

The role of gender in predicting life satisfaction of the interest in physical education lesson

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Authors' Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation; E – Funds Collection

Abstract

Background and Study Aim In this study, it was aimed to investigate the relationship between the level of interest in physical education lesson and life satisfaction of students studying in secondary schools.

Material and Methods The research group consisted of 421 students in total 52.3% (n=220) were male students and 47.7% (n = 201) were female students. Structural equation model was used in the analysis of research data.

Results The effect of interest in physical education lesson on life satisfaction was found to be 19.8% ($R^2 = .198$, $p < 0.05$). In the gender variable, the effect of interest in physical education lesson on life satisfaction in girls is 12.8% ($R^2 = .128$), whereas it is 25.7 ($R^2 = .257$) in boys. According to the model, as the level of interest in physical education lesson of students studying in secondary school increases, their life satisfaction increases. While it is concluded that the interest level of students studying in secondary schools in physical education and sports lessons positively predicts their life satisfaction, this rate is higher in male students.

Conclusions Since the participation of students in physical education and sports activities contributes to the multifaceted development and life satisfaction of students, it is necessary to increase the interest of students in physical education lessons and especially to engage female students. It is very important for physical education teachers to provide an environment for student participation in physical education and sports lessons. School-based interventions that can increase female students' participation and interest in physical education and sports lessons can be effective.

Keywords: life satisfaction, interest in physical education, gender and sports, structural equation model

Introduction

In the psychological studies, the happiness of the individual is indicated by the concept of subjective well-being. Subjective well-being (happiness), which reflects the degree of experience of the individual's life or means evaluating the life of the individual, is considered as a versatile structure that includes both cognitive and emotional factors [1]. The affective dimension of subjective well-being is divided into 2 items as positive affect (joy, interest, cheer, trust, excitement, etc.) and negative affect (grief, sadness, anxiety, anger, etc.), while the cognitive dimension is life satisfaction [2]. Life satisfaction is the individual's self-assessment in the light of the criteria he/she has determined [3]. While life satisfaction [4], which is an important structure in positive psychology, is examined in detail in adults, life satisfaction of children and young people has recently begun to draw attention [5, 6]. Life satisfaction in adults increases to a certain age and then decreases. With this decrease, cognitive, physical and social problems emerge [7-10].

Increasing the quality of life has been a target for the individual, society, nation and the world for a long time [11]. Life satisfaction can be an important factor especially in reducing the problematic

behavior of young people [12]. At this point, school environments can contribute to increasing life satisfaction because school environments are important not only for the academic development of students but also for their non-academic development [13]. School can be an important area for young people's life satisfaction [14] and can make important contributions to their lives [15]. Relationship between students at school, teacher-student relationship, order and discipline, parental involvement in education can play critical roles in determining students' life satisfaction [16]. As students' life satisfaction increases, they develop more positive attitudes towards school and teacher [4], and their academic achievement [13], self-esteem, focus of internal control, and extraversion raise [17]. On the other hand, those with higher life satisfaction experience less depression [6], less stress [6, 15], less anxiety and worry [7, 17]. Therefore, it is important to increase students' life satisfaction. Otherwise, when life satisfaction is low, the probability of being addicted [18, 19], carrying weapons or knives, engaging in a fight [19] suicidal ideation [7, 9, 20], depression [21, 22] increases.

Motivation is an important force in starting and maintaining learning behaviors. Because it becomes harder for students to learn unless they are motivated [23]. Interest can make a critical contribution to

increase the effectiveness of learning processes. The interest not only increases the student's focus on the lesson, but also makes him willing [24] and has a strong influence on learning [25]. It is an important component that contributes to psychological well-being in all life stages as well as its effect on learning [26]. Interest to physical education and sports lessons is an important factor in creating the learning environment [27-29]. At this point, it is very important to attract students' attention to physical education and sports lessons. According to Chen, Durst and Pangrazi [30], physical activities must provide new information, require a high level of attention, refer to research and provide a fun environment for students to attract their attention. In a traditional classroom environment, students are expected to gather around a table and complete a given study. Physical education and sports lessons offer environments where students try to show their talents and skills, where sports activities are at the forefront and where dynamic interaction matters [31]. Physical education and sports lessons play a distinctive role in developing children's mobility skills and gaining physical competence [32]. Sports and physical activity help the individual in personal pleasure, personal development, social adaptation and social change [33]. Physical activity supports the healthy development of children [34-36] and makes them feel better psychologically [37]. In physical education lessons, students have more fun and their perception of pleasure increases, and they also have the opportunity to socialize [31, 35, 38]. Physical education and sports activities can also benefit academic performance as it affects children's social leadership, participation in decision-making processes and increasing their concentration [32]. In the researches, it is seen that students define physical education lessons as a fun, loved and joyful lesson [39, 40].

It is thought that as a result of the students having fun and enjoyable time in the lessons, their interest in the lesson increases, and in parallel to this, it may positively affect their life satisfaction. In this study, the relationship between the interest level and life satisfaction of students studying in secondary schools was studied.

Materials and Methods

Relational screening model was used in this study in which the relationship between secondary school students' level of interest in physical education and life satisfaction was examined. Relational screening model was preferred in order to give an idea about cause-effect relationship between two or more variables [41, 42]. The relationship between students' interest in physical education lesson and their life satisfaction was tested using the structural equation modeling (SEM). SEM is a powerful analysis method used in theory development by examining

the relationships between variables [43].

Participants

421 students attending the secondary school participated in the study. While 52.3% (n = 220) of the students participating in the study were female students, 47.7% (n = 201) were male students. The study group was distributed as 23% (n = 98) in the 5th grades, 26.1% (110) in the 6th grades, 23.8% (n = 100) in the 7th grades, and finally 26.8% (n = 113) in the 8th grades. Required legal permission was obtained from Çanakkale Onsekiz Mart University Graduate School for this research (Ethics committee decision no: 2021-13/19).

Research Design

Data Collection Tools

Life Satisfaction Scale: Life satisfaction for children scale, which was developed by Gaderman et al. [44] and adapted to Turkish culture by Altay and Ekşi [45], was used to determine the life satisfaction of students studying in secondary school. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were performed for the construct validity of the scale. According to AFA results, since Bartlett test result is significant ($\chi^2 = 822.101$, df: 10, $p < .001$) and Kaiser-Meyer-Olkin (KMO) coefficient is .834, the data set was found to be suitable for factor analysis. It was determined that the variance rate explained by the scale was 61.030%. Cronbach's Alpha reliability coefficient of the scale was found to be .851. As a result of the CFA, it was observed that the item factor loads varied between .57 and .88. According to the results of CFA, χ^2 / sd (2.827), GFI (.987), CFI (.989), NFI (.983), IFI (.989) and RMSEA (.066) values were found. It was determined that the scale has perfect fit reference values [46, 47].

The Scale of Interest in Physical Education Lesson: It was developed by Uğraş and Temel in order to determine the interest levels of secondary school students for physical education and sports lesson [48]. According to EFA results, since Bartlett test result is significant ($\chi^2 = 3225,060$, df: 45, $p < .001$) and Kaiser-Meyer-Olkin (KMO) coefficient is .941, the data set was found to be suitable for factor analysis. It was determined that the variance rate explained by the scale of interest in the physical education lesson was 66.662%, and the factor loads were between .71 and .83. Since the results of the DFA analysis were out of acceptable values, two modifications were made. Acceptable values were achieved after modification ($\chi^2/sd = 4.786$, GFI = .948, CFI = .974, NFI = .965, IFI = .974, RMSEA = .80).

Statistical Analysis

SPSS 23 and AMOS 23 statistics programs were used to analyze the data. Before determining whether the data are suitable for the structural equation model, 30 questionnaires with missing, erroneous and extreme values were removed and

the process was continued with a total of 421 data sets. For the normality assumption of the data, skewness and kurtosis values were examined. After determining that EFA, CFA and Cronbach's Alpha reliability coefficients met the necessary conditions for Structural Equation Modeling (SEM), analyzes were performed. While SPSS 23 was used for EFA with descriptive statistics, AMOS 23 was used in CFA and SEM analysis. χ^2/sd , GFI, CFI, NFI, IFI and RMSEA values were examined to test the YEM model.

Results

As it can be seen in Table 1, the average scores of the students in the scales of interest in physical education and life satisfaction showed a normal distribution. For this reason, parametric tests were preferred [49]. It has been determined that there is a moderate significant correlation ($r = .463$, $p < .01$) between interest in physical education lesson and life satisfaction.

After examining the relationship between the interest in physical education lesson and the life satisfaction of students, the predictive effect of the "interest in physical education lesson" variable on

the "life satisfaction" variable was tested by path analysis. The model tested is shown in Figure 1.

It has been determined that the model examining the effect of interest in physical education lesson on life satisfaction has acceptable fit indices ($\chi^2/sd = 2.930$, GFI = .927, CFI = .964, IFI = .899, NFI = .946, RMSEA = .068). The path model showing the relation of interest in physical education lesson is shown in table 2.

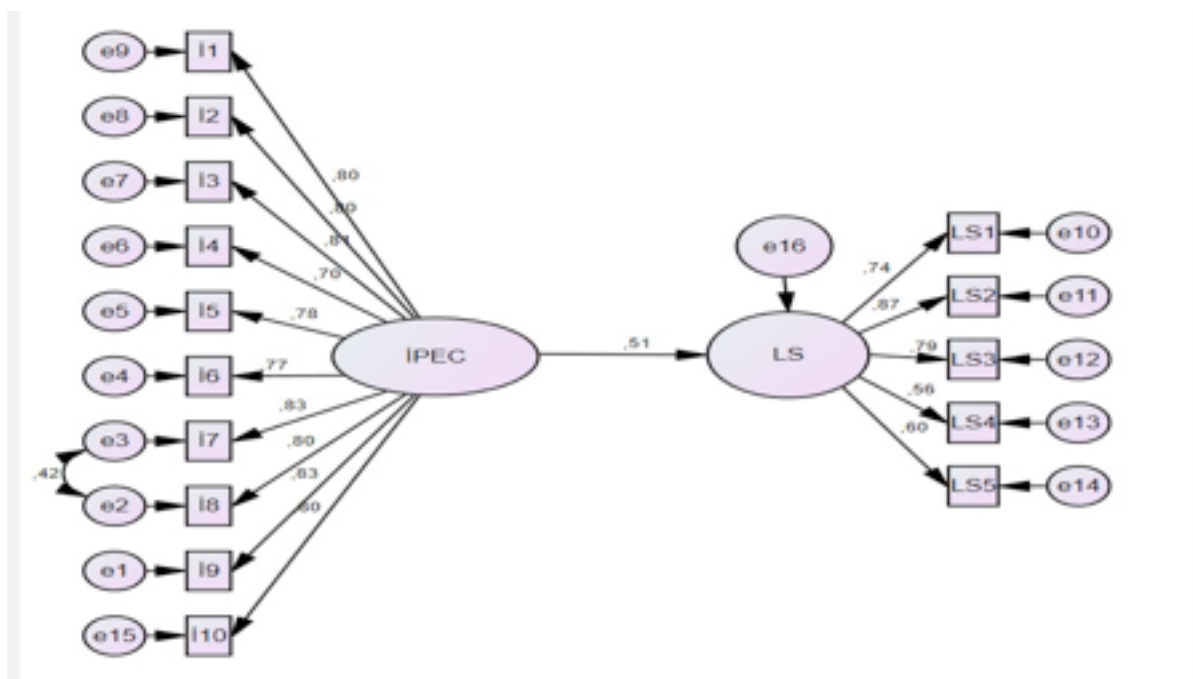
According to Table 2, it has been observed that the interest in physical education lesson affected life satisfaction emphatically and unquestionably ($\beta = .51$, $p < .05$) and is statistically significant. It has been determined that the effect of interest in physical education lesson on life satisfaction is 19.8% ($R^2 = .198$). After the analysis of the interest in physical education lesson predicting life satisfaction, the path analysis for the interest of female students in physical education lesson is shown in Figure 2.

The model, which examines the effect of interest of female students in physical education lesson on life satisfaction, has been found to have acceptable fit indices as a result of modifications ($\chi^2/sd = 2.154$, GFI = .899, CFI = .937, IFI = .938, NFI = .890, RMSEA = .073). The path model showing the relation of

Table 1. Arithmetic mean, standard deviation, skewness, kurtosis and correlation values of variables

Variables	X	SS	Skewness	Kurtosis	Correlation
Interest in Physical Education Lesson	3.90	0.99	-1.03	0.45	1
Life Satisfaction	3.67	0.96	-0.72	-0.11	.445**

Note: ** - $p < .05$



IPEC: Interest in physical education lesson LS: life satisfaction

Figure 1. Path analysis of the interest in physical education lesson for predicting life satisfaction

interest in physical education lesson is shown in table 2.

According to Table 3, it has been observed that the interest in physical education lesson positively and significantly ($\beta=.45$, $p < .05$) affects life satisfaction and is significant statistically. It has been determined that the effect of interest in physical education lesson on girls' life satisfaction is 12.8% ($R^2 = .128$). After analyzing the interest of female students in physical education lesson on life satisfaction, the

path analysis of male students' interest in physical education course is shown in Figure 3.

The model examining the effect of male students' interest in physical education lesson on life satisfaction was found to have acceptable fit indices as a result of the modifications made ($\chi^2 / sd = 2.126$, $GFI = .897$, $CFI = .966$, $IFI = .966$, $NFI = .937$, $RMSEA = .075$). The path model showing the relation of interest in physical education lesson is shown in table 4.

Table 2. Standardized regression results regarding the effect of interest in physical education lesson on life satisfaction

Path	Path Coefficient (β)	Standardized estimate (Estimate)	Standard Error (S.E)	Critical Rate (C.R)	Significance Value (p)
Interest in Physical Education Lesson → Life satisfaction	.5	.446	.049	9.148	***

Note: *** - $p < .05$

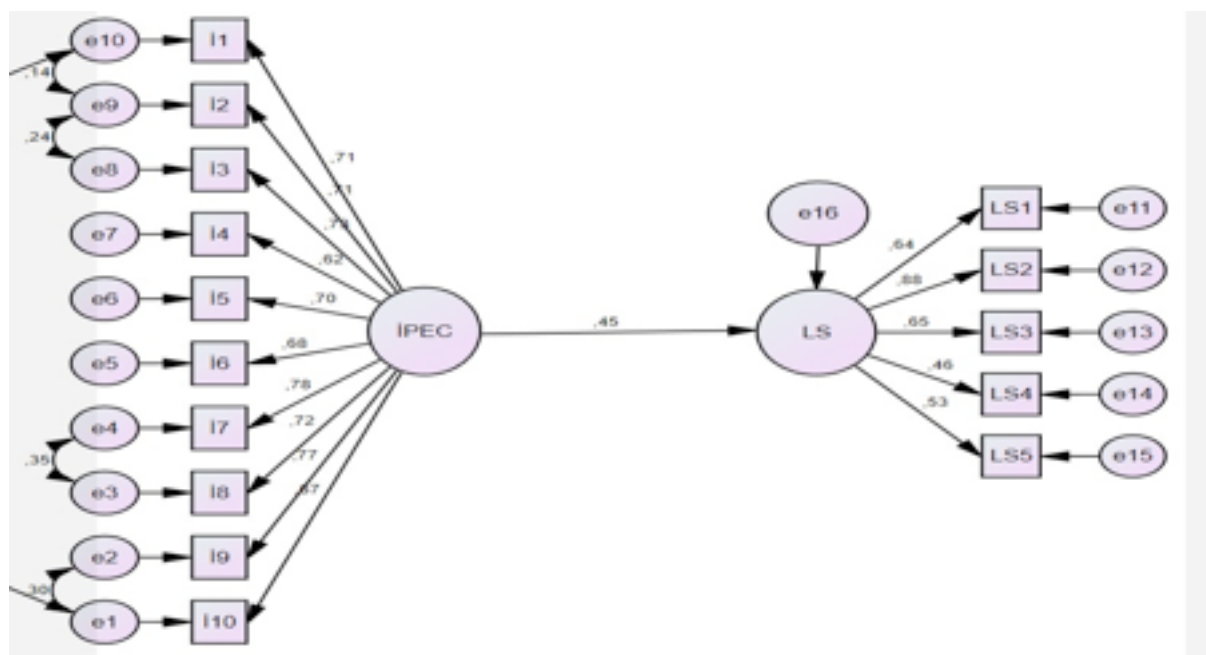


Figure 2. Path analysis for the interest of female students in physical education lesson on predicting life satisfaction

Table 3. Results on the effect of female students' interest in physical education lesson on life satisfaction

Path	Path Coefficient (β)	Standardized estimate (Estimate)	Standard Error (S.E)	Critical Rate (C.R)	Significance Value (p)
Interest in Physical Education Lesson → Life satisfaction	.45	.387	.077	5.005	***

Note: ***- $p < .05$

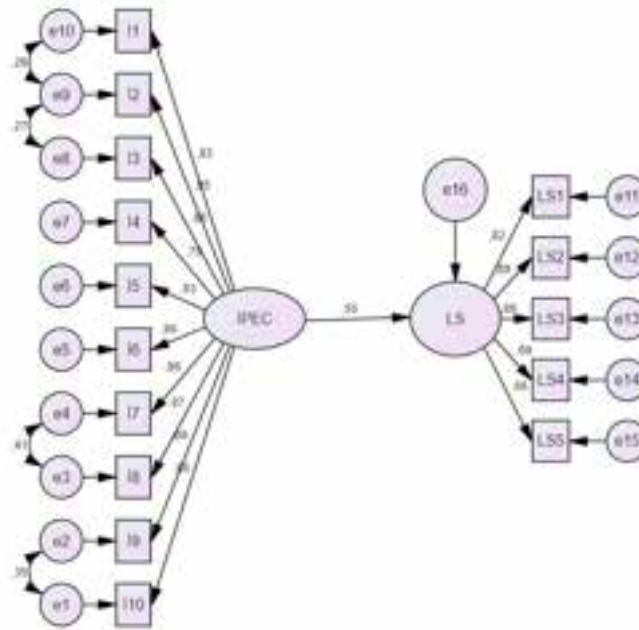


Figure 3. Path analysis of male students’ interest in physical education lesson on predicting life satisfaction

Table 4. Results on the effect of male students’ interest in physical education lesson on life satisfaction

Path	Path Coefficient (β)	Standardized estimate (Estimate)	Standard Error (S.E)	Critical Rate (C.R)	Significance Value (p)
Interest in Physical Education Lesson → Life satisfaction	.55	.482	.064	5.005	***

Note: *** - $p < .05$

According to Table 4, it has been observed that the interest in physical education lesson affect life satisfaction positively and significantly and is statistically significant. The effect of interest in physical education lesson on life satisfaction in male students was found to be 25.7% ($R^2 = .257$).

Discussion

In the study, the relationship between secondary school students’ level of interest in physical education lesson and their satisfaction with life was examined with the structural equation model. It was concluded that the level of interest of students studying in secondary schools to physical education and sports lessons predicted their life satisfaction positively and significantly. In the studies conducted, the health development, psychological development, socialization opportunities and academic performance of students participating in sports activities and physical activities are positively affected [32, 34, 35, 37]. Sportive activities encourage compliance with social rules and keep alcohol, violence, illegal substance abuse away. It increases self-esteem. It gives fun and pleasure.

It gives life experience. It allows you to make more friends. It helps to improve mental health [50-54]. Similarly, individuals who participate in physical activities after the youth period feel more competent, protect their self-esteem and increase the chance of staying healthy and fit. However, individuals who stay away from sports and physical activity over time have more cognitive, physical and social difficulties compared to those who do sports. Therefore, it can be said that physical activity increases life satisfaction and those who move more and participate in physical activities have more life satisfaction than those who do not participate [8, 55-58]. Therefore, in this study, it is possible that the interest of secondary school students in physical education lesson affected life satisfaction positively.

In our study, when we look at the relationship between the level of interest in physical education lesson and life satisfaction according to the gender variable, it was seen that the level of interest in men affects their life satisfaction more. While the participation of students in physical education and sports activities is high at young ages, participation rates decrease with adolescence [59-61]. While

some studies do not differ by gender [61], most of the studies show that the participation rates of girls in physical education and sports activities decrease compared to boys [59, 60, 62, 63]. In a study investigating girls' participation in physical activities in secondary school, Robbins, Pender and Kazanis [64] found that female students had a sense of self-awareness and inadequacy. The study conducted by Whitehead and Biddle [65] between forty-seven girls among the ages of 14-16 reveals that the participation of adolescent girls in physical activities is not high due to social effects and social norms. While Fiset [66] says that female students are ashamed in physical education and sports lessons and they fall behind in the background, according to Kirk [67] male students with high skills come into prominence due to the creation of a skill-oriented lesson environment in physical education and sports lessons. It is very important to create a physical education lesson environment that meets the unique needs of girls in such an environment [68]. In this study, it can be interpreted that female students have less interest in physical education lesson than male students, and its effect on life satisfaction also decreases.

In order to increase the life satisfaction of children and ensure their participation in sports, they should be ensured to participate in physical education and sports activities from a young age [69]. Therefore, environments where students will be interested in physical education and sports lessons should be created. Physical education lessons have quite different alternatives to attract students. Students' interest in the lesson may increase with the presence of elements such as innovation, exciting and stimulating activities, physical activity and social participation [23, 70, 71]. Domville et al. [72] state that their desire to participate as long as students enjoy in physical education and sports lessons. For this reason, physical education and sports lesson should increase the students' feeling of instant enjoyment [62, 73]. In order to increase students' interest in physical education and sports lessons, Chen et al. [74] conceptualized the lesson to cover 5 sub-dimensions. These are: innovation (the difference between current knowledge and knowledge to be learned), attention (cognitive participation), challenge (difficulty), discovery (features of learning tasks that encourage the student to explore their environment) and pleasure (positive emotion experienced by the student). In order to attract the attention of students to physical education and sports lessons, besides the individual preferences of the students and external factors, the most important task belongs to physical education

teachers [72]. Researches show that attitude levels [48, 75, 76] are already positive, which is one of the important factors affecting children's participation and maintenance in physical education and physical activity [69, 77-79]. At this point, the classroom environment created by physical education teachers will increase the interest of the students and ensure that their attendance is permanent [80, 81]. In this way, it can be ensured that students' interest in physical education lessons are increased and their life satisfaction is increased. It can be stated that by increasing students' interest in the lesson and indirectly their life satisfaction, it will have a positive effect on many factors such as academic success, peer relations, school belonging. As a result, it was concluded that the level of interest of students studying in secondary schools to physical education and sports lessons predicted their life satisfaction positively. At the same time, it was determined that male students' interest levels of physical education lessons predicted their life satisfaction more. As students' participation in physical education and sports activities contributes to the multifaceted development and life satisfaction of students, increasing the interest of students in physical education lessons becomes important. It is very important for physical education teachers to provide an environment for student participation in physical education and sports lessons. School-based interventions that can increase female students' participation and interest in physical education and sports lessons can be effective [68].

Limitations

It was concluded that the level of interest of students studying in secondary schools to physical education and sports lessons predicted their life satisfaction strongly. By virtue of this result, it can be misleading to interpret the relationship between physical education and life satisfaction only by looking at the levels of physical education and physical activity. Our study emphasizes that the level of interest in physical education and sports can have a significant effect on students' life satisfaction. Our study is not representative nationally and data were collected from a specific region in Turkey.

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Conflict of interests

The authors state that there is no conflict of interest

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