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**Hungarian adaptation and psychological correlates
of Source of Enjoyment in Youth Sport Questionnaire
among high school students**

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Abstract

Several studies have reported a decreasing tendency of engagement in physical activity during adolescence. Since previous research suggests that enjoyment could be a key predictor of sport participation, the aim of this study was to validate the Source of Enjoyment in Youth Sport Questionnaire (SEYSQ) and to investigate the relationship between sport enjoyment and different psychological correlates such as future orientation, satisfaction with life and future life aspirations. First, we conducted an exploratory factor analysis which revealed six factors of sport enjoyment and the construct validity of the scale showed an acceptable fit. Second, we used confirmatory factor analyses to test the factor structure of the previous result on the Wiersma's (2001) theoretical model. The six-factor model contained factors resulting from the exploratory factor analysis. Subsequently, we tested for associations between these SEYSQ factors and the psychological correlates. Extrinsic aspirations were positively associated with the following forms of sport enjoyment: competitive excitement, affiliation with peers, energy expenditure, other-referenced competency and recognition; whereas intrinsic aspirations were associated with the first three psychological correlates and positive parental involvement. Additionally, being future-oriented was positively related to energy expenditure and positive parental involvement, as well as to self-referenced competency. Nearly all sources of sport enjoyment were important contributors to life satisfaction. The role of gender in relation to the sport enjoyment factors suggested that for girls, competition seemed less important, whereas parental support served as a resource. Findings provide useful information in developing strategies that strengthen adolescents' involvement in sport activities.

Keywords: *sport enjoyment, future orientation, satisfaction with life, life aspirations*

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Due to many positive social, physical and psychological health effects of sports, public health policies strongly encourage physical activity. Unfortunately, several studies have found a decreasing tendency of engagement in physical activity during adolescence, particularly in terms of regular and organized sports activity, especially among girls (Piko & Keresztes, 2008; Vilhjalmsson & Kristjansdottir, 2003). Given such findings, it is important to understand which factors might act as sources of motivation to increase adolescents' activity level, and engagement in organized sports.

The concept of motivation determines many aspects of our lives. Motivation is defined as the attribute that moves us to do or not to do something (Broussard & Garrison, 2004). According to Guay, Chanal, Ratelle, Marsh, Larose, and Boivin (2010) motivation refers to "the reasons underlying behaviors". Thus, motivation may play an important role in engaging in physical activity to gain fitness. In the sport field, several conceptual perspectives have been established during the past years for better understanding athletes' motivations. For example, Vallerand (1997) proposed a three-dimension model of sport motivation theory, which was generated from the Self-Determination framework developed by Deci and Ryan (1985). This framework included three types of motivation: intrinsic motivation, extrinsic motivation and amotivation. Locke and Latham (1985) investigated sport motivation from the goal orientation perspective suggesting that goals can help athletes be motivated, and that goals can have an impact on their self-confidence and performance. For example, if the goals are too high, they could cause amotivation and drop-out, especially in young athletes. Another important framework related to sport motivation was the Sport Commitment theory established by Scanlan, Carpenter, Schmidt, Simons, and Keeler (1993). According to their theory, the athletes' commitment is determined by several factors such as enjoyment, involvement opportunities, social support and constrain, other priorities, as well as desire to excel (Scanlan, Graig, Sousa, Scanlan, & Knifsend, 2016). They found that sport enjoyment was one of the main predictors of sport commitment (Carpenter & Coleman, 1998; Scanlan, Carpenter, Schmidt, & Simons, 1993). Weiss and Williams (2004) summarized the reasons why athletes were participating in different types of sports. They found very similar reasons for sport participation and they also established sports enjoyment as one of the key factors for athletes' participation. Thus, it could be inferred that sports enjoyment can be a crucial factor in both commitment and sport motivation.

Scanlan's definition of sport enjoyment refers to "a positive affective response to the sport experience that reflects generalized feelings such as pleasure, liking, and fun" (Scanlan et al., 1993, p. 6). Other researchers contended that enjoyment was synonymous with intrinsic motivation (Deci & Ryan, 1985), or the concept of flow (Csikszentmihalyi, 1975; Kimiecik & Harris, 1996). While Scanlan and Lewthwaite (1986) acknowledged the similarities, they reflected that enjoyment also had an extrinsic aspect which came from social and parental influences.

Research concerning sport enjoyment has yielded consistent findings. Scanlan, Ravizza, and Stein (1989) analyzed elite ice dancers and concluded that the source of sport enjoyment was the activity that the individual pursued, which resulted in high levels of movement experience and that the athletes could show others' how good they were (Scanlan et al., 1989). Furthermore, not only individual traits, but also social interactions can be an important source of sport enjoyment. In another earlier research of Scanlan and Lewthwaite (1986) with adolescent athletes, five different sources of sport enjoyment were identified: perceived ability, positive team support, positive parental involvement, effort expenditure, and positive coaching support. Scanlan and Simons (1992) studied 9 to 14 years-old male wrestlers and they found that younger kids reported more sports enjoyment than older wrestlers, and that parental and coaching encouragement led to higher level of sport enjoyment during the season. In a study performed by Wankel and Kreisel (1985) on Canadian athletes, the sources of sport enjoyment were intrinsic factors such as performance and self-referenced competence, and these were followed by extrinsic factors such as the social experience. However, the authors concluded that intrinsic factors had a greater impact on sport enjoyment than extrinsic factors. According to Gill, Gross, and Huddleston (1983) sport enjoyment and lack of sport enjoyment were among the primary reasons for sport participation, and dropout, respectively. Also, sport enjoyment was found to be associated with higher levels of perceived physical competence and challenge (Brustad, 1988; Chaplin, Csikszentmihalyi, Kleinber, & Larson, 1984). Similar studies showed that the performance and movement experiences were the most important sources of sport enjoyment and that could indirectly affect sport motivation (Scanlan & Lewthwaite, 1986; Wankel & Kreisel, 1985; Wiersma, 2001).

Consequently, Wiersma (2001) put sport enjoyment theory into a new perspective, which constituted the theoretical background for new research in sport enjoyment. He developed a two-dimensional model from Scanlan's work (Scanlan et al., 1989), distinguishing between achievement/ non-achievement and intrinsic/extrinsic dimensions. Additionally, six sources of sport enjoyment are mapped onto this two-dimensional model presented in Figure 1. Based on an examination conducted in a sample of 896 participants, Wiersma validated a 28-item questionnaire which was later adapted to different cultures (Yapar & Levente, 2014; Santos & Carlos, 2012). Research using this model suggests that experiencing self-competence and competitive excitement were the two most relevant sources of sport enjoyment (Wiersma, 2001).



Figure 1. Sport Enjoyment Model (Wiersma, 2001).

Besides mapping sources of sport enjoyment, to understand their role in sport motivation, it is also important to detect their associations with psychological constructs. It is well-known that regular physical activity improves self-esteem, it helps develop positive attitudes toward health and enhances self-efficacy (Baker, Little, & Brownell, 2003; Ntoumanis, 2001). Among the values of young athletes, intrinsic and postmaterial values play important roles, similar to future orientation and health awareness (Piko & Keresztes, 2006). All these may develop a strong base for the long-term development of a healthier lifestyle. In terms of their subjective well-being, the level of life satisfaction was found considerably higher among young people who were engaged in regular sports activity, and the level of sport engagement was associated with more attention paid to nutrition (Grant, Wardle, & Steptoe, 2009). Sport enjoyment in association with these psychological variables, may help develop a healthy attitude toward life and health since enjoyment of life and enjoyment of sport have the same foundation (Berger, 1996).

Current Study

Given the above mentioned research, it is important to understand how sport related motivation and enjoyment can help enhance sport experiences and maintain adolescents' involvement in sport, which may lead on long terms to a healthier lifestyle in adulthood. While several studies examined this theory (e.g., Yapar & Levente, 2014; Santos & Carlos, 2012; McCarthy, Jones, & Clark-Carter, 2008), in Hungary this is a relatively less explored field of research (Berki & Piko, 2017).

Therefore, the aim of our study was to investigate the most relevant sources of sport enjoyment with a Hungarian sample of youth. Namely, this study had three objectives: (1) first, to explore the most relevant sources of sport enjoyment using exploratory factor analysis (EFA); (2) second, to validate Wiersma's (2001) Source of Enjoyment in Youth Sport Questionnaire (SEYSQ-H) using confirmatory factor analysis (CFA); and finally, (3) to map youth's psychological background and the associations between different psychological scales and the sources of sport enjoyment. Previous studies suggested that mapping the psychological background of sport enjoyment might be useful for future sport motivation research (Bengoechea, Wilson, & Dunn, 2017; Oliveira-Brochado, Brito, & Oliveira-Brochado, 2017). We chose a set of psychological variables (such as satisfaction with life, future orientation, and long-term life goals for the future) since in the pilot phase of our research project we found several interconnections between them and the dimensions of sport enjoyment.

METHOD

Participants

The participants were 526 adolescents from 6 different high schools in Budapest, aged from 14 to 18 years ($M = 16.4$ years, $SD = 1.2$ years). The sample consisted of 275 boys (52.3%) and 251 (47.7%) girls, whose experience in their sport averaged 8.2 years ($SD = 3.5$ years) and ranged from 1 to 15 years. Three-hundred and forty-seven (66%) of the students studied in sport schools and 179 (34%) of them were in the regular educational system. The adolescents from sport schools came from 39 different sports such as football, basketball, athletics, swimming etc. As to their training programs, 45.7% of the students spent time with training more than 5 times a week and 26.9% of them participated in 4-5 training programs in a week and 23.2% of the athletes had 2-3 trainings weekly. Only 4.2% of the participants had training once a week. The sample's competition levels were the following: 39.7% competed at international level; 34.2% at the national level; 9.2% at municipal or county level; 16.5% did not compete.

Procedure

After receiving the ethical approval from the university, the survey was sent out to 12 different sport schools in Budapest. Six of these schools agreed to participate in this research project, which was authorized by the school principals. Parents and students were also informed, and their consent was obtained. Questionnaires were self-administered, anonymous and voluntary. The questionnaires were administered in one session of approximately 15-20 minutes. In the instructions on the survey,

participants were asked to assess their daily involvement in sport activities. We assured them that there was no good or bad answer.

Measures

Socio-demographic data such as age, gender, socio-economic status, etc., as well as background of their sport activity (i.e., “How long you have been doing this sport?”) was reported by the participants.

Sources of sport enjoyment were measured with the Hungarian version of Wiersma's (2001) Source of Enjoyment in Youth Sport Questionnaire (SEYSQ-H). The adaptation of the scale was conducted in several steps. In the first step of the process, the scale was translated from English into Hungarian, which was followed by back-translation. The items were translated from English into Hungarian by the researchers under continuous supervision of highly specialized translators and English teachers. In the next stage, the back-translation was made by an independent expert who was a university English teacher. Finally, these items were compared to the ones from the original version. After translation, a pilot test was conducted to ensure that potential participants understood the content of the items. The scale contained 28 questions that could be answered by means of a five-point Likert-type scale indicating the extent to which a statement characterizes the respondents' behavior, ranging from 1 (*not at all*) to 5 (*very much*). According to Wiersma (2001) the sport enjoyment scale can be divided into six subscales: Competitive excitement, Effort Expenditure, Affiliation with Peers, Self-Referenced competency, Positive Parental Involvement, Other-Referenced Competency and Recognition. Wiersma (2001) arranged these subscales into the following categories: extrinsic (Other-Referenced Competency and Recognition, Positive Parental Involvement, Affiliation with Peers) and intrinsic (Competitive excitement, Effort Expenditure, Self-Referenced competency); achievement (Self-Referenced competency, Self-Referenced competency) and non-achievement (Competitive excitement, Effort Expenditure, Affiliation with Peers, Positive Parental Involvement) sport enjoyment categories. Cronbach alpha values of reliability for the original measures varied between .61 and .81 and in our study between .71 and .94.

Satisfaction with life was measured using the Hungarian version of The Satisfaction with Life Scale (SLS; Diener, Emmons, Larsen, & Griffin, 1985; Martos, Sallay, Désfalvy, Szabó, & Itzész, 2014). The scale includes 5 items and the responses varied from 0 (*strongly disagree*) to 7 (*strongly agree*). The scale measures general satisfaction with life, with statements such as "I am satisfied with my life". The scale's reliability was measured employing Cronbach's alpha, which was .86 in this sample.

Future orientation was evaluated with the Consideration of Future Consequences Scale – Short version (CFC; Strathman, Gleicher, Boninger, & Edwards, 1994), which includes six items. The scale includes statements such as "I consider how things might be in the future, and try to influence those things with my day to day behavior". The response categories were on a 5-point Likert-type scale, ranging from 1 (*extremely uncharacteristic*) to 5 (*extremely characteristic*). The final score varied between 6 and 30 points. The Cronbach alpha value was .50, similar to the one found in a previous study with Hungarian adolescents (Piko, Luszczynska, Gibbons, & Teközel, 2005).

Future life goals. The Aspiration Index (AI; Kasser & Ryan, 1996) was employed to assess the students' future life goals. The 14-item shortened version was developed by Martos, Szabó, and Rózsa (2006) in which each goal contained two statements (altogether seven). The scale (both the original and the shorter one) measured extrinsic (fame, richness, appearance) and intrinsic (social relationships, personal development, social engagement) long-term life goals (Kasser & Ryan, 1996; Komlósi, Rózsa, Berdi, Móricz, & Horváth, 2006). The response categories ranged on a 5- point Likert scale ranging from 1 (*not important*) to 5 (*very important*). The Cronbach alpha reliability values were .82 for extrinsic aspiration, and .71 for intrinsic aspiration.

Statistical analyses

After data collection, SPSS was used for descriptive statistics, exploratory factor analysis (EFA) and correlations, and AMOS 22 for confirmatory factor analysis (CFA). The statistics began with exploratory factor analysis with varimax rotation to explore the factor structure. Then CFA was conducted to test Wiersma's model with our data. To confirm our data, we tested two potential factor structures of Wiersma's model. First, a six-factor model was tested which relied on the result of our exploratory factor analysis. The second model was a four-factor model where the latent variables represented the combined factors within the quadrants of the model (intrinsic, extrinsic, achievement, non-achievement). The appropriateness of each model was assessed by using several fit indexes. These included the chi square (χ^2), relative chi square divided by the degree of freedom (CMIN/d.f), root mean square error of approximation (RMSEA), a non-normed fit index which also called Tucker-Lewis index (TLI), comparative fit index (CFI) and incremental fit index (IFI).

The χ^2 value is acceptable when it is nonsignificant, however, as it is well known that the evaluation is very sensitive to the sample size. Therefore, many researchers suggest that instead of using χ^2 we should use the relative chi-square which is divided by the degree of freedom (Garson, 2015). If the CMIN/d.f value is lower than 3 than our data has a good fit to the model. According to other

researchers the CMIN/d.f value is also acceptable below five (Bryne, 2010; Hu & Bentler, 1999). The RMSEA is independent from the sample size. If the RMSEA value is lower than 0.08 it is an acceptable fit (Byrne, 2010; Hooper, Coughlan, & Mullen, 2008). The TLI value is also independent of the sample size, although the complexity of the model has a great role in this index. The TLI value is between 0 and 1; if the value is above 0.90 then it is an acceptable fit and if it is above than 0.95 then it is a good fit (Hu & Bentler, 1999). The CFI compares the model of interest with some alternative, such as the null or independence model. If the CFI value is above than 0.90 then we have a good model fit. IFI is also insensitive to the sample size. The values above 0.90 are regarded as acceptable (Garson, 2015).

Finally, correlation analyses (Pearson's coefficients) were used to assess bidirectional relationships between the factors resulting from the EFA regarding sport enjoyment and psychological characteristics (future orientation, satisfaction with life, aspiration), whereas the relationships between sport enjoyments and gender were assessed by point biserial correlations.

RESULTS

Exploratory Factor Analysis

In the first part of our study an EFA was used on SEYSQ-H. The principal component method with varimax rotation was selected and the KMO index was 0.93 which suggested a perfect fit. According to the Kaiser criterion (Kaiser, 1960), factors with an eigenvalue of more than 1 were included as presented in Table 1. A six-factor solution was extracted with the minimal loading of 0.40 (Tabachnick & Fidell, 2007) and the factors accounted for 67.75% of the total variance.

The first factor accounted for 40.57% of the variance and included five items. Because of the strong similarity, the factor was named after the original model and it was labeled as *competitive excitement*. The variables of this factor included statements that were related to competition or game experiences (i.e., "Hearing the crowd cheer during a close game, match, or race"). Our next factor was called *affiliation with peers*. Mainly items of social influences played a role in this factor and accounted for 7.69% of the variance (i.e., "Being with the friends on my team"). Factor 3 with a 6.35% of the variance was labeled as *effort expenditure*. The factor contained questions about practice and training like "Working hard in practice". *Positive parental involvement* (with 5.54% of variance) was the next factor, which included items concerning their parents' involvement in their sports (i.e., "Getting support from my parents for playing my sport"). Factor 5 was labeled as *other-referenced competency and recognition* (3.91% of variance), which included items that reflected a need to defeat opponents and to be recognized by others (i.e., "Showing that I am better than others who play my sport"). The last

factor named *self-referenced competency* accounted for 3.68% variance of the model. The factor contained questions regarding how students evaluated their own performance (i.e., "Improvement of performance based on how I've done in the past").

Table 1.
Factor analysis of the items of sport enjoyment scale: final, rotated result

	Factors					
	1	2	3	4	5	6
Cronbach alpha	.86	.94	.86	.82	.84	.71
Variance %	40.57	7.69	6.35	5.54	3.91	3.68
Eigenvalue	11.36	2.15	1.78	1.55	1.09	1.03
24. The excitement of competition.	.75					
22. The thrill of competition.	.75					
13. Playing hard during competition.	.68					
15. Hearing the crowd cheer during a close game, match, or race.	.61					
8. Participating in a close game, meet, or competition.	.59					
4. Being with the friends on my team.		.85				
7. Getting support and encouragement from my teammates.		.75				
10. Making new friends in my sport.		.74				
6. The felling of team spirit and togetherness I fell from being on a team.		.73				
11. Doing things with my teammates away from practice or competition.		.72				
2. Working hard in practice.			.79			
1. Playing up to my potential.			.79			
9. Participating in and finishing a difficult practice.			.63			
3. Improvement of my performance based on my ability to outperform others.			.58			
27. Achieving personal goals, I set for myself on my own performance.			.56			
26. Giving a lot of effort in practice or competition.			.52			
17. Getting encouragement from my parents.				.82		
23. Getting support from my parents for playing my sport.				.82		
28. Having my parents pleased with my performance no matter what.				.68		
25. Having my parents watch me compete.				.56		
5. Doing skills other kids my age cannot do.					.79	
18. Being better in my sport than other athletes my age or in my league.					.76	
19. Being recognized by others because I participate in sport.					.57	
16. Showing that I am better than others who play my sport.					.52	
12. Being known by others for being an athlete.					.50	
21. Playing well compared to how I've played in the past						.74
14. Improvement of performance based on how I've done in the past.						.72
20. Feeling exhausted after a practice or competition.						.46

Notes. 1 = Competitive excitement; 2 = Affiliation with Peers; 3 = Effort Expenditure; 4 = Positive Parental Involvement; 5 = Other-Referenced competency and recognition. 6 = Self-Referenced competency

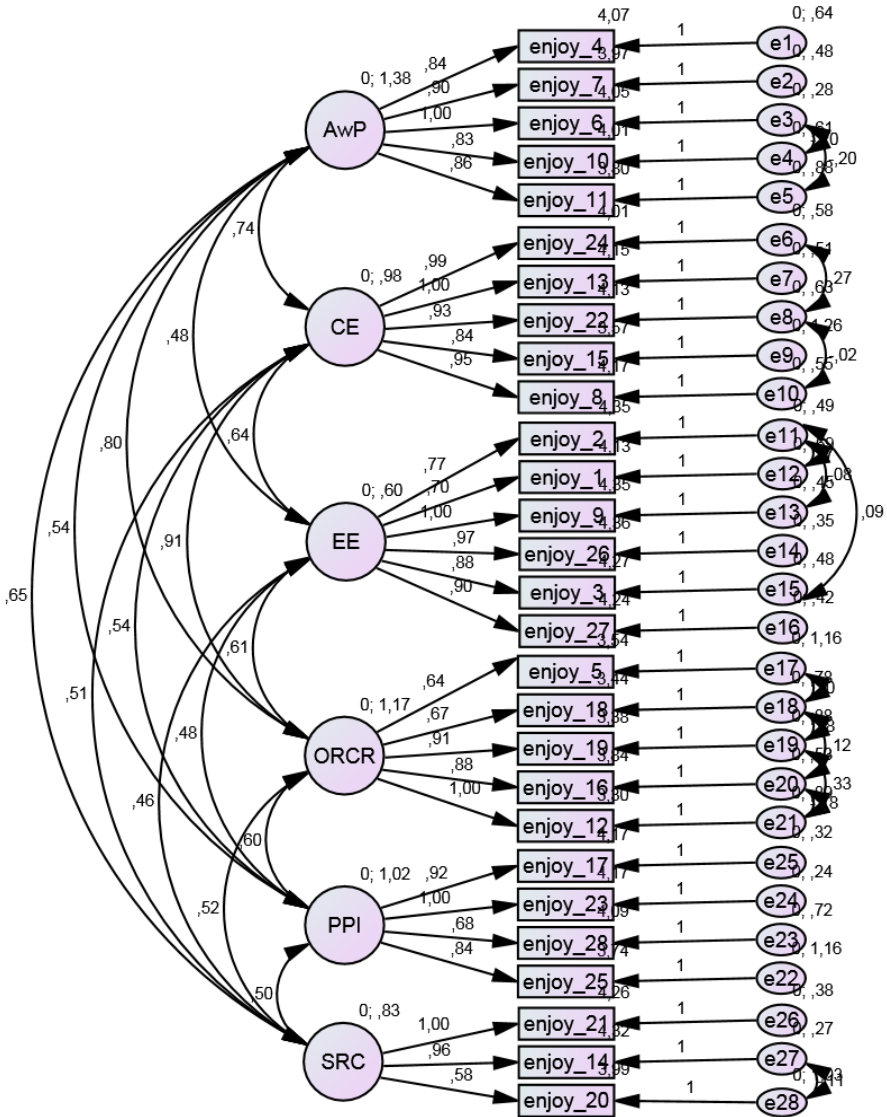


Figure 2. Final 6 factor model structure of the SEYSQ-H. AwP: Affiliation with Peers; CE: Competitive Excitement; EE: Effort Expenditure; ORC: Other-Referenced Competency and Recognition; PPI: Positive Parental Involvement; SRC: Self-Referenced Competency

Confirmatory Factor Analyses

CFAs were used to test the factor structure of our previous result on Wiersma's (2001) theoretical model. According to previous findings on Wiersma's questionnaire, a six-factor and a four-factor model were constructed as depicted in Figure 2 and Figure 3, respectively.

Table 2.

Model fit indexes of the SEYSQ-H

Model	X^2	<i>CMIN/d.f</i>	<i>RMSEA</i>	<i>TLI</i>	<i>CFI</i>	<i>IFI</i>
6 factor model	808.49	2.51	.54	.93	.94	.94
4 factor model	881.39	2.79	.58	.92	.93	.93

The six-factor model contained factors resulting from the EFA. The four-factor model contained the following latent variables: intrinsic motivation, extrinsic motivation, achievement, non-achievement. As suggested by findings reported in Table 2, the six-factor model had a slightly better fit to the theoretical model than the four-factor model. According to the literature, the sample size has a great impact on the χ^2 value, therefore we decided to use other fit indexes. For the 6-factor model the *CMIN/d.f* index was 2.51, which indicates a perfect fit, and the *RMSEA* value of .54 suggesting the same. In addition, the *TLI*, *CFI* and *IFI* indexes showed acceptable values based on our data. Therefore, for subsequent analyses the six-factor solution was employed.

Correlation analyses were conducted to test the bidirectional relationship between the 6-factor model of sport enjoyment and psychological characteristics, as well as gender, which are presented in Table 3. The extrinsic aspiration scale was positively correlated with the Competitive Excitement, Affiliation with Peers, Energy Expenditure, and Other-Referenced Competency and Recognition which has the highest correlation. The intrinsic aspiration scale was also positively correlated with Competitive Excitement, Affiliation with Peers, Energy Expenditure and Positive Parental Involvement. The Future orientation scale had connections with Energy Expenditure, Positive Parental Involvement and Self-Referenced Competency; all the correlations were positive. In terms of The Satisfaction with Life scale only the Self-Referenced Competency did not correlate with it. The relationships between age and the factor scores showed negative connections. Thus, we can say that the Competitive Excitement and Self-Referenced Competency had significantly negative connection with the age. Several significant correlations were found between the psychological scales and gender. Competitive Excitement and Other-Referenced Competency and Recognition were negatively and Positive Parental Involvement was positively correlated with gender. This means that whereas boys are more competitive, for the girls parental involvement is more

important. All significant correlation coefficients were relatively small between .10 and .30.

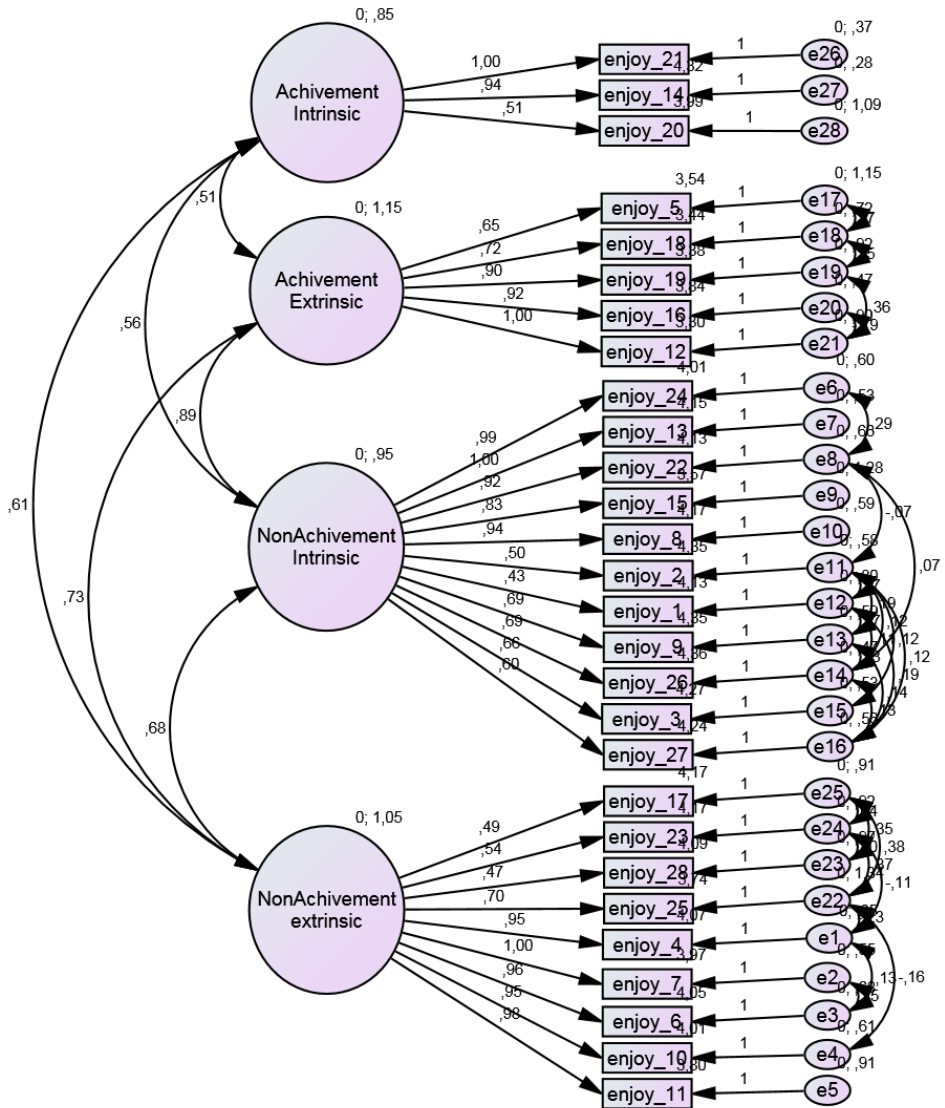


Figure 3. The 4 factor model structure of the SEYSQ-H (Source of Enjoyment in Youth Sport Questionnaire).

Table 3.
Correlation analysis between factor variables of sport enjoyment, and psychological scales, gender and age

Variables	Aspiration extrinsic	Aspiration intrinsic	Future orientation scale	Satisfaction with life scale	Age	Gender (Male=1 Female=2)
Competitive Excitement	.18**	.09*	.07	.18**	-.12**	-.15**
Affiliation with Peers	.12**	.14**	.01	.10*	.00	-.02
Energy Expenditure	.16**	.23**	.28**	.14**	-.07	-.08
Positive parental Involvement	.04	.17**	.13**	.21**	-.05	.13**
Other-referenced competency	.37**	.04	.07	.12*	-.01	-.21**
Self-referenced competency	.02	.07	.13**	.03	-.09*	-.07

Note. * $p < 0.05$; ** $p < 0.01$

DISCUSSIONS

Based on the literature review we assumed that by understanding and exploring the sources of sport enjoyment, we can get closer to a more enjoyable sport, which may contribute to less drop-out in different types of physical activity. Therefore, we investigated the construct validity of the Hungarian version of Wiersma's Source of Enjoyment in Youth Sport Questionnaire employing both EFA and CFA procedures. Subsequently, since physical activity and sports have a great impact on youth psychological development, as part of the validation study, we also intended to examine the relationship between sport enjoyment factors and diverse psychological scales (e.g., satisfaction with life, future orientation, and long-term life goals for the future).

The first objective was analyzing the factor structure of SEYSQ-H. The EFA results showed similar findings to the previous studies (Berki & Piko, 2017; McCarthy et al., 2008; Wiersma, 2001), thus confirming that a six-factor solution was also the most appropriate in this sample of Hungarian youth. As this factor structure suggests, the concept of sport enjoyment shares similarities with other motivational theories, such as the self-determination theory, and the achievement goal theory (Bollók, Takács, Kalmár, & Dobay, 2010; Clancy, Herring, MacIntyre, & Campbell, 2016; Deci & Ryan, 1985; Locke & Latham, 1985; Teodor & Claudiu, 2013). Therefore, this scale covers a wide range of motivational sources from intrinsic to extrinsic.

The second aim was to investigate the model fit with the CFA in order to further test the construct validity of the questionnaire. We concluded that the six-factor model provided the best model fit out of the two proposed models. Whereas both models had an acceptable fit and validity, the six-factor solution showed a slightly better fit to our data than the four-factor solution, which is also supported

by the literature (McCarthy et al., 2008; Yaspar & Levent, 2014; Wiersma, 2001). Therefore, we decided to use this modul in subsequent analyses.

As the role of psychological variables in relation to the sources of sport enjoyment was less explored, the third objective of the current study was to investigate the extent to which these factors may be associated with the sources of sport enjoyment. Based on the goal achievement and self-determination theories (Lee, McInerney, Liem & Ortiga, 2010; Nishimura & Suzuki, 2016), we anticipated that future life goals (aspirations) might have associations with certain sources of sport enjoyment. The current findings suggested that Competitive Excitement, Affiliation with Peers and Energy Expenditure were associated with both intrinsic and extrinsic long-term life goals. These factors represent long-term social connections, decisions and energy investments which have an influence on the long-term future goals, either extrinsic or intrinsic. Other-Referenced Competency and Recognition only correlated with the extrinsic aspirations. This is not surprising given that for the athletes it is important to defeat opponents and be recognized by others (Atkin, Johnson, Force, & Petrie, 2015; MacDonald, Cote, Eys, & Deakin, 2011) which can easily affect their long-term future plans. Winning is crucial for young athletes to continue their involvement in sport as elite athletes in their future (Hazril, Jaafar, Kassim, & Isa, 2016). Positive Parental Involvement represents an extrinsic source of sport enjoyment (Wiersma, 2001), but interestingly, our data indicated that it was associated with intrinsic aspirations. This finding may be explained by the results of Woolger and Power (2000), which suggested that children who benefited from being supported by their parents to develop realistic and attainable goals, showed higher levels of intrinsic motivation. Finally, the Self-Referenced Competency which contains items measuring achievement and performance, did not exhibit any association with future life aspirations. The reason for this may be that young athletes' competence and performance are changing all the time, and might not be used as a reference for their future life goals during this developmental period.

Other findings showed that the Consideration of Future Orientation scale was positively associated with mainly intrinsic sources of sport enjoyment (Effort Expenditure, Self-Referenced Competency) and with the Positive Parental Involvement as an extrinsic source. There are sources in sport enjoyment which do not refer to day to day plans and consequences (Competitive Excitement, Affiliation with Peers, Other-Referenced Competency and Recognition), but on the other hand, other sources such as Energy Expenditure, Positive Parental Involvement, and Self-Referenced competency may have an impact on daily behaviors (Keegan, Harwood, Christopher, & Lavalee, 2014). For example, parental support can help children plan ahead or improve a skill, and can therefore motivate a young athlete to attend the next training.

Besides family connection and social support (Srinivasan & Jayashree, 2017; Yuh & Choi, 2017), physical activity and sport can also influence life

satisfaction. According to Sato, Jordan, and Funk (2016) regular running had a positive impact on life satisfaction, while in another research sport improved life satisfaction for individuals with disabilities (Yazicioglu, Yavuz, Goktepe, & Kenan, 2012). In our study, nearly all of the sources of sport enjoyment (except for Other-Referenced Competency and Recognition) were correlated with the life satisfaction level. These results were not surprising because in an earlier study, life satisfaction was strongly associated with intrinsic motivation (Moraes, Corte-Real, Dias, & Fonseca, (2009). In addition, their finding may provide an explanation as to why the extrinsic Other-Referenced Competency and Recognition factors did not exhibit a significant association. These results were similar to those obtained in another recent study indicating that intrinsic goals were positively associated with life satisfaction (Sebire, Standage, & Vansteenkiste, 2009; 2011)

The relationship between athletes' age and sport engagement and commitment was previously investigated in several studies (Galina & Shuklina, 2014; Tonnessen, Svendsen, Olsen, Guttormsen, & Haugen, 2015), which generally suggested that as athletes age increases their motivation to sport usually tends to decrease (Passer & Wilson, 2002; McCarthy et al., 2008). In accordance with these findings the results of our study suggested that there was a negative association between age and sources of sport enjoyment. These findings suggest that not only engagement and motivation in sport decrease with age, but also sport enjoyment. Five factors out of six sport enjoyment factors showed negative correlations (except for Affiliation with Peers) and two of them were significant. Among the factors which might decrease youth's motivation for sport include school stress, injury, lack of time, lack of family support, and conflicts in the sport environment (Bussmann, 1999, Holmberg & Sheridan, 2013; Lonsdale & Hodge, 2011). Additionally, we found a significant association between age and Competitive excitement and Self-Referenced Competency. One of the reasons for this may be that with age the development of their performance might be slower (Gulbin, Weissenstener, Oldenziel, & Francoys, 2013). As it seems, age may also have a negative impact on their intention of competing, due to the fact that intrinsic motivation was found to be stronger in childhood and decreasing as athletes reach adulthood (Szemes, Harsanyi, & Toth, 2016).

Besides age, gender was also an important background socio-demographic variable in our study. Previous studies suggested that boys were more competitive than girls in sport (Vilhjalmsson & Kristjansdottir, 2003). Our findings were in concordance with these results, since male gender was significantly associated with Competitive excitement, Other-Referenced Competency and Recognition factors. Conversely, for girls Positive Parental Involvement seemed to be more important than for the boys. Thus, these findings might suggest that girls require their parents' support to a larger extent than boys. Parents, through their psychosocial support can play a pivotal role in providing children (especially girls) with an enjoyable sport experience. Our results were similar to those of McCarthy et al. (2008), and

might suggest that socialization in sport related activities could have a greater impact on boys than girls. Due to this difference in socialization, boys may tend to report significantly greater enjoyment compared with girls.

In sum, our findings first showed that the SEYSQ-H data had an acceptable fit to Wiersma's theoretical model. Therefore, we can state that the Hungarian version of this scale can be used among adolescent athletes in Hungary to measure sport motivation. Second, based on the relationships among the variables, we can summarize the main findings as follows: (1) there are important differences according to age and gender in the sources of sport enjoyment; (2) sources of sport enjoyment representing long-term social connections, decisions and energy investment are associated with future life aspirations, either extrinsic or intrinsic; (3) future orientation was positively associated with mainly intrinsic sources; and (4) nearly all sources of sport enjoyment were important resources of life satisfaction.

Limitations. First, the SEYSQ-H did not examine the role of the coaches while previous research had provided some evidence of the positive support of the coaches (Atkin et al., 2015). Second, the individuals who participated in this study were engaged in sport as a free-choice activity. Finally, the relatively small correlation coefficients (below .30) suggest that other psychological variables might be more proximally associated with sport motivation such as self-efficacy, attribution style or expectations regarding success or failure. In future studies we will include other psychological scales.

These limitations notwithstanding, we believe that our study provides useful information for physical educators, as well as coaches in specific sport fields because mapping sources of sport enjoyment can help strengthen adolescents' involvement in sport activities and prevent drop-out in young athletes. Our findings should encourage future studies to expand on this research with new variables and new psychological scales or compare this model with another theoretical construct (e.g., Goal Orientation theory; Duda & Nicholls, 1992) to better understand the motivational background of adolescent athletes.

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