whether the developed measurement tool measures the features it is trying to measure is calculation of item analyses. In this context, the significant difference between the items that have the specific feature and the items that do not have the specific feature is accepted as an importance evidence of that test's validity (Anastasia & Urbina, 1997; Tavşancıl, 2010). For this reason, the individuals were ranked from the highest score to the lowest score and the significance of the difference between 27% of the upper and lower group was tested with t test. In addition, total scale scores and correlations of all items in the scale were calculated. Table 2 shows the data obtained.

Table 2 : Corrected item correlations and discrimination results of scale items

Item	r	Group	X̄±S	t	Item	r	Group	X̄±S	t
45	,65	Upper	4,62±,73	19,57	**31**	,70	Upper	4,64±,585	18,18
		Lower	2,24±1,26				Lower	2,56±1,24	
46	,69	Upper	4,61±,636	20,82	**1**	,62	Upper	4,35±,895	15,53
		Lower	2,27±,1.19				Lower	2,47±1.15	
47	,67	Upper	4,60±,767	22,96	**2**	,63	Upper	4,40±,661	13,90
		Lower	2,05±1,09				Lower	2,84±1,17	
50	,71	Upper	4,66±,647	23,62	**5**	,65	Upper	4,37±,935	18,12
		Lower	2,05±1,16				Lower	2,28±1.03	
51	,64	Upper	4,54±,841	19,21	**6**	,69	Upper	4,17±1,07	16,10
		Lower	2,15±1,24				Lower	2,13±1,08	
20	,67	Upper	4,73±,592	14,99	**7**	,67	Upper	4,55±,610	13,86
		Lower	2,96±1.28				Lower	2,95±1,25	
21	,69	Upper	4,75±,517	15,88	**36**	,71	Upper	4,45±,841	15,65
		Lower	2,89±1,31				Lower	2,55±1,19	
22	,65	Upper	4,66±,589	14,26	**39**	,64	Upper	4,37±,824	16,10
		Lower	2,65±1,34				Lower	2,42±1,20	
25	,72	Upper	4,75±,460	16,99	**Total**		Upper	77,30±4,09	43,42
		Lower	2,84±,1,27				Lower	42,65±8,69	

Table 2 shows that the differences between the upper and lower groups are significant between the 17 items included in the scale and the scores obtained from the total scale. In other words, it can be seen that the scores obtained from each of the items in the scale and the scores from the total scale have the characteristics of distinguishing between the items which have the features measured by the scale and those which do not. Item total test correlations of the scale were found to range between ,55 and ,72. In the study, confirmatory factor analysis (CFA) was conducted to test which of the factors had higher correlation with the variable groups revealed with exploratory factor analysis and to find out whether the variables contributing to determined factors would be represented adequately by these factors. Confirmatory factor analysis is a technique based on testing theories about latent variables (Tabachnick & Fidell, 2001). CFA aims to test and verify correlations between variables and as a result to examine under which factors these variables come together, to create a strong theoretical structure (Raykov & Marcoulides, 2008).

Figure 1. Path diagram PSBS

Before performing CFA, the fit indices of the data were examined and the chi-square value [χ2=410,038 df=111, p<.01] was found to be significant. The ratio of Chi-square value to degree of freedom was measured as 3.69 The ratio of Chi-square value to degree of freedom being ≤ 5 means that the model fit is within acceptable limits (2003; Thompson, 2000). Covariance was created between some items to increase the fit values of the results obtained with CFA to a more acceptable level (Hooper et al., 2008). When the fit values of prosocial behavior scale obtained from the four subscales were examined, the following results were found: Goodness of Fit Index (GFI) = 0.94, Adjusted Goodness of Fit Index (AGFI) = 0.91, Comparative Fit Index (CFI) = 0.95, Normed Fit Index NFI=0,93 Root Mean Square Error of Approximation (RMSEA) = 0.041, Standardized RMR (SRMR) = 0.050. In general, GFI, AGFI and CFI values are expected to be ≥,90, while SRMR and RMSEA values are expected to be ≤.05 in confirmatory factor analysis (Byrne; 1998; Kline, 2011; Schumacker & Lomax, 2004). When the results obtained were examined, it was found that fit values of prosocial behavior scale were very good.

Table 3 includes the subscale mean scores and standard deviations of the correlation analysis conducted to calculate the correlation between prosocial behavior scale subscales.

Table 3: Correlation results between Prosocial Behavior Scale mean scores and subscale scores

Subscales	1	2	3	4	5	$\overline{X}$	Sd
1. Altruism	--					16,69	5,88
2. Self-worth	,51**	--				19,57	4,84
3. Sympathy	,46**	,61**	--			17,89	4,55
4. Empathy	,48**	,58**	,54**	--		6,99	2,17
5. PBS	.65**	.72**	.33**	.76**	-	65.92	12.22

As can be seen in Table 4, there are positive significant correlations between altruism and self-worth (*r= .51, p <.* 01), sympathy (*r= .46, p <.* 01) and empathy (*r= .48, p <.* 01) subscale scores. There are also positive correlations between sympathy and self-worth (*r= .61, p <.* 01), empathy and sympathy (*r= .54, p <.* 01), and empathy and self-worth (*r= .58, p <.* 01). Mean subscale scores of the scale were found as 16,69 (Sd=5,88) for altruism, as 19,57 (Sd=4,84) for self-worth as 17,89 (Sd=4,55) for sympathy and as 6,99 (Sd=2,17) for empathy.

For the external validity study of the developed scale, the prosocial behavior scale developed by Carlo and Randal (2002) and adapted to Turkish culture by Yıldız et al., (2012) was used. Prosocial behavior scale scores and altruism (r= .65, p <.01), self-worth (r= .72, p <.01), sympathy (r= .33, p <.01), and empathy scale scores (r= .33, p <.01) = .76, p <. 01) positively significant relationships were observed.

Results about the reliability of the scale

Cronbach Alpha values were calculated for the reliability values of all subscales of Pro-social Behavior Scale and for total scale scores and the results obtained are shown in Table 3.

Table 3 : Cronbach alpha values of PSBS and subscales

Scales	Items	Alpha Coefficient
Altruism	5	,88
Self-worth	5	,87
Sympathy	5	,80
Empathy	2	,74
Total	17	,91

As can be seen in Table 3, Cronbach Alpha values were found as ,88 for altruism subscale, as ,87 for self-worth subscale, as ,82 for sympathy subscale and as ,74 for empathy subscale. Cronbach Alpha value of all subscales of Prosocial Behavior Scale was calculated as ,91. Internal consistency coefficient of all the items in the scale was calculated as ,79.

Evaluation of Scale Scores

PSBS is a 5 Likert type scale and high scores from the scale show positive prosocial behaviors. The minimum possible score of the scale is 17, while the maximum possible score is 85. Dividing the scores obtained from the scale by the number of items (17) can give information about individuals' prosocial behavior level. A score below 2,5 shows that prosocial behavior level is low, while a score between 2,5 and 3,5 shows moderate level of prosocial behavior and a score of 3,5 and higher shows high prosocial behavior level. It takes about 7-10 minutes to apply the scale.

CONCLUSION and DISCUSSION

The KMO value of the developed prosocial behavior scale was measured as .92, and it was observed that it was significant in the result of the Barlett test. Exploratory factor analysis (EFA) showed that the scale consisted of 17 items and 4 factors. The variances explained by the factors were calculated as 20,86 for the first factor, as 20,25 for the second factor, as 15,41 for the third factor and as 10,22 for the fourth factor and thus the variance explained by the whole scale was found as 66,75.

In the study, confirmatory factor analysis (CFA) was conducted to test which of the factors had higher correlation with the variable groups revealed with exploratory factor analysis and to find out whether the variables contributing to determined factors would be represented adequately by these factors. The fit values obtained [RMSEA=,04 SRMR=,05, CFI=0.95, GFI=0.94, AGFI=,91, NFI=,95] were found to be very high. It was

found that standardized coefficients showing the relationship between the factors obtained with CFA and the items varied between ,53 and ,83.

Significant difference between an item having a feature and an item not having that feature found with item analysis is considered as an important evidence of the validity of that test. According to the item analysis result, which was conducted for this purpose, it was found that the differences between upper and lower groups in 17 items and the scores from the total scale were significant. In other words, it was found that all the items in the scale had discriminative features. Item total test correlations of the scale were found to vary between ,55 and ,72 (p <.001). The correlations between the lower scale scores were calculated since it is considered as one of the criteria of the scale's external validity and the correlation values obtained were found to vary between ,46 and ,61 (p < .001).

Cronbach Alpha values calculated for the reliability of the scale were found as ,88 for altruism subscale, as ,87 for self-worth subscale, as ,82 for sympathy subscale and as ,74 for empathy subscale. Cronbach Alpha value of all subscales of Prosocial Behavior Scale was calculated as ,91. Internal consistency coefficient of all the items in the scale was calculated as ,79.When the psychometric characteristics of the developed scale are examined, it can be seen that all statistical values obtained are high; in this context, it can be seen that the scale can be used easily in the measurement of these characteristics.

As a result of factor analyses, it was found that the scale had four factors as altruism, self-worth, sympathy and empathy. The fact that the variance explained by empathy factor was measured as 10,22 although it had only two items and all of the items explained 66,75 of the total variance shows the strengths of the scale. Similarly, high standardized coefficients showing the correlation of factors obtained by CFA with items is another strength of the scale. It is also possible to say that Cronbach Alpha values of all items in the scale (α= ,91) were close to perfect value. Caprara, et al. (2005) adults prosocial behavior scale; It is seen that it consists of 4 sub-dimensions and 16 items: sharing, helping, caring and empathy. In the prosocial behavior scale developed by Ackfeldt & Wong (2006); It is seen that there are 3 sub-scales: Role-Defined Dimension, Beyond-Role Dimension, and Collaborative Dimension.

 When the literature is reviewed, it can be seen that prosocial behaviors have different types; in this context, it is possible to say that prosocial behaviors have more than one dimension. These include hoping to receive a reward, social approval, a desire to relieve internal negative states (Eisenberg, et al., 1999); and also behaviors of altruism, sympathy, cooperation, helping, comforting (Carlo et al., 1991). There are also studies which group prosocial behaviors as altruistic, public, anonymous and responsive (Richaud et al., 2012). Eisenberg & Fabes, (1998) and Laibe et al., (2004) suggested that prosocial behaviors are bidirectionally related to self-worth and in this context, self-worth is one of the dimensions of prosocial behavior theoretically and empirically. While prosocial behaviors seem to be multi-dimensional in general, it is possible to state that these are positive behaviors which require sacrifice and include emotionality, which make individuals feel valuable, which are shown without an expectation or a reward, but which relatively occur with the expectation of gaining prestige from the environment. With the scale developed in this study, only four dimensions of this multi-dimensional structure were discussed.

The scale developed in this study has strong aspects as well as some limitations and weak aspects. First of all, one of the limitations is the fact that the scale measures one limited aspect of prosocial behavior which has a wide scope. One of the important steps of scale development studies is repetition (Hinkin,1998). In this context, the scale has to be applied to a different sample to find out the generalibiltiy of the scale. Although scales are planned to be universal, they are not independent of the culture they are developed for. In this context, applying the scale in different cultures will increase the validity level of the data obtained. The fact that the data were obtained in a specific area on a limited number of students and the fact that all of the participants were students are the limitations of this study. It is recommended that research on the psychometric properties of the developed scale in different cultures and studies on the relationship of the scale with different psychological characteristics should be carried out.

Finally, it should be remembered that the most effective way to make decisions about individuals is to use different ways (observation, interview, etc.) rather than making use of only measurement instruments.

Declarations

Conflict of Interest

No potential conflicts of interest were disclosed by the author(s) with respect to the research, authorship, or publication of this article.

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Subscales		Pro-Social Behavior Scale Items	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Altruism	45	I consider it my duty to introduce the environment to newcomers to my neighbourhood or school without expecting anything in return					
	46	I remove obstacles for people without expecting anything in return (such as picking up a large stone on the road or throwing garbage that is on the street into trash can)					
Self-Worth	20	It makes me very happy to be known as helpful among my friends					
	21	I think that a lot of people should respect me					
	22						
	25						
	31						
Sympathy	1						
	2						
	5						
	6	I am worried about all the people in the world					
	7	When a friend is wronged, I feel like I've been wronged					
Empathy	36	If a friend feels resentment towards me for any reason, I can feel it right away					
	39						