

Development and Examination of Personal and Social Responsibility Behaviors Scale*

Bireysel ve Sosyal Sorumluluk Davranışları Ölçeği'nin Geliştirilmesi ve İncelenmesi

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Abstract

In this study, “Personal and Social Responsibility Behaviors Scale (PSRB-S)” was developed in order to determine students’ responsibility behaviors in accordance with “Personal and Social Responsibility” model developed by Don Hellison and students’ personal and social responsibility levels were examined in terms of gender, age and years of sport practice through this scale. Pertaining to personal and social dimension of responsibility, four-category Likert type trial scale consisting of 52 items and Exploratory Factor Analysis (EFA) were applied to 330 high-school students. Items that did not apply as a result of the analysis were omitted from 52-item trial scale and the scale was reduced to 14 items. A final scale consisting of two factors was created. Obtained scale was applied to different 250 high-school students for Confirmatory Factor Analysis (CFA). It has been determined that EFA and CFA results of two-factor PSRB-S and reliability and validity of internal consistency coefficients are at an acceptable level. It was not detected a significance difference in total scores of athlete students’ responsibility behaviors in terms of gender and age variables while there were significant difference in their total scores of years of sport practice.

Keywords: Personal responsibility, social responsibility, physical education and sport

Öz

Bu çalışmada, Don Hellison tarafından geliştirilen “Bireysel ve Sosyal Sorumluluk” modeline uygun olarak öğrencilerin sorumluluk davranışlarını belirlemek amacıyla “Bireysel ve Sosyal Sorumluluk Davranışları Ölçeği (BSSD-Ö)” geliştirilmiş ve bu ölçek aracılığıyla cinsiyet, yaş ve spor yapma yılı değişkenlerine göre bireysel ve sosyal sorumluluk düzeyleri incelenmiştir. Sorumluluğun bireysel ve sosyal boyutuna ilişkin 52 maddeden oluşan dört kategorili Likert tipli denemelik ölçek, Açıklayıcı Faktör Analizi (AFA) için 330 lise öğrencisine uygulanmıştır. Analiz sonucunda 52 maddeden oluşan denemelik ölçekten işlemeyen maddeler çıkartılarak 14 maddeye indirilmiş ve iki faktörden oluşan nihai ölçek oluşturulmuştur. Elde edilen ölçek doğrulayıcı faktör analizi (DFA) için farklı 250 lise öğrencisine uygulanmıştır. İki faktörlü olan BSSD-Ö'nün AFA ve DFA sonuçları ve iç tutarlılık katsayılarının güvenilirlik ve geçerliliklerinin kabul edilebilir düzeyde olduğu belirlenmiştir. Sporcu öğrencilerin sorumluluk davranışlarında; cinsiyet ve yaş değişkenlerine göre toplam puanlarında anlamlı bir farklılık bulunmamış, spor yapma yılı toplam puanlarında ise anlamlı farklılıklar bulunmuştur.

Anahtar Kelimeler: Bireysel sorumluluk, sosyal sorumluluk, beden eğitimi ve spor.

INTRODUCTION

Responsibility is an important behavior that every individual should have. The individual begins to develop personal and social responsibility behaviors, which they began to gain in his / her family, in a planned way in the school environment. With the correct responsibility education given in the schools,

* The scale development section of this study was presented as oral presentation on November 12th, 2015 in Morocco/Rabat.

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it is aimed for individuals to become citizens who are aware of their responsibilities and has the ability to increase the protective factors and durability of the individual's life skills.

Responsibility can be defined as "The individual undertaking his/her own behavior and responsibilities of the event falling within the jurisdiction both morally and legally" (Jenkins, 1994), "Starting from early childhood, performing tasks in accordance with the child's age, gender and level of development" (Yavuzer, 2006), "Making choices and accepting the consequences and influences of these choices" (Yalom, 2001). Personal responsibility is "to fully accept all responsibilities and assignments in order to identify and achieve clear goals in life" (Nelson et al., 2004). Social responsibility can be defined as "The person's care for others, fulfilling their obligations to others, participating in the social process, dedication to relieving pain, and endeavoring for a better world" (Lickona, 2009). In this context, creating awareness of both social and personal responsibilities while improving life skills will contribute positively to the person becoming a full individual.

Teaching life skills addresses the emotional and social aspects of being a complete individual. Teaching children life skills because of these and many other reasons is significant, despite the challenges and means helping students to take personal and social responsibility, sharing authority with the students and giving the power to decide them over time (Hellison, 2014, p.13). In this context, according to the Teaching Personal and Social Responsibility (TPSR) literature, it seems that TPSR is the most pressing and typical model in terms of the observed improvement of physical education and sport in the social responsibility behavior (Hellison & Walsh, 2002).

The TPSR model of Don Hellison (2011) which is a program attracting great interest was originally designed for young people at-risk. This model is also known as the responsibility model. In the USA, it has been used in a wide range (Hellison & Walsh, 2002). It is a common education program used in physical education classes, summer and in after-school programs especially for children in at-risk groups that do not get adequate services (Hellison, 2011; Hellison & Martinek, 2006; Hellison & Walsh, 2002).

TPSR training aims to instill the character traits such as social responsibility, taking responsibility for children through physical activities that emphasize the value guidance, and to provide a holistic self-development in gaining basic values (Hellison, 2014).

TPSR is a responsibility-based program which can be used as both a preventative measure and an intervention to support a value and belief system that supports prosocial behaviors in children. It has the ability to increase the protective factors and resiliency of participants who are at-risk for negative outcomes due to their environmental circumstances (Martinek & Hellison, 1997). It aims to empower children to take control of their lives by providing them the chance and space to exhibit responsible behaviors. The program gradually shifts responsibility from the facilitator to the program participants (Hellison & Martinek, 2006; Hellison, 2011; Hellison & Walsh, 2002). Hellison and Martinek (2006) indicates the responsibility of this model's overarching objective as to help the children's development in order to contribute to their own welfare and the welfare of others. The most appropriate environments for gaining responsibility behavior of children in upbringing period are schools. But the schools fail to teach how to achieve a successful identity in terms of social responsibility and self-confidence needs. However, social responsibility training should be a part of each school's program. Otherwise, many children cannot develop a successful personality (Glasser, 1999). The use of technical approach, strategy or model developed according to the field in bringing the children responsible behavior in school may provide, in this regard, a more effective learning environment in schools.

When considering the physical education and sports, it can be said that not all but some scientists respond to these developments. Examples include physical education and physical activity in adventure training (Hattie et al., 1997; Hellison, 2011), character development (Beedy & Zierk, 2000), cooperation (Bressan, 1987; Orlick, 1978), moral development (Gibbons, Ebbeck, & Weiss, 1995; Romance, Weiss, & Bokoven, 1986; Shields & Bredemeier, 1995), good sporting behavior and fair play (Gibbons, Ebbeck, & Weiss, 1995; Giebink & McKenzie, 1985; Horrocks, 1977), empowerment

(Ennis et al., 1999; Siedentop, 1994) and social responsibility (Horrocks, 1978; Trulson, 1986) as well as sports-based youth development programs.

Conceptualization and implementation of these kinds of programs are difficult because personal and social development involves “soft skills”, value orientations and intentions, and attitudes as well as specific behaviors. How someone feels- an intangible mix of perceptions and intentions toward the self or someone else- may have greater personal and social implications than more visible behaviors (Hellison, 2014, p.12). Therefore, while teaching life skills, getting children to comprehend and practice the behavior that can/cannot be observed is important for developing sense of responsibility in children.

When looking at the research and the literature related to the liability issues, it is observed that responsibility is divided as the personal and social responsibility (Nelson et al., 2004), and is defined as feelings (Berkowitz, 1963), skills (Chamberlin, 1994; Ellenburg, 2001), and personal characteristics and character (Yalom, 2001). Furthermore, it is stated that there is a close relationship between some variables and responsibility. The locus of social class and responsibility (Berkowitz & Lutterman, 1968; Chebat, 1968) is positively correlated to empathy and happiness (Barrio, Aluja, & Garcia, 2004), and academic success (Taylı, 2006; Golzar, 2006), and it was found internal locus of control and academic success of the individuals were high (Önal, 2005; Taylı, 2006; Golzar, 2006). With responsibility education program, it has been determined that responsibility is a teachable behavior (Glasser, 2005; Önal 2005; Taylı, 2006).

Considering the scale developed related to responsibility in Turkey and abroad; it appears that Responsibility Scale was developed by Golzar (2006) for the fifth grades. Personal and Social Responsibility Scale developed by Conrad and Hedin (1982) was adapted into Turkish by Taylı (2006). Social Responsibility Scale development work of Onal (2005) on high school students is available. Internal and External Supervisory Responsibility Scale (Ozen et al., 2002), and sense of Responsibility and Behavior Scale were developed by Ozen (2013). In studies carried out in stages by Coles and Schofield (2008), they have developed The Pathways to Inflated Responsibility Beliefs Scale to identify ways to increase the personal's responsibility for his beliefs based on the responsibility description of Salkovskis et al. (1999). İkiz et al. (2013) have adopted the scale into Turkish. Patrick et al. (1997) developed the 11-point Social Goal Scale to measure social relations and social responsibility targets of fifth grade students in the classroom. Anderman and Anderman (1999) developed another on a 17-item Social Goal Scale on the scale of Patrick et al. (1997).

When the scales developed on the responsibility for physical education and sports in the international field were analyzed, it is observed that Watson et al. (2003) developed the Contextual Self-Responsibility Questionnaire to be used in physical activity after examining the TPSR model of Don Hellison (2011); and Li et al. (2008) developed personal responsibility and social responsibility component and two-factor 14-item Personal And Social Responsibility Questionnaire by modifying the scale of Watson et al. (2003). Filiz and Demirhan (2015) adapted the Turkish version of the same scale. In addition it is observed that Guan, McBride, and Xiang (2006) carry out studies in physical education and sports programs with high school students in order to examine whether Social Goal Scale developed by Patrick et al. (1997) could be generalized to physical education settings. At the end of the study adapting from the scale of Patrick et al. (1997) developed the 11-point scale Social Goal Scale-Physical Education (SGS-PE).

The school is the most important institution in gaining the responsibility behavior after family (Akyüz, 1991, s. 247). Teachers try to develop responsibility by giving students small responsibilities for their behavior in the learning area and, latent and formal messages in teaching activities. They use authorization, reflection time and group meetings techniques in the assessment of responsible behavior; for informal student assessment, based on the degree of personal and social responsibility to give feedback they receive from the course; for the official student assessment use logging, the scoring key, give their student opportunity to mention scoring techniques (Hellison, 2014). Diagnostic tools are required in order to grade students' responsibility behaviors.

Purpose and importance of research according to the relevant literature, it has been seen that there is only one scale related to responsibility behavior in the field of physical education and sports in Turkey and that there is a limited number of scales in the world. In addition, it has been considered appropriate to improve this scale as it shortens the time that teachers spend for grading, simplifies the evaluation of student work, as it brings about an observable criterion and in terms of getting a feedback related to the impact of education on forming responsibility behaviors. The purpose of the study within this scope is to develop a scale in conformity with personal and social responsibility model in an attempt to determine students' responsibility behaviors in the field of physical education and sports; and to analyze students' level of responsibility in terms of gender, age and years of sports practice by evaluating the data obtained from the scale.

METHOD

Research Design

In this study, it was aimed to investigate the level of responsibility of the students in terms of gender, age and years of sport practice using the Personal and Social Responsibility Behavior Scale developed by the researcher. In this study, a relational screening model was used to determine the level of personal and social responsibility of the students (aimed to present the current situation).

Study Group

Study group of Exploratory Factor Analysis (EFA) consists of 330 high school students in total, 128 female, 202 male, studying in high schools which are related to Ministry of Education (MEB) and pursue their educational activities in 2015-2016 academic year in Yenimahalle district center of Ankara (TVF Sport High School: n1=120, 60 boys, 60 girls; Gazi Technical and Industrial Vocational High School: n2=50, 50 boys; Gazi Ciftligi Anatolian High School: n3=80, 40 boys, 40 girls; Mimar Sinan Technical and Industrial Vocational High School: n4=80, 52 boys, 28 girls). Demographic information of participant students is presented in Table 1.

Table 1. Demographic Information of Athlete Students for EFA

Variable	Group	n	%	Total
Gender	Female	128	38.8	330
	Male	202	61.2	
Age	14-15	112	33.9	330
	16-17	218	66.1	
The years of sport practice	1-2 years	64	19.4	330
	3-4 years	115	34.8	
	5-6 years	106	32.1	
	7-8 years	45	13.6	

Study group of Confirmatory Factor Analysis (CFA) consists of different 250 high school students in total, 93 female, 157 male, studying in high schools which are related to Ministry of Education (MEB) and pursue their educational activities in 2015-2016 academic year in Yenimahalle district center of Ankara (TVF Sport High School: 57 boys, 53 girls; Gazi Technical and Industrial Vocational High School: 60 boys; Atatürk Anatolian High School: 40 boys, 40 girls). Personal information of participant students is presented in Table 2.

Table 2. Demographic Information of Athlete Students for CFA

Variable	Group	n	%	Total
Gender	Female	93	37.2	250
	Male	157	62.8	
Age	14-15	109	43.6	250
	16-17	141	56.4	
The years of sport practice	1-2 years	35	14.0	250
	3-4 years	94	37.6	
	5-6 years	75	30.0	
	7-8 years	46	18.4	

Measurement Instrument

Personal and social responsibility behaviors scale (PSRB-S)

PSRB-S, developed by the researcher, was used in the study. Scale items were prepared by utilizing the scale developed items of Li et al. (2008) (1, 2, 3 and 8. items) and from the TPSR model of Hellison (2011) contemplated as the most appropriate model in conferring the behavior responsibility in physical education and sport. Examining textbooks and items related to the model (Hellison, 1976; Hellison, 1978; Hellison, 1985; Hellison, 2011; Hellison & Cutforth, 2000; Hellison & Walsh, 2002), a total of 56 items has been established consisting of three negative (personal responsibility), 53 positive items in personal areas 28 and 28 agents in the social sphere for the scale. The scale was initially applied by the researcher to a student group of 30 in order to test the understandability of items for students. One of the commonly used methods of determining the validity that expresses for measuring the quality and quantity of the desired properties of the items used is to apply to expert opinion (Büyüköztürk, 2016). Items obtained within this frame were reviewed by five academician experts in fields of psychological consultancy and guidance, educational program, education, physical education and sports psychology and four items were removed out of the scale as a result of experts' opinions and students' feedbacks and a revised 52-item form was created. Afterwards, the scale was applied by the researcher to 340 students in class environment by visiting random classes in four different high schools. Students were given 25 minutes by the researchers in order to fill 52-item scale form. At the end of the application, test forms which are not suitable for the validity and reliability studies were removed and EFA was conducted on 330 students in total, 128 female and 202 male. Items that did not load on a certain factor as a result of the analysis were omitted from 52-item trial scale and the scale was reduced to 14 items and a final scale consisting of two factors was created. In this study, it has been avoided to make the mistake of using third degree 'Neither Disagree, nor Agree' and 'No Opinion' expressions which are presented in 5-degree scales (Bohner and Wanke, 2002, Şencan, 2005). It has been decided to form the distracters in four categories from Never (0) to Always (3) and to make scoring between 0 and 3 with regard to the responses given to the scale items to be less distractive in terms of evaluating responsibility behavior. In this way, it was aimed to receive reliable answers related to the situations where students avoid to express their opinion, in other words choosing the option 'Neither Disagree, nor Agree', by taking a step towards determining their actual tendencies. The highest possible score in scale is 56 and lowest is 14. According to this grading, 0-14 point in personal and social responsibility scale can be regarded as negative, 15-28 points as average, and 29-42 points as positive and 43-56 points as highly positive.

The structure of the social responsibility of the scale represents two of the TPSR levels: Respect for the rights and feelings of others and helping/ leadership others. As a sample item "I show sensitivity to the skill level of my friends in the group work." can be showed. The structure of personal responsibility represents the two levels of TPSR: Effort/ participation and self-direction. As a sample item "I prepare my work plan according to my personal needs." can be given. When the dispersion of the material is examined; it seems that to show respect for the rights and feelings of others' is 4 items, effort/ participation is 3 items, self-direction is 4 items, helping/ leadership others is 3 items. There were questions regarding gender, age and years of sport practice in personal information section of the scale in order to collect the data to be used as independent variable.

Data Analysis

SPSS 20.0 package program and LISREL 8.80 were used in data analysis. For the validity of the scale, firstly homogeneity of the scale scores was checked, then Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were conducted (Büyüköztürk, 2016). Correlations of the items, which are in sub-dimensions of the scale, were analyzed in order to provide evidence for validity of the items. Cronbach alpha coefficient was calculated for internal consistency of the scale. Pearson Correlation analysis was performed in an attempt to determine the linear relation between two sub-factors. Firstly, homogeneity of scale scores was checked in order to compare students' scores from the scale according to independent variables; then t test was performed between two independent groups; one way variance of analysis was used in order to test the difference between the average of groups more than two (Büyüköztürk, 2016; Field, 2005). As significance level .05 was taken in analysis and interpretation of the data.

RESULTS

Results of the research were presented in two parts as the findings aimed at validity and reliability studies that were conducted concerning development of the scale and the findings aimed at examination of students' responsibility behaviors in terms of certain variables.

Results Pertaining to Development of the Scales

Validity study of the scale

Firstly, normality distribution of the scale was reviewed and it was determined that students' scores out of the scale is between -1.5 and +1.5 skewness and kurtosis ranges; it was observed that the data have normal distribution (Tabachnick & Fidell, 2013).

Exploratory factor analysis (EFA): In order to determine the construct validity of the scale was performed the EFA on the data. Before the EFA, three negative items were reversed and then reliability analysis was performed. Five items that corrected item total correlation values is below .30 as a result of the analysis were removed from the scale (30, 31, 33, 41, and 51). Bartlett test was found to be significant as a result of analysis's principle component before rotation. Sample size conducted in order to determine eligibility to factoring KMO value was determined to be .90. KMO value according to the relevant literature middle .60, .70 is good, very good .80, .90 is considered excellent (Bryman & Cramer, 1999). Therefore, the approach to one of the KMO value (.90), the sample size of it and Bartlett test was excellent to reveal the existence of the correlation between the scale items results indicate that suitable for factor analysis of the data sets obtained. Applied Bartlett test results obtained Chi-square test statistics were significant ($\chi^2= 4925.0456$; $df= 1081$, $p<.01$).

Before rotating the factors, 12 factors with eigenvalues higher than 1.00 were revealed. These factors explain the % 56.664 of the variance related to responsibilities variable. Varimax rotation technique (Varimax component analysis) was used to group the personal and social items for EFA. It is mentioned that on scale development regarding the creation of factors which could then be taken as the lower cut-off point of factor loadings are ranging from .30 to .45 (Büyüköztürk, 2016). When the distribution of the factors load was examined, it was discovered that scale items were tend to gather under two factors. By taking the breakpoint as .40, 33 items (1, 2, 4, 5, 6, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 32, 35, 36, 37, 39, 40, 43, 44, 45, 46, 47, 49, 50, 52) that the factor loadings are below .40 and showing scattered on various factors (complex) were removed from the scale. After that there are 14 significant items. When the analysis was repeated with the removed item factors, only 2 factors with eigenvalues higher than 1.00 are found. As seen in Table 3, when we look at the distribution of the factor load; seven items formed by the first sub-factors (27, 28, 29, 34, 38, 42, and 48) and the eigenvalue of the first factor that information on the significance and weight of each factor in the structure was found to be 4.254. The responsibility variable factor alone explains the 30,387 %.

The second component of seven substances (3, 7, 8, 11, 12, 13, and 26) formed and was found to be 1.507 eigenvalue of this factor. The variance of this component alone explains the responsibilities variable 10.761 %. These two factors explain the lower 41,148 % of the variance with the related responsibilities variables. This result, Kline (2011) as indicated by the acceptable limit is above 41%.

In order to provide evidence for the validity of the substance of the scale, the correlations between each item in the sub-dimensions have been analyzed. Accordingly, it has been seen that all of the items are correlated with the .01 level of significance in the medium and high-level ($p < .01$). The factor loads of the scale have been calculated as principal component analysis, Varimax component analysis and corrected item-total correlation. In Table 3, the results of this analysis are given:

Table 3. Factor Loadings for Exploratory Factor Analysis

Factor name	Item	New Item	Items (Levels of responsibility)	Factor load values	Varimax component factor load values		Corrected item total correlation
					PR	SR	
Personal responsibility (PR)	3	1	I try the given new tasks (Effort/ participant)	.48	.65		.40
	7	2	I participate in all of the activities (Effort/ participant)	.44	.58		.36
	8	3	I give effort to overcome difficult tasks (Effort/participant)	.61	.46		.51
	11	4	I perform a given task without peer pressure (Self-direction)	.48	.50		.39
	12	5	I prepare my work plan according to my personal needs (Self-direction)	.48	.68		.41
	13	6	I do independent study related to my skill level without directed by someone else (Self-direction)	.40	.53		.30
	26	7	I follow the necessary rules to fulfill my responsibilities (Self-direction)	.59	.50		.49
Social responsibility (SR)	27	8	I respect others (Respect)	.65		.74	.52
	28	9	I respect my teachers (Respect)	.58		.75	.45
	29	10	I control my behavior towards others (Respect)	.62		.75	.49
	34	11	I care about others (Respect)	.58		.61	.47
	38	12	I show sensitivity to the skill level of my friends in the group work (Helping/ leadership)	.62		.49	.51
	42	13	I would help others while learning something new (Helping/ leadership)	.59		.48	.48
	48	14	I would help immediately when others ask for help (Helping/ leadership)	.58		.56	.47
Eigenvalues					1.507	4.254	
Explained the total variance					10.761	30.387	

Examining Table 3; it is seen that all principal factor load values are higher than .40. On the other hand, it has been determined that Varimax component factor load values are high for all factors and the lowest one is .46. Examining the values on “total item correlation” column giving the correlation of items that constitute the scale with the entire scale; it is seen that the lowest correlation is in the 13. item and in level .30. Thus, it is required for these values to be above .20, which has been provided.

When the items gathered under two factors as a result of the analyses have been examined, it has been determined that the items under the first factor evaluate the social dimension of responsibility and the items under the second factor evaluate the personal dimension of responsibility. According to these items in the first factor is named social responsibility, items in the second factor personal responsibility. Two-dimensional structure of personal and social responsibility scale was found to be related with the conceptual framework related to responsible behavior (Nelson et al. 2004; Golzar, 2006; Hellison, 2011). For this reason, it is considered that the structure of the scale should be retained conceptually.

Confirmatory factor analysis (CFA): In order to reach goodness of fit values of the two-factor model, CFA was performed using the LISREL 8.80 program with a data group of 250 different high school students (Jöreskog & Sörbom, 2004). Figure 1 shows the diagram of the model.

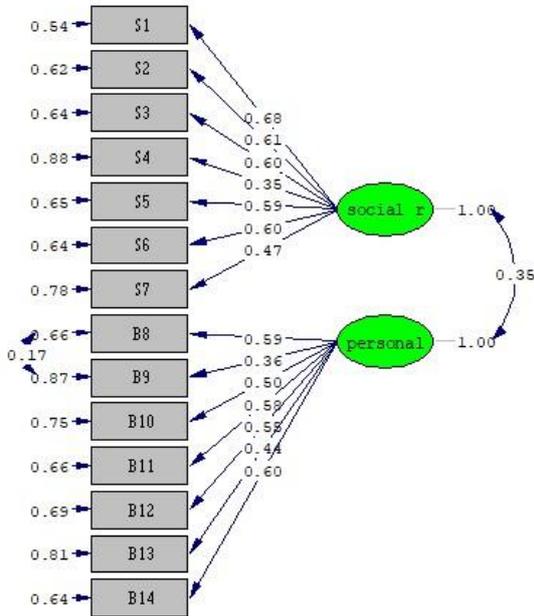


Figure1. Path Diagram of the Model

Examining Figure 1; it is observed that path coefficients between items and their dimensions vary between .35-.68 for social responsibility and .36-.60 for personal responsibility. These items explain at least .54 variance. Because the variance they explain and relation values are moderate and above, these values are accepted as sufficient (Büyüköztürk, 2016). As is seen in Figure 1; error variances of eighth and ninth items in the dimension of personal responsibility are equalized since they reduce the chi-square value. Examining the contents of these items; the eighth item is as, “I try new tasks”, whereas the ninth item, “I participate in all activities”. Both items are statements that complete each other and seem to be parallel regarding personal responsibility. Thus, it may be concluded that equalization of error variances in CFA is a convenient procedure."

Table 4. Goodness of Fit Index Values of CFA

χ^2	Sd	χ^2/sd	P	GFI	CFI	NFI	NNFI	SRMR	RMSEA	%90 C.J. RMSEA
78.87	75	1.05	0.0	.96	.99	.93	.99	.027	.014	.0-.040

Examining the measurement values of the confirmatory factor analysis as in Table 4; the Chi-square value concerning the 4-item two-factor model was determined as $\chi^2 (75, n=250)=78.87, p<.001$. As a result of the calculation, it was observed to have a good value as $\chi^2/sd=1.05$. It was determined that fit values of RMSEA=.014, SRMR=.027, CFI=.99, NFI=.93, NNFI=.99, GFI=.96, which are frequently used in CFA measurements, had good and excellent fit values (Hu & Bentler, 1999). It was also determined that the confidence interval (CI) limit of 90% varied between .0-.040 for RMSEA. As RMSEA and SRMR values are smaller than .80, the model is considered acceptable (Anderson &

Gerbing, 1984; Cole, 1987). Findings acquired from the confirmatory factor analysis signify that factor structure of the scale shows an acceptable compatibility with the collected data.

Reliability study of the scale

Internal consistency coefficients were calculated to determine the reliability of the scale. Cronbach's Alpha coefficient for these two factors of the scale was .82; for the first sub-factor Cronbach's Alpha coefficient was .78, for the second sub-factor Cronbach's Alpha coefficient was found as .70. When the correlation between the two factors was examined, it was found that there was a significant correlation between the factors. The correlation coefficient of .90 is stated as near perfect, .80 very well, .70 near enough, that the higher than .60 it is dependent on the availability of sizes and it is stated they all together measure a single conceptual structure, below .50 as insufficient (Şencan, 2005; Kline, 2011). High and statistically significant correlation coefficients indicate that the two sub-factors are responsibility components.

The Pearson Correlation Analysis was conducted for testing the relationship between items separated into two sub-factors. As a result of the Pearson Correlation Analysis that was conducted by averaging the items in the two sub-factors with 95% confidence, it was determined that there was a positively significant linear relationship between the items of personal responsibility and social responsibility. [$r(330) = .516; p < .01$]. Accordingly, it may be interpreted that in the phase of developing both personal and social aspects of responsibility while gaining responsibility behaviors, in case that there is a parallel positive increase in both dimensions or failure of development, both dimensions may be affected negatively. The student's sense of personal responsibility is high so social responsibility behavior is also high or can be expressed vice versa.

Results Pertaining to Students' Responsibility Behaviors

In this section is contained the findings concerning whether students display responsibility behaviors according to variables of gender, age and years of sport practice. Firstly, normality distribution of the scale was reviewed and it was determined that students' scores out of the scale is between -1.5 and +1.5 skewness and kurtosis ranges; it was observed that the data have normal distribution (Tabachnick & Fidell, 2013).

Table 5. Differences Between Mean Scores of Responsibility Behaviors by Gender Variable (t test)

Dimension	Gender	N	\bar{X}	Sd	t	p
Personal responsibility	Female	128	20.86	3.25	.748	.45
	Male	202	20.58	3.26		
Social responsibility	Female	128	23.18	3.66	1.787	.07
	Male	202	22.46	3.46		

$p < .05$

When Table 5 was reviewed, it was not found a significance difference between male and female's mean scores based on dimensions of responsibility of gender ($p > .05$).

Table 6. Between Mean Scores of Responsibility Behaviors by Age Variable (t test)

Dimension	Age	N	\bar{X}	Sd	t	P
Personal responsibility	14-15	112	20.82	3.05	.522	.60
	16-17	218	20.62	3.35		
Social responsibility	14-15	112	23.02	3.59	1.010	.31
	16-17	218	22.60	3.53		

$p < .05$

When Table 6 was reviewed, it was not found a significance difference between 14-15 and 16-17 ages mean scores based on dimension of responsibility of age ($p>.05$).

Table 7. Differences Between Mean Scores of Responsibility Behaviors by The Years of Sport Practice Variable (One Way ANOVA)

Responsibility behavior	Source of variance	Sum of squares	Df	Mean square	F	P	Difference
Personal responsibility	Between groups	23.923	3	7.974			
	Within groups	3458.55	326	10.609	.752	.522	
	Total	3482.47	329				
Social responsibility	Between groups	97.654	3	32.551			7-8 *5-6
	Within groups	4009.24	326	12.298	2.647	.049*	years
	Total	4106.89	329				

* $P<.05$

Examining Table 7; it was determined that there was a significant difference between the score averages of answers given by students to judgments regarding their perception on the sub-dimension of social responsibility [$F(3,326)=2.647$, $p<.05$] according to the variable of years of sport practice, whereas there was no difference on the sub-dimension of personal responsibility [$F(3,326)=.752$, $p>.05$].

Evaluating the students according to years of sport practice in the results of the multiple comparison test; it is seen that there is a significant difference between 5-6 years and 7-8 years based on the sub-dimension of social responsibility ($p<.05$). In social responsibility sub-dimension, point average of the answers given to 7-8 years is 21.400, point average of answers given to 5-6 years is 23.141.

DISCUSSION

First, in this study, in the implementation of the TPSR model, in order to evaluate the responsibility behavior of students and athletes studying at high school PSRB-S was developed. Scale items are consistent with the conceptual model of TPSR literature (Hellison & Martinek, 2006; Hellison & Walsh, 2002). As a result of the analysis, it was determined that there is a positive relationship between personal and social responsibility structures of the scale. Findings regarding validity and reliability that were acquired as a result of the study indicate that the scale is convenient for determining behaviors aimed at the attributes in question.

PSRB-S can be used in different age groups like primary, secondary and high school students, physical education and sport activities at schools, club activities, after school programs and camp activities for evaluating responsibility behaviors and this scale can contribute to studies related the field. As a result of the implementation of the scale on students and athletes in different age groups it is expected to reach similar findings in relation to the validity and reliability. The scale was applied to high school students and the validity and reliability analysis of data obtained from this group have been made. If the scale is used to determine responsibility for the behavior of different age groups, it is recommended that it is used after with validity and reliability of data derived from the group performed again.

Although the scale was developed to be used in applications of TPSR model, it can contribute in areas such as guidance, psychology and training involving activities related to responsible behavior. It is considered that the scale would be useful to strengthen the work of the researchers and teachers.

The scale can be more effective when supported by other tools besides course applications. Various tools like self-assessment, graduated scoring, portfolio, rubric formation and taking daily notes are used in model applications. It should not be considered that scale is useful alone without applications that enable gaining behavior and without supported with other diagnostic tools.

It was adhered to the values that contain levels in TPSR model while developing scale items (respect for the rights and feelings of others, effort/ participation, self-direction and helping/ leadership others). In the future, another study can be carried out by considering values such as cooperation, trust, honesty, self-efficacy that have been formed in the process of application in the TPSR model and the number of assessment tools can be replicated relevant to responsibility. In this scale, four-point Likert-type scale was used; in future studies scale can be prepared of five, six or seven-point Likert-type. The scale items can be used in the studies of other areas and in the evaluation of responsible behavior in different sports.

Second subject of analysis in this study was athlete students' personal and social behaviors according to variables of gender, age and years of sport practice via PSRB-S. This study revealed significant differences in social responsibility behaviors of athlete students according to years of sport practice. According to the acquired results, it is possible to state that long years of engagement in sports starting in early ages have a negative effect on social responsibility behaviors of athlete students. In differing of sub-dimensions of PSRB-S depending on gender; it was not found a significant difference between point averages of the answers given by athlete students to their personal and social responsibility behavior ($p > .05$). It is possible to construe this situation as male and female athletes in the age group of study were given responsibilities of equal conditions in sports practices in class activities and clubs of schools and there is not sexual discrimination in terms of bringing in responsibility behaviors. In the study that used Escape from Responsibility Scale developed by Powell, Rosen and Huff (1997), it was found that male students escape from responsibilities significantly more than female students (Powell & Rosen, 1998). In a study conducted by Gunnoe, Hetherington and Reiss (1999), it was found social responsibility level of girls higher than boys. In a study conducted by Taylı (2013), it was found that responsibility level of girls is higher compared to boys. In the study that was conducted by Wright (2011) using the standardized questionnaire for the purpose of examining the responsibility behaviors of students regarding environment and recycling, no difference was found between genders. These results display parallelism with the result of this research.

In differing of sub-dimensions of PSRB-S depending on age; it was not found a significant difference between point averages of the answers given by athlete students to their personal and social responsibility behavior ($p > .05$). Development of the sense of responsibility is possible with the steps taken as of the first years of life. Responsibility is a skill that children initially learn from their parents then from social environment (Gordon, 2010). Teaching of the sense of responsibility that starts in the family continues in school. The scale was applied to students between ages of 14-17 practicing sports. Considering that certain responsibility behaviors have been taught to students in family and school until this age range, it is considered appropriate to compare responsibility behaviors with students of smaller age and different age range. In the study conducted by Wright (2011) on university students, it was not found a difference between students' responsibility behaviors regarding environment and recycling depending on the variable of age. This situation was construed as responsibility behaviors might result in differently in different populations. This conclusion shows parallelism with the result of this study.

In differing of sub-dimensions of PSRB-S depending on years of sport practice in social responsibility sub-dimension; students who practiced sports for 5-6 years presented opinions that are more significant compared to students with 7-8 years of sport practice. It is found that students who have been engaged in sports 5-6 years display more responsibility compared to students who practiced sports for than 7-8 years in terms of behaviors of helping others, caring about others, being respectful towards teachers and others and self-control towards the others. This situation can be interpreted as the more students' years of sport practice increase, the less their social responsibility behaviors become. When there is a decrease in their social responsibility behaviors, it is considered appropriate to examine factors such as students' level of exhaustion, their level of unit and solidarity among the team or class, their internal and external motivation levels, level of responsibility education given throughout their sports life. In the study conducted by Eilam and Trop (2012) on children and their parents in order to examine their attitudes towards environment, teachers provided environmental education to children along with their parents and as a result of the comparison at the end of the study, it was found that parents display more positively-oriented responsibility behaviors compared to

children. This situation was construed as when a person matures, the process positively affects behaviors. This study does not support the result of the research.

When research results were reviewed, it was found that personal and social responsibility behaviors of high-school sportsman students do not display difference basing on gender and age and there is a decrease in displaying social responsibility behaviors in students who started practicing sports at an early age and continued for a long time. According to these results; individuals' personal and social responsibility behaviors can be compared among different populations by categorizing them as primary school, secondary school, high school and university students and even adults. Personals' responsibility behaviors can be analyzed with different variables. Personals can be provided responsibility education in different age groups and change of responsibility behaviors between the age groups can be analyzed. The causes behind why the increase in years of sport practice decreases social responsibility behaviors can be researched.

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GENİŞ ÖZET

Giriş

Büyük ilgi çekmiş bir program olan Don Hellison'un (2011) bireysel ve sosyal sorumluluk modeli (BSSM), başlangıçta risk grubundaki gençler için tasarlanmıştır. Sorumluluk modeli olarak da bilinir. Modelde uygulanan programın sorumluluğu uygulayıcıdan katılımcılara doğru yön değiştirir (Hellison ve Martinek, 2006; Hellison, 2011; Hellison ve Walsh, 2002). Hellison ve Martinek (2006), bu modelin kapsayıcı amacını, kendi refahları ve başkalarının refahlarına katkıda bulunmak için

çocukların sorumluluk gelişimlerine yardımcı olmak olarak belirtir. BSSM, beden eğitimi sınıfları, danışmanlık ve antrenörlük programları, genişletilmiş günlük programlar gibi çeşitli alanlarda hizmet vermektedir ve programlar bu farklı türleri karşılamak için esnektir (Hellison, 2011; Lee ve Martinek, 2009; Martinek, Schilling ve Johnson, 2001; Walsh, 2007; Wright ve Burton, 2008).

Öncelikle ilgili literatüre göre, ülkemizde beden eğitimi ve spor alanında sorumluluk davranışları ile ilgili bir ölçeğe rastlanılmış olması, dünyada ise çok az sayıda olması sebebiyle; ayrıca, sorumluluk davranışlarının değerlendirilmesinde öğretmenlerin puanlama için harcadıkları zamanı kısaltması, öğrenci çalışmalarının değerlendirmesini basitleştirmesi, ortaya gözle görülür bir ölçüt çıkması ve soyut bir kavram olan sorumluluk davranışlarını kazandırmada eğitimin etkisine ilişkin geri bildirim alabilmek açılarından bu ölçeğin geliştirilmesi uygun görülmüştür. Bu bağlamda çalışmanın amacı, beden eğitimi ve spor alanında öğrencilerin sorumluluk davranışlarının belirlenmesi amacıyla bireysel ve sosyal sorumluluk modeline uygun bir ölçek geliştirmek; ve ölçek kullanılarak cinsiyet, yaş ve spor yapma yılı değişkenleri açısından öğrencilerin sorumluluk düzeylerini incelemektir.

Yöntem

Çalışma Grubu

Çalışma grubunu, AFA için Ankara ili Yenimahalle ilçe merkezinde, 2015-2016 yılı eğitim ve öğretim faaliyetlerini sürdüren Milli Eğitim Bakanlığı'na (MEB) bağlı liselerde, 128'i (% 38,8) kız, 202'si (% 61,2) erkek toplam 330 lise öğrencisi oluşturmuştur. DFA için ise 93'ü (% 37,2) kız, 157'si (% 62,8) erkek toplam farklı 250 lise öğrencisi oluşturmuştur

Veri Toplama Aracı

Çalışmada araştırmacı tarafından geliştirilen Bireysel ve Sosyal Sorumluluk Davranışları Ölçeği (BSSD-Ö) kullanılmıştır. Ölçek maddeleri, beden eğitimi ve spor alanında sorumluluk davranışlarını kazandırmada en uygun model olduğu düşünülen Hellison'un (2011) BSSM'nden ve Li ve ark. (2008)'nin geliştirdikleri ölçek maddelerinden faydalanılarak hazırlanmıştır (1, 2, 3 ve 8. maddeler).

Veri Analizi

Verilerin analizinde SPSS 20.0 paket programı ve LISREL 8.80 kullanılmıştır. Ölçeğin yapı geçerliği için öncelikle ölçek puanlarının homojenliği kontrol edilmiş, sonrasında Açıklayıcı Faktör Analizi (AFA) ve Doğrulamalı Faktör Analizi (DFA) yapılmıştır (Büyüköztürk, 2010). Madde geçerliliğine kanıt sağlamak amacıyla ölçeğin alt boyutlarında bulunan maddelerin birbirleri ile olan korelasyonları incelenmiştir. Ölçeğin iç tutarlılık güvenilirliği için Cronbach Alpha katsayısı hesaplanmıştır. İki alt faktör arasındaki doğrusal ilişkiyi test etmek için Pearson Korelasyon analizi yapılmıştır. Bağımsız değişkenlere göre öğrencilerin ölçekten aldıkları puanların karşılaştırılması için öncelikle ölçek puanlarının homojenliği kontrol edilmiş, sonrasında ikili gruplarda bağımsız gruplar için t testi, ikiden fazla grupların ortalamaları arasındaki farkı test etmek için tek yönlü Varyans analizi kullanılmıştır (Büyüköztürk, 2010; Field, 2005).

Bulgular

Ölçeğin yapı geçerliğini belirlemek amacıyla 330 lise öğrencisi üzerinde yapılan AFA sonucunda iki alt faktörlü bir yapı elde edilmiştir. Elde edilen yapının uyum iyiliği değerlerine ulaşmak için farklı 250 lise öğrencisi üzerinde yapılan DFA sonucunda, ölçeğin faktör yapısı toplanan verilerle kabul edilebilir uyum göstermiştir.

Ölçeğin güvenilirliğini tespit etmek için hesaplanan iç tutarlılık katsayılarında; iki faktöre ilişkin $\alpha=.82$, birinci alt faktöre ilişkin $\alpha=.78$, ikinci alt faktöre ilişkin $\alpha=.70$ olarak bulunmuştur. İki faktör arasındaki korelasyon incelendiğinde faktörler arasında anlamlı ilişki olduğu görülmüştür.

İki alt faktördeki maddelerin ortalamaları alınarak yapılan %95'lik güvenilirlik Pearson Korelasyon analizi sonucunda bireysel sorumluluk ve sosyal sorumluluk maddeleri arasında pozitif yönlü anlamlı doğrusal bir ilişki olduğu belirlenmiştir [$r(330)=.516; p<.01$].

Yapılan analizler sonucunda; öğrencilerin cinsiyet ve yaş değişkenine göre sorumluluk davranışlarına yönelik yargılara verilen cevapların puan ortalamaları arasında anlamlı bir farklılık bulunmamış ($p>.05$), spor yapma yılı değişkenine göre sosyal sorumluluk [$F(3,326)= 2.647, p<.05$] alt boyutunu algılayışlarına yönelik yargılara verdikleri cevapların puan ortalamaları arasında anlamlı bir farklılık bulunmuş; bireysel sorumluluk [$F(3,326)= .752, p>.05$] alt boyutunda ise bulunmamıştır.

Sonuç

Bu çalışmada ilk olarak, bireysel ve sosyal sorumluluk modeline uygun olarak öğrencilerin ve sporcuların sorumluluk davranışlarını değerlendirebilmek amacıyla “Bireysel ve Sosyal Sorumluluk Davranışları Ölçeği” geliştirilmiştir. Ölçek maddeleri kavramsal olarak BSSM literatürü ile uyumludur. Analiz sonucunda ölçeğin bireysel ve sosyal sorumluluk yapıları arasında pozitif yönlü bir ilişkili olduğu tespit edilmiştir.

Bu çalışmada ikinci olarak, geliştirilen BSSD-Ö aracılığıyla yaş, cinsiyet ve spor yapma yılı değişkenlerine göre sporcu öğrencilerin bireysel ve sosyal sorumluluk davranışları incelenmiştir. Bu çalışma, spor yapma yılına göre sporcu öğrencilerin sosyal sorumluluk davranışlarında anlamlı farklılıklar olduğunu ortaya koymuştur. Elde edilen sonuca göre, erken yaşlarda başlayarak uzun süre spor yapmanın, sporcu öğrencilerin sosyal sorumluluk davranışlarını olumsuz yönde etkilediği söylenebilir.

Araştırma sonuçlarına bakıldığında, lise çağındaki sporcu öğrencilerin bireysel ve sosyal sorumluluk davranışlarının cinsiyet ve yaşa göre farklılık göstermediği, erken yaşta başlayarak uzun süre spor yapan öğrencilerde ise sosyal sorumluluk davranışlarını sergilemede azalma olduğu belirlenmiştir. Bu sonuçlara göre; ilkokul, ortaokul, lise ve üniversite öğrencileri, hatta yetişkinler, ayrı gruplandırılarak farklı popülasyonlar arasında bireylerin bireysel ve sosyal sorumluluk davranışları karşılaştırılabilir. Farklı değişkenlerle bireylerin sorumluluk davranışları incelenebilir. Bireylere farklı yaş gruplarında sorumluluk eğitimi verilerek yaş grupları arasındaki sorumluluk davranışlarının değişimi incelenebilir. Spor yılının artması ile sosyal sorumluluk davranışlarının düşmesinin nedenleri araştırılabilir.