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ANALYSIS OF HIGH SCHOOL STUDENTS 'MOTIVATIONS OF PARTICIPATION IN PHYSICAL ACTIVITY ACCORDING TO SOME VARIABLES

Research article

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Abstract

The purpose of this research is to describe high school students' motivation to participate in physical activity. 223 students (115 female, 108 male) studying in Anatolian high schools participated in the research on a voluntary basis. "Personal Information Form" and "Motivation Scale for Participation in Physical Activity" were used in the data collection process. In the analysis of the data, the items related to the sub-problem were grouped and descriptive statistics such as frequency (f), percentage (%) and weighted average (\bar{X}) were used together with Mann Whitney U and Kruskal Wallis techniques. The results of the research show that students' motivation to participate in physical activity is at the level of agree. Students' motivation to participate in physical activity differs significantly according to their grade levels. It was observed that as the grade level increased, the motivation to participate in physical activity increased. The motivation of students to participate in physical activity differs significantly according to the variable of participation in sports activities. It has been observed that students participating in sports activities have higher motivation to participate in physical activity. However, gender, father and mother educational status did not differ significantly on students' motivation to participate in physical activity.

Keywords: high school students, physical activity, motivation

1.Introduction

It is in the nature of man to act, to continue his life. The development of technology in the world and accordingly, people have started to lead a life-limited life. The process of exercising and moving from the birth of a child to the adulthood is considered important for human health (Başkonuş, 2020). The importance given to physical activity has been increasing in recent years and physical activity-based studies have been given to various segments of the society. It is seen that interdisciplinary studies in this field are given more and more place day by day.

According to Ono, Hirata, Yamada, Nishiyama, Kurosaka & Tamura (2007), physical activity includes multiple elements and encompasses all bodily tasks that people do at work, at home and in their spare time. Lack of physical activity causes weight gain (Seabra, Mendoça, Maia, Welk, Brustad, Fonseca & Seabra, 2013). It is stated that inactivity and obesity have become problems for people and individuals who do not want to move feel bad (Guthold, Stevens, Riley & Bull, 2020; Woessner, Tacey, Levinger-Limor, Parker, Levinger & Levinger, 2021; Gutiérrez-García, Rocha, González, Ramírez & Gómez, 2021).

Day by day, physical activities and their benefits are accepted by people (Edwards & Barker, 2015). Physical activity performed at an appropriate level benefits the body's weight control, spiritual vigor, and the cohesion of people (Castillo, Molina-Garcia & Pablos, 2009). Physical activity also contributes to the strengthening of bones by releasing endocrine factors such as insulin and androgens, along with an increase in estrogen (Vainionpaa, Korpelainen, Siavinen, Vihriala, Leppaluoto & Jamsa, 2007). It is stated that doing physical activity will help weight control (Swift et al., 2018) and significantly reduce the stress level (Stubbs et al., 2018). Physical activity is considered very important for the general health of the person (Donnelly, Blair, Jakicic, Manore, Rankin & Smith, 2009).

When various research results in this area are examined, it is stated that physical activity improves areas such as concentration, school behavior, academic achievement, intellectual functions, cognitive abilities, foreign language success, and neural connections between the left and right brain hemispheres (Hill et al. 2010; Roberts, Freed & McCarthy, 2010; Tomporowski et al. 2011; Pontifex et al. 2013; Booth et al. 2014; Chaddock-Heyman et al., 2014; Gülünay & Savaş, 2021).

As can be seen, physical activity has significant effects on socialization, concentration, academic achievement, cognitive abilities and general body health, and on cardiovascular health for middle-aged and older people. When it is considered for young people, it is stated that it would be beneficial to create recreation programs consisting of activities in the style of exercise and dance by controlling the number of students in the classes and the gender differences (Albayrak, Ziyagil & Çekin, 2015). The fact that high school students who are in the developmental age are physically and mentally healthy individuals is closely related to how much they include physical activities in their lives (Baskonuş, 2020). The place of physical activities in human life, the necessity of human health and the need to move were considered important, and this research was designed based on this importance. The main purpose of the research is to determine the level of high school students' motivation to participate in physical activity. With this main purpose, high school students' motivation to participate in physical activity; gender, grade level, participation in sports activities, father and mother educational status variables were also examined.

2. Method

2.1. Model of the Research

In this study, survey method was used. The survey method is a scientific study method carried out to understand the unique features of a Universe (Johnson and Christensen, 2000).

2.2. Population and Sample

The study was carried out with 223 students who voluntarily participated in the research. Demographic information of the participants is given in Table 1.

Table 1. *Demographic Information*

Independent variables		f	%
Gender	Male	108	48.4
	Female	115	51.6
Grade level	9th grade	59	26.5
	10th grade	55	24.7

	11th grade	83	37.2
	12th grade	26	11.7
Status of participating in sporting events	Participate	150	67.3
	Do Not Participate	73	32.7
Father education level	Primary education	27	12.1
	Secondary education	104	46.6
	University	92	41.3
Mother education level	Primary education	21	9.4
	Secondary education	139	62.3
	University	63	28.3

In Table 1, 48.4% (n=108) of the study sample consisted of male students and 51.6% (n=115) of female students; 9th grade students made up 26.5% (n=59) and 12th grade students made up 11.7% (n=26) students; 67.3% (n=150) participated in sportive activities, 32.7% (n=73) did not; While the fathers of 46.6% (n=104) were university graduates, 12.1% (n=27) were primary school graduates; It was seen that 62.3% (n=139) mothers were secondary school graduates and 9.4% (n=21) mothers were primary school graduates.

3. Data Collection Tools

In the research, the personal information form (KBF) developed by the researcher was used to collect information about personal information, and the "Motivation Scale for Participation in Physical Activity" developed by Tekkurşun Demir and Cicioğlu (2018) was used to determine the motivation of students to participate in physical activities.

2.4. Analysis of the Data

Normality data was checked before starting the analysis process. The analysis process was shaped in line with the normality data. Normality data is in Table 2.

Table 2. Kolmogorov-Smirnov Analysis Results

	Kolmogorov-Smirnov		
	Statistics	df	p
General	,082	223	,001
Non-causality Factor	,086	223	,000
Environmental Causes Factor	,077	223	,003
Individual Causes Factor	,085	223	,001

As a result of the normality data, nonparametric tests (Mann Whitney U and Kruskal Wallis) were used in the study.

3. Findings

Table 3. Students' Motivation to Participate in Physical Activity

	\bar{X}	SD	Level

General	3.37	.609	I'm undecided
Non-causality Factor	3.50	.886	I agree
Environmental Causes Factor	3.33	.772	I'm undecided
Individual Causes Factor	3.50	.931	I agree

When Table 3 is examined, the motivation of the students ($\bar{X}=3.37$) is at the level of undecided. I agree in the sub-dimensions of individual causes ($\bar{X}=3.50$) and non-causality ($\bar{X}=3.50$), but undecided in the sub-dimension of environmental causes ($\bar{X}=3.33$).

Table 4. *Mann Whitney U Test Results for Gender*

	Gender	N	Mean Rank	Sum of Ranks	U	Z	p
General	Male	108	112,55	12155,50	6150,500	-,124	,902
	Female	115	111,48	12820,50			
Individual Causes Factor	Male	108	110,36	11918,50	6032,500	-,369	,712
	Female	115	113,54	13057,50			
Environmental Causes Factor	Male	108	116,00	12528,50	5777,500	-,901	,368
	Female	115	108,24	12447,50			
Non-causality Factor	Male	108	109,57	11834,00	5948,000	-,547	,585
	Female	115	114,28	13142,00			

The mean differences between the groups were not significant ($U=6150.500$; $p>.05$).

Table 5. *Kruskal Wallis Test Results for Grade Level*

	Grade Level	N	Mean Rank	Chi square	sd	p	Source of the Difference
General	¹ 9th Grade	59	119,15	22,586	3	,000*	2>1 3>2
	² 10th Grade	55	77,27				
	³ 11th Grade	83	129,14				
	⁴ 12th Grade	26	114,52				
Individual Causes Factor	¹ 9th Grade	59	116,63	24,987	3	,000*	2>1 4>2
	² 10th Grade	55	75,74				
	³ 11th Grade	83	130,63				
	⁴ 12th Grade	26	118,73				
Environmental Causes Factor	¹ 9th Grade	59	119,36	9,227	3	,026*	3>2
	² 10th Grade	55	89,15				
	³ 11th Grade	83	119,15				
	⁴ 12th Grade	26	120,81				

Non-causality Factor	¹ 9th Grade	59	111,64	2,672	3 ,445
	² 10th Grade	55	104,96		
	³ 11th Grade	83	120,15		
	⁴ 12th Grade	26	101,67		

Note. * p < 0.05.

The mean rank between the groups was statistically significant ($X^2=22,586$; $p<.05$) (Table 5). In terms of individual causes ($X^2=24,987$; $p<.05$) and environmental causes ($X^2=9,227$; $p<.05$), the mean rank between groups was statistically significant. As the grade level increases, it is seen that the motivation to participate in physical activity increases.

Table 6. Mann Whitney U Test Results on Participation in Sports Events

	Status of participating in sporting events	N	Mean Rank	Sum of Ranks	U	Z	p
General	Participate	150	121,69	18254,00	4021,000	-3,218	,001*
	Do Not Participate	73	92,08	6722,00			
Individual Causes Factor	Participate	150	121,70	18254,50	4020,500	-	,001*
	Do Not Participate	73	92,08	6721,50			
Environmental Causes Factor	Participate	150	120,84	18126,50	4148,500	-	,003*
	Do Not Participate	73	93,83	6849,50			
Non-causality Factor	Participate	150	117,66	17648,50	4626,500	-	,059
	Do Not Participate	73	100,38	7327,50			

Note. * p < 0.05.

It is seen that the mean rank ($\bar{X}=121.69$) of the students participating in the sports activities is higher than the mean rank ($\bar{X}=92.08$) of the students who do not participate in the sports activities (Table 6). This difference between the means was statistically significant ($U=4021,000$; $p<.05$). In the sub-dimensions of individual causes ($U=4020,500$; $p<.05$) and environmental causes ($U=4148,500$; $p<.05$) it is seen that the average rank of the students participating in sports activities is high.

Table 7. Kruskal Wallis Test Results Regarding Father's Educational Status

	Father Educational Status	N	Mean Rank	Chi square	s	p
General	Primary education	27	110,30	,152	2	927
	Secondary education	104	110,67			
	University	92	114,01			
Individual Causes Factor	Primary education	27	100,67	1,445	2	,486
	Secondary education	104	110,52			
	University	92	116,99			

Environmental Causes Factor	Primary education	27	108,39		
	Secondary education	104	113,07	,114	2 ,944
	University	92	111,85		
Non-causality Factor	Primary education	27	127,04		
	Secondary education	104	108,60	1,780	2 ,411
	University	92	111,43		

The mean rank between the groups was not statistically significant ($X^2=.152$; $p>.05$) (Table 7).

Table 8. *Kruskal Wallis Test Results on Maternal Educational Status*

	Mother Education	N	Mean Rank	Chi square	sd	p
General	Primary education	21	100,86			
	Secondary education	139	115,38	1,224	2	,542
	University	63	108,25			
Individual Causes Factor	Primary education	21	95,67			
	Secondary education	139	116,13	2,129	2	,345
	University	63	108,33			
Environmental Causes Factor	Primary education	21	104,10			
	Secondary education	139	116,13	1,531	2	,465
	University	63	105,52			
Non-causality Factor	Primary education	21	118,79			
	Secondary education	139	110,35	,355	2	,837
	University	63	113,38			

The mean rank between the groups was not statistically significant ($X^2=1,224$; $p>.05$) (Table 8).

4. Discussion and Conclusion

In the research, it was determined that the motivation of the students to participate in physical activity was generally at the level of undecided; in lower dimensions; It was concluded that I agree in the dimensions of individual causes and non causality, but I am undecided in the dimension of environmental causes. When the relevant literature is examined, it is seen that the studies (Green et al., 2005; Rasberry et al., 2011) that find the result of participating in physical activity are positive and at a high level. However, DeMarco and Sidney (2009) found in their study that students' participation in physical activities was at a low level.

Students' motivation to participate in physical activity did not differ significantly according to the gender variable. When the relevant literature is examined, studies that find that gender is not an effective variable on participation in physical activity are seen (Hazar et al., 2018; Çakır, 2019; Çiçek, 2019). However, there are also studies that find differences in favor of female students (Aycan & Yıldız, 2016) and male students (İlhan, 2018; Coşkun, 2019; Öztürk,

2019; Güler, 2021). In some studies, it has been concluded that women are less engaged in physical activity than men, and this has been interpreted as women's perceptions of their health status are lower (Egli, Bland, Melton and Czech, 2011). According to the findings of the research conducted by Türkeli and Namlı (2019), it was concluded that the physical activity motivation of the students was higher than the males in total with the individual, environmental and causal sub-dimensions of the physical activity motivation. In Ulukan's (2020) research, secondary school students' motivation to participate in physical activity was examined. As a result of the research; It was determined that there was a significant difference between the motivation of the students to be involved in physical activities and the gender variable in favor of male students. However, Yıldırım (2017) concluded in his study that female participants have higher motivation than males.

Students' motivation to participate in physical activities differs significantly according to their grade levels. As the grade level increases, it is seen that the motivation to participate in physical activity increases. In his study, Güler (2021) examined high school students' motivation to play digital games and their motivation to participate in physical activity, and concluded that class levels are an effective variable on their motivation to participate in physical activities. However, in the literature reviews, together with the studies that concluded that the class levels are an effective variable on the participation of students in physical activity (Jhonston et al., 2007; Doğaner & Balcı, 2017; Yörük, 2019; Çakır, 2019), it was concluded that the class levels were not a factor. studies are also seen (High & Bayar, 2015).

Students' motivation to participate in physical activity and their situation regarding their involvement in sportive activities differ significantly. The averages of the students who marked the data I participate in sports activities are higher than the averages of the students who marked the data I do not participate in sports activities. In Ulukan (2020)'s research, the motivation of students who do and do not do sports, to participate in physical activity, was examined, and it was concluded that the motivation of students who do sports is higher than those who do not do sports. However, unlike the result of the research, in the study of Güler (2021), no significant difference was found on the motivation to participate in physical activity according to the duration of participation in physical activity.

Students' motivation to participate in physical activity does not differ significantly according to their father's educational status. Different from the results of the research, Güler (2021) concluded that participation in physical activity, which is one of the sub-dimensions of motivation, individual reasons for participation in physical activity of the participants whose fathers are undergraduate graduates is significantly higher than the average score of those whose fathers are primary school graduates. It has been concluded that the mean scores of environmental reasons for participation in physical activity of the participants whose fathers are undergraduate graduates are significantly higher than the mean scores of those whose fathers are high school and primary school graduates. In addition, Hazar, Tekkurşun Demir, and Can (2018) concluded in their study that father education status is not an effective variable on students' motivation to participate in physical activity.

Students' motivation to participate in physical activity does not differ significantly according to their mother's educational status. Different from the results of the research, Güler (2021) concluded that the sub-dimensions of motivation to participate in physical activity, the mean scores of individual reasons for participation in physical activity of the participants whose mothers are undergraduate graduates are significantly higher than the mean scores of those whose mothers are primary school graduates and secondary school graduates. In addition, it was concluded that the mean scores of environmental reasons for participation in physical activity of the participants whose mothers were undergraduates were significantly higher than

the mean scores of those whose mothers were primary school graduates. However, Hazar, Tekkurşun Demir, and Can (2018) concluded in their study that the educational status of the mother is not an effective variable on the motivation of students to participate in physical activity.

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