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## EXAMINING THE MOTIVATIONS OF SPECIALLY GIFTED CHILDREN TO PARTICIPATE IN PHYSICAL ACTIVITY AND PLAY DIGITAL GAMES

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### ABSTRACT

The research aims to investigate the motivation of specially talented children to participate in physical activity and their motivation to play digital games in terms of various variables. A general screening method was used in the research. Data were obtained using the Digital Game Playing Motivation Scale and the Physical Activity Participation Motivation Scale. The participants of the research were 199 students in total. Non-parametric and Spearman correlation tests were applied to analyze the data. According to the gender variable, a statistically significant difference was detected between the causality sub-dimension and the success and revival sub-dimensions. A significant difference was found in all sub-dimensions of the variables of sports status and education level and the sub-dimensions of digital game-playing motivation, success and revitalization. A statistically significant, low-level, negative relationship was detected between the age variable of the students and the uncertainty sub-dimension of the desire to play. According to the correlation test results, there was a statistically low level of positive correlation between the environmental reasons sub-dimension and the success and revival sub-dimension and a statistically low level of positive correlation between the gratuitousness sub-dimension and the curiosity and social acceptance sub-dimension and the uncertainty in play desire sub-dimensions, and a statistically significant difference between the curiosity and social acceptance sub-dimension. A moderate positive significant relationship was found. As a result, it was observed that male students participated in more physical activities and wanted to play more digital games according to the gender variable. Students who do sports regularly have more motivation to participate in physical activity due to individual reasons, environmental reasons and no reason compared to those who do not do sports. According to the education level variable, primary school students are more likely to engage in physical activity in the individual reasons and environmental reasons sub-dimensions, and secondary school students are more likely to engage in physical activity in the no-reason sub-dimension. In the revival sub-dimension, it was observed that primary and secondary school students were more motivated to play digital games.

**Keywords:** Special talent, physical activity, digital game, motivation

## INTRODUCTION

Preferring a static life instead of an active life starting from childhood and adolescence, and attitudes and behaviors of not engaging in physical activity continue in later periods, leading to a lack of physical activity in people's lifestyles (Gülbetekin et al., 2021). The excessive amount of time spent on technological devices such as computers and mobile phones, has a negative effect on children and their families (Özkan et al., 2023). Considering that health problems have reached alarming levels with a sedentary life habit, the importance of physical activity has increased in terms of staying healthy (Burtscher, 2019; Burtscher, 2020; Nieman, 2019; Neiman & Wentz, 2019; Owen et al., 2010). A sedentary life without physical activity not only creates many sociological problems, such as depression and anxiety in individuals in adulthood, affecting their psychological and mental health and quality of life, but also negatively affects social, physical, and emotional developmental areas during childhood (Gülbetekin et al., 2021). Therefore it is essential to make room for activity areas where students with special needs can take place as active participants. And excessive hours should be determined for students with special needs in extracurricular practices (Özkan, 2023).

Physical activity performed during childhood not only provides skills that require being a competitor but also contributes to the protection and maintenance of health (Bailey & Martin, 1994; Carson et al., 2017; Lasselin et al., 2016; Rhodes et al., 2019). Children who have to spend more time at home due to their social life habits are more affected by sedentary life (Rajkumar, 2020; Savi -Çakar & Uzun, 2021). This sedentary life in home environments has caused children's daily life habits to change and increased use of technology (Küçük, 2020; Özer & Suna, 2020). It seems that people who have access to technology are constantly online; their screens are always on, and mobile phones and digital games are among the routines of their daily lives (Biricik, 2022, p. 109). In particular, digital games are among the activities that individuals of almost all ages use to evaluate the time spent at home, get away from stress, and have fun. In his study, Aksel (2020) stated that children between the ages of 10 and 19 are more interested in digital games, and the time they spend on games is constantly increasing (Aksel, 2020). However, it has been stated that children are more quickly and easily affected by digital games and that digital games affect children's cognitive, emotional, and social development both positively and negatively (Hazar & Hazar, 2017). Studies have also stated that digital games reduce stress, improve visual intelligence, increase self-confidence, contribute to course success (Gentile et al., 2011; Göldağ, 2018), and improve problem-solving skills by having fun in children (Şahin & Tuğrul, 2012; Tüzün, 2012). 2002). However, different studies have shown that playing digital games increases the tendency to violence, loneliness, and anxiety levels in children and causes behavioral and psychosocial problems, as well as inadequate self-care skills in children, irregular and inadequate sleep problems, bad eating habits, and musculoskeletal, circulatory and respiratory problems due to inactivity. has been stated (Kılıç, 2019; Öztürk et al., 2020; Yalçın & Erdoğan, 2016).

There are also incredibly talented individuals among the children who are affected positively or negatively by digital games. Specially talented individual: It is defined as an individual who performs at a high level

compared to his/her peers in intelligence, creativity, art, leadership capacity, motivation, or special academic fields (Ministry of National Education, 2013). As can be seen from the definition, understanding a group that has so many differences among itself and preparing and sustaining educational environments and adaptations appropriate to its characteristics is essential for every discipline in education. A specially talented individual has a dynamic structure as he/she manifests himself/herself in academic fields, arts, business, sports, liberal arts, and social fields. Their development should be supported with purposeful and systematic education (Sak & Sezerel, 2018). The use of technology support during their education has positive effects on these individuals. In addition, it has been stated that as a result of the high technological interests and attitudes of specially talented individuals, these students may have a higher habit of playing digital games (Bircan & Köksal, 2020; Periathiruvadi & Rinn, 2012; Sevgi Koçak, 2019).

Since the higher mental development levels of gifted individuals compared to their peers can also affect their emotional progress, it is essential to investigate their social-emotional progress along with their mental progress when researching these people (Kaya, Erdoğan, & Çağlayan, 2014; Clark, 2013). In addition, considering the psychologically healing effect of physical activity on individuals, examining the motivations of specially gifted children to play digital games and participate in physical activity can be important in terms of giving insight to both specially talented children and educators working with these children.

When we think of daily mobility as low-level physical activity, with the developing technology, The change in our lifestyle has led to the understanding that physical activity can only be done at certain times. Homework, exam preparations, and time spent at school, which are part of children's daily routines, have caused the child to abandon the active play approach in his free time to digital games and not to allocate enough time for physical activity (Usta, 2016; Yavuz, 2018). However, WHO, in its Physical Activity and Sedentary Behavior Guide, recommends physical activity for all age groups aged five and above, regardless of gender, cultural background, and socio-economic status, in order to protect and improve health. Especially children and adolescents (5-17 years old), including disabled groups, should do at least an average of 60 minutes of moderate or high-intensity physical activity, primarily aerobic, every day. In addition, it recommends doing vigorous aerobic physical activities, as well as muscle and bone strengthening activities, at least three days a week (WHO, 2020). Considering the principle of integrity of development, it can be said that the effects of physical activity on children's development and the necessity of it being a part of their lives are important in terms of protecting and maintaining health for this group, which is ahead of their peers in terms of development. While there are no studies on the motivation for participation in physical activity in specially talented children, there are a limited number of studies in our country on digital game addiction (Kılıç & Ateşgöz, 2018; Köroğlu, 2015; Üstünel, 2008). It is also essential in terms of providing information about gaming motivations and eliminating the deficiency.

Aimed to investigate the motivation of specially talented children to participate in physical activity and their motivation to play digital games in terms of various variables. For this purpose, answers were sought to the following research questions:

1. Is there a significant difference between the motivation of specially talented children to participate in physical activity and play digital games and the gender variable?
2. the motivation of specially gifted children to participate in physical activity and play digital games and the variable of sports playing status?
3. Is there a significant difference between the motivation of specially talented children to participate in physical activity and play digital games and the education level variable?
4. Is there a relationship between the age variable of students and their motivation levels for participation in physical activity and playing digital games?

## **METHOD**

### Research Model

was designed with the general survey model, which is one of the quantitative research methods. General screening models are studies that aim to collect data from a determined group in order to determine specific characteristics of a group (Büyükoztürk et al ., 2016). This study is an example of this model as it includes specially talented children receiving education at the science and arts center. In the first part of the survey form used in the study, a demographic information form was used, and in the second part, "Physical Activity Participation Motivation Scale and Digital Game Playing Motivation Scale" was used to determine the students' motivation levels for participation in physical activity and playing digital games.

### Population and Sample

The population of the research consists of a total of 255 students who received education at different levels in the 2020-2023 academic year at the Science and Art Center affiliated with the Muş and Bitlis provincial directorate of national education. The complete count sampling method was used as the sampling method in the research. The complete count sampling method is stated as a unique method that allows reaching the whole universe and allowing some activities of the universe to be examined intensively (Baştürk & Taştepe, 2013). The sample group of the study consisted of a total of 199 students (106 girls and 93 boys) based on voluntary participation. The data was sent to 255 students via Google form and the 199 data returned were analyzed. Before data was collected, the study was taken from Muş Alparslan University Document Date and Number: 06.11.2020-E.13014 Scientific Research and Publication Ethics. In addition, the parents of the participants were asked to fill out a parental consent form. Descriptive information about the participants is given in Table 1.

**Table 1.** Descriptive statistics of the demographic characteristics of students studying at the science and arts center

<b>Gender</b>	<b>N</b>	<b>%</b>	<b>Sports Status</b>	<b>N</b>	<b>%</b>
1. Girl	106	53.3	1. Yes	97	48.7
2 men	93	46.7	2. No	102	51.3
<i>Total</i>	<i>199</i>	<i>100.0</i>	<i>Total</i>	<i>199</i>	<i>100.0</i>
<b>Education Level</b>			<b>Age</b>		
1. Primary school	69	34.7	Average	11.20	
2. Secondary school	105	52.8	standard deviation	2.26	
3. High school	25	12.6	minimum	7	
<i>Total</i>	<i>199</i>	<i>100.0</i>	Maximum	17	

When we examine Table 1, according to the findings regarding the gender variable, the students studying at the science and arts center are 53.3 % female and 46.7% male. It appears to be. It was determined that 48.7 % of the students do sports, 51.3 % do not do sports, while 34.7 % are in primary school, 52.8 % are in secondary school, and 12.6 % are in high school. It is seen that the average age of the students is 11.20, and their ages are distributed between 7 and 17 years old.

#### Data Collection Tools

A personal information form created by the researchers (gender, sports status, education level, age) to determine the demographic characteristics of the students studying at the science and arts center, and the Physical Activity Participation Motivation Scale (developed by Demir and Cicioğlu (2018) to determine the students' motivation to participate in physical activity). FAKMO) Moreover, the Digital Game Playing Motivation Scale (DOOMÖ) developed by Demir and Hazar (2018) was used to determine students' motivation in playing digital games.

#### Physical activity participation motivation scale,

motivation to participate in physical activity. The validity and reliability of the scale were established by applying it to 308 high school students studying in Izmir in the 2016-2017 academic year. The result obtained from the exploratory factor analysis (EFA) consists of 16 items and three sub-dimensions: "Individual Reasons," "Environmental Reasons," and "Non-Cause." The scale's internal consistency Cronbach's Alpha values were between .82 and .89; Spearman-Brown split-half reliability coefficients were reported to vary between .76 and .89 (Demir & Cicioğlu, 2018).

#### Digital game-playing motivation scale,

It is a scale developed to determine sources of motivation to play digital games. The scale was applied to a total of 513 students who continued their education in the 2016-2017 academic year. As a result of exploratory factor analysis (EFA), the scale consists of 3 sub-dimensions: "Success and Revitalization," "Curiosity and Social Acceptance," "Uncertainty in Play Desire," and 19 items. The Cronbach Alpha reliability coefficient for the entire scale was  $\alpha=.70$  for the "Success and Revitalization" factor; For the "Curiosity and Social Acceptance" factor,

$\alpha=.87$ ; For the "Uncertainty in Game Desire" factor, it was reported that  $\alpha = .72$ , and test-retest results provide evidence of the consistency of the scale (Demir & Hazar, 2018).

Data analysis

To analyze the study data, initial mean, standard deviation, frequency/percentage, and regular distribution test (Kolmogorov-Smirnov Test and Shapiro-Wilk Test) statistics were applied. Looking at the average distribution test results, it was determined that the data did not show a normal distribution in terms of gender, sports status, education level, and age parameters. Therefore, in order to measure the assumptions of the study, the Mann-Whitney U Test was applied in pairwise comparisons, analysis of variance (Kruskal -Wallis H Test) was applied in multiple comparisons, and the correlation test (Spearman Correlation Test) was applied to determine the relationship between dependent and independent variables. After the Kruskal Wallis -H test, the Mann-Whitney U test was performed again to determine in which groups there was a significant difference. To prevent type I and type II errors that may arise from pairwise comparisons, the Bonferroni correction method was used, and the new significance value was determined as ( $p < 0.017$ ). In order to analyze the study data, the IBM SPSS 22.0 program was used.

**FINDINGS**

In this section, the difference analysis of the motivation to participate in physical activity and the motivation to play digital games regarding the variables of gender, sports status, and education level. and the correlation analysis for the motivation to participate in physical activity. and the motivation to play digital games by age are included.

**Table 2.** Students' comparison of physical activity participation and digital game-playing motivation levels according to gender variable

Dependent Variables	Gender	N	Rank avg.	It's time for the ball.	u	p
Individual Reasons	1. Girl	106	97.49	10333.50	4662,500	.509
	2 men	93	102.87	9566.50		
Environmental Causes	1. Girl	106	97.50	10334.50	4663,500	.511
	2 men	93	102.85	9565.50		
causelessness	1. Girl	106	92.13	9765.50	4094.500	<b>.039</b>
	2 men	93	<b>108.97</b>	1034.50		
Success and Revival	1. Girl	106	88.97	9430.50	3759.500	<b>.004</b>
	2 men	93	<b>112.58</b>	10469.50		
Curiosity and Social Acceptance	1. Girl	106	96.40	10218.00	4547,000	.345
	2 men	93	104.11	9682.00		
Uncertainty in Game Request	1. Girl	106	96.92	10273.50	4602.500	.419
	2 men	93	103.51	9626.50		

\* $P < 0.05$ ; N (199)

Students studying at the Science and Arts Center participate in physical activity and motivation to play digital games. As a result of the Mann-Whitney U test, which was conducted to test whether there is a significant difference in levels according to the gender variable, individual reasons ( $U=4662.500$ ,  $p > 0.05$ ), environmental

reasons (U=4663.500, p>0.05), curiosity and social acceptance. At the same time, no statistically significant difference could be detected between the sub-dimensions (U=4547.000, p>0.05) and uncertainty in the desire to play (U=4602.500, p>0.05) and the gender variable, reasonlessness (U=4094.500, p<0.05), success and revival. A statistically significant difference was detected between the sub-dimensions (U=3759.500, p<0.05) and the gender variable (See Table 2).

**Table 3.** Comparison of Students' Motivation Levels for Participating in Physical Activity and Playing Digital Games According to the Variable of Sporting Status

Dependent Variables	Doing sports	N	Rank avg.	It's time for the ball.	u	p
Individual Reasons	1. Yes	97	<b>124.22</b>	12049.50	2597,500	<b>.001</b>
	2. No	102	76.97	7850.50		
Environmental Causes	1. Yes	97	<b>114.22</b>	11079.00	3568,000	<b>.001</b>
	2. No	102	86.48	8821.00		
causelessness	1. Yes	97	<b>114.24</b>	11081.00	3566,000	<b>.001</b>
	2. No	102	86.46	8819.00		
Success and Revival	1. Yes	97	98.86	9599.50	4846.500	.804
	2. No	102	100.99	10300.50		
Curiosity and Social Acceptance	1. Yes	97	100.99	9796.00	4851,000	.813
	2. No	102	99.06	10104.00		
Uncertainty in Game Request	1. Yes	97	106.55	10335.50	4311.500	.117
	2. No	102	93.77	9564.50		

\*P<0.05; N (199)

Students studying at the Science and arts center participation in physical activity and motivation to play digital games As a result of the Mann- Whitney U test, which was performed to test whether there is a significant difference in the levels of sports activities according to the variable of sports status, individual reasons (U=2597.500, p<0.05), environmental reasons (U=3568.000, p<0.05) and While a statistically significant difference was found in the sub-dimensions of reasonlessness (U=3566.000, p<0.05) according to the sport status variable, success and revitalization (U=4846.500, p>0.05), curiosity and social acceptance (U=4851.300, p>0.05) and play. No statistically significant difference was detected in the uncertainty in desire (U=4311.500, p>0.05) sub-dimensions (See Table 3).

**Table 4.** Comparison of Students' Physical Activity Participation and Digital Game Play Motivation Levels According to Education Level Variable

Dependent Variables	Education Level	N	Rank avg.	sd.	χ <sup>2</sup>	p	(Ij)
Individual Reasons	1. Primary school	69	<b>108.04</b>	2	8,080	<b>.018</b>	<b>1-3</b>
	2. Secondary school	105	101.74				
	3. High school	25	70.50				

Environmental Causes	1. Primary school	69	<b>108.07</b>				
	2. Secondary school	105	100.70	2	6,177	<b>.046</b>	<b>1-3</b>
	3. High school	25	74.82				
causelessness	1. Primary school	69	97.69				
	2. Secondary school	105	<b>113.46</b>	2	24,976	<b>.001</b>	<b>1-3, 2-3</b>
	3. High school	25	49.86				
Success and Revival	1. Primary school	69	102.43				
	2. Secondary school	105	<b>104.96</b>	2	6,669	<b>.036</b>	<b>1-3, 2-3</b>
	3. High school	25	72.46				
Curiosity and Social Acceptance	1. Primary school	69	101.48				
	2. Secondary school	105	102.42	2	1,768	.413	
	3. High school	25	85.74				
Uncertainty in Game Request	1. Primary school	69	96.94				
	2. Secondary school	105	98.00	2	2,476	.290	
	3. High school	25	116.86				

\*P<0.05; \*\*P<0.017; N (199) (The significance level of 0.05 was divided by the number of Mann Whitney U tests performed (3) and the new significance level was determined as 0.017)

The Kruskal Wallis H test, which was conducted to test whether there is a significant difference in the motivation levels of participating in physical activity and playing digital games according to the education level variable of the students studying at the science and arts center, individual reasons according to the education level variable  $\chi^2$  (sd =2, n= 199) = 8.080, p<0.05), environmental causes  $\chi^2$  (sd =2, n=199) = 6.177, p<0.05), lack of cause  $\chi^2$  (sd =2, n=199) = 24.976, p<0.05) and success and revitalization  $\chi^2$  (sd =2, n=199) = 6.669, p<0.05) sub-dimensions, while curiosity and social acceptance  $\chi^2$  (sd =2, n=199) = 1.768, p>0.05) and No statistically significant difference was found in the sub-dimensions of uncertainty in game desire  $\chi^2$  (sd =2, n=199) = 2.476, p>0.05) (See Table 4).

**Table 5.** Correlation Test Results Between Students' Age Variable and Physical Activity Participation and Digital Game Playing Motivation Levels

Dependent Variables	Age	BN	MPN	N	B.C.	MSK
<b>BN</b>	-.072					
<b>MPN</b>	-.094	.459**				
<b>N</b>	-.027	.436**	.353**			
<b>B.C.</b>	-.041	.051	.182*	-.136		
<b>MSK</b>	-.031	.113	.302**	.142*	.603**	
<b>OİB</b>	.159*	.048	-.021	.175*	.one hundred	083

\*P<0.05; \*\*P<0.01; N (199) ( **BN** = Individual Causes, **CN** = Environmental Causes, **N** = Causelessness, **BC** = Success and Revival, **MSK** = Curiosity and Social Acceptance, **OİB** = Uncertainty in Play Desire)

Playing digital games with age variable As a result of the Spearman correlation test, which was conducted to test whether there is a significant relationship between motivation levels, a statistically low-level negative significant relationship was detected between the age variable of the students and the uncertainty in game desire (r= -.159; p<0.05) sub-dimension. Individual reasons (r= -.072; p>0.05), environmental reasons (r= -.094; p>0.05),

causelessness ( $r = -.027$ ;  $p > 0.05$ ), success and revival ( $r = -.041$ ;  $p > 0.05$ ) and curiosity and social acceptance ( $r = -.031$ ;  $p > 0.05$ ) sub-dimensions, no statistically significant relationship could be detected.

According to the correlation test results between participation in physical activity and digital game motivation levels, there was a statistically low level of positive correlation between the environmental reasons sub-dimension and the success and revitalization ( $r = .182$ ;  $p < 0.05$ ) sub-dimension and a statistically low positive correlation between the curiosity and social acceptance sub-dimension ( $r = .302$ ;  $p < 0.01$ ) with a statistically moderately positive direction, the gratuitousness sub-dimension and the curiosity and social acceptance sub-dimension ( $r = .142$ ;  $p < 0.05$ ) and uncertainty in the desire to play ( $r = .175$ ;  $p < 0.05$ ) sub-dimensions, a statistically low level positive significant relationship was found (See Table 5).

## **CONCLUSION and DISCUSSION**

The motivation of specially talented children to participate in physical activity and play digital games, and the results obtained from the analyses performed on the data are discussed.

Students studying at the Science and Art Center According to the gender variable, a significant difference was found in favor of male students in the physical activity participation scale, the reasonlessness sub-dimension, and the digital game playing motivation scale, success and revitalization sub-dimension. In this regard, male students have higher perceptions than female students in participating in physical activity for no reason and in playing digital games due to success and revitalization. There are studies in the literature that find significant differences in terms of gender variables, motivation to participate in physical activity, and motivation to play digital games (Balık, 2017; Bozkurt & Tamer, 2020; Candan, 2019; Demirel et al., 2019; Demir & Cicioğlu, 2019; Duran, 2020; Kudaş et al., 2005; Lakot, 2019; Nariç, 2019). In addition, it is stated that in studies conducted on male and female participants' motivation to participate in physical activity, there is no difference between the gender variable and the level of motivation to participate in physical activity (Demir & Cicioğlu, 2019; Hazar et al., 2017; Özkök, 2019). For this reason, it can be said that no generalization can be made in terms of gender variables motivation to participate in physical activity, and motivation to play digital games.

Another finding of our study is that students, while a statistically significant difference was detected in all sub-dimensions of physical activity participation motivation and digital game playing motivation, according to the sports status variable, no statistically significant difference was found in all sub-dimensions of digital game playing motivation. According to the sport status variable, motivation to participate in physical activity, individual and environmental reasons, and reasonlessness sub-dimensions, When the rank average values are examined, it is seen that the rank averages of students who do sports regularly are higher than the rank averages of students who do not do sports regularly. Students who do sports regularly have more motivation to participate in physical activity due to individual and environmental reasons and for no reason compared to those who do not do sports. Accordingly, it can be said that participants who do regular sports are aware of the psychological, social, and physical benefits of physical activity (Başar, 2018; Çelik & Şahin, 2013; Duman, 2020; Orhan, 2019), and therefore they are more willing to participate in physical activity. According to the variable of doing sports, motivation to

play digital games, and uncertainty sub-dimension in-game desire, When the rank average values are examined, it is seen that the rank average of students who do sports regularly is higher than the rank average of students who do not do sports regularly. It can be said that students who do sports regularly experience more uncertainty in their desire to play games than those who do not do sports. This shows that physical activity can be effective in distracting students from digital games. It can be said that the tendency of individuals who do sports to move has a negative impact on their interest in digital games. When the study conducted by Hazar et al. (2017) was examined, it was found that the average scores of students who did not do sports regularly were higher than those of students who did sports regularly. Orhan (2018) concluded in his study that increasing the level of physical activity reduces digital game addiction. In their study, Demir and Cicioğlu (2019) found that as the motivation to play digital games increases, the motivation to participate in physical activity decreases. These results support the findings obtained from the study.

In another finding of the study, the results regarding the students' motivation for participating in physical activity and playing digital games were compared in terms of the education level variable. While there was no significant difference in the sub-dimensions of motivation to play digital games, curiosity, social acceptance, and uncertainty in the desire to play, the motivation to participate in physical activity increased in all sub-dimensions. Significant differences were detected in the dimensions and sub-dimensions of digital game-playing motivation, success, and revival. The significant difference in the individual reasons and environmental reasons sub-dimensions is between the students educated at the primary school level and the students educated at the high school level, the significant difference between the motivation to participate in physical activity, the lack of reason sub-dimension and the motivation to play digital games, success and revival sub-dimensions between primary school and secondary school. It was determined that the difference between students receiving education at the high school level and students receiving education at the high school level. Level of education studied according to the variable; it was observed that primary school students were more physically active than high school students in the individual reasons and environmental reasons sub-dimensions, and middle school students were more physically active than high school students in the uncaused sub-dimension, and primary and secondary school students were more motivated to play digital games than high school students in the success and revitalization sub-dimensions. The reason for this situation may be that high school students have exam anxiety or that they attach more importance to friendship relations. Studies have also stated that friendship relationships have an impact on positive and negative behaviors in high school students (Erdem et al ., 2006; Tanrıverdi, 2012). In addition, it can be said that regular physical activity improves skills such as problem-solving and decision-making in children (Baki, 2019; Çetinkaya, 2019; Tuzcuoğlu, 2018;) and this may be important for the development of primary and secondary school students.

The correlation test results between the age variable of the students studying at the science and art center and the variables of participation in physical activity and digital game-playing motivation showed that only uncertainty in the desire to play between the age variable and the digital game-playing motivation scale was found. It shows that there is a low level of negative significant relationship between the sub-dimensions. This can be interpreted

as students' increasing age causes a decrease in their motivation to participate in physical activity due to individual reasons. Especially in high school, students have exams to prepare for with anxiety about the future, which also affects their motivation to participate in physical activity. It is also supported by studies that it is not a surprising result to move away from physical activity as age increases in the education system where success is evaluated through academic skills (Ünlü, 2010). However, it has been reported that regular physical activity has positive effects on academic skills in children (Bradley et al., 2013; Kim & So, 2012); however, as students' internet use decreases at the high school level, their academic success increases (Binali, 2015; Toraman, 2013).

Correlation test results between participation in physical activity and digital game motivation levels in the study, there was a low level of positive correlation between the environmental reasons sub-dimension and the success and revival sub-dimension, a moderate positive correlation between the curiosity and social acceptance sub-dimension, and a moderate positive correlation between the reasonlessness sub-dimension and curiosity. A low-level, positive, statistically significant relationship was found between the uncertainty sub-dimensions of social acceptance and play desire. No significant relationship was found between other sub-dimensions. We can interpret this situation as students' participation in physical activity increases due to environmental reasons such as the circle of friends and acceptance in society. It also causes an increase in their motivation to play digital games due to success and revitalization, curiosity, and social acceptance. Bozkurt and Tamer (2020), in their study titled "Level of Motivation to Participate in Physical Activity," found a positive, low-level significant difference in the environmental reasons sub-dimension, one of the sub-dimensions of secondary school students' motivation to participate in physical activity. This supports the findings obtained from the study.

As a result, exceptionally talented students' motivation to participate in physical activity is higher than their motivation to play digital games; students who do sports regularly have more motivation to participate in physical activity than those who do not due to individual reasons, environmental reasons, and no reason, primary school students have more motivation to participate in physical activity than high school students due to individual reasons, environmental reasons. Due to reasons and lack of reasons, secondary school students are more motivated to participate in physical activity than high school students due to lack of reasons; physical activity distracts students from playing digital games, and in playing digital games, It can be said that primary and secondary school students play more digital games in the success and revival sub-dimension than high school students. As the students' ages increase, their motivation to play digital games decreases due to uncertainty in their desire to play. In the developing world, although the use of digital applications in children's educational environments is a valuable tool, they also negatively affect children and prevent them from developing addictive behaviors. It can be said that measures in this direction can be taken, as well as instilling physical activity habits in children at an early age in order to raise healthy generations, preventing feelings of uncertainty in children in the future, and improving problem-solving and decision-making skills with regular physical activity.

This study contributes to gaining knowledge by investigating the motivation of specially talented children to participate in physical activity and their motivation to play digital games in terms of various variables; it also has limitations. The limitations of the study are limited to those who agreed to participate in the study in BİLSEMs in

Muş and Bitlis provinces. It is recommended to conduct the study with larger groups of students with the same characteristics in order to compare the findings of our study. Since the number of studies conducted in the field of sports science with specially talented children is limited, studies with this group are recommended in order to make it easier for physical education teachers working with these children to access scientific information.

### **SUGGESTIONS**

This study contributes to gaining knowledge by investigating the motivation of specially talented children to participate in physical activity and their motivation to play digital games in terms of various variables; it also has limitations. The limitations of the study are limited to those who agreed to participate in the study in BİLSEMs in Muş and Bitlis provinces. It is recommended to conduct the study with larger groups of students with the same characteristics in order to compare the findings of our study. Since the number of studies conducted in the field of sports science with specially talented children is limited, studies with this group are recommended in order to make it easier for physical education teachers working with these children to access scientific information.

### **ETHICAL TEXT**

"In this article, the journal writing rules, publication principles, research and publication ethics, and journal ethical rules were followed. The responsibility belongs to the author (s) for any violations that may arise regarding the article. " Ethics committee permission for the article was received by Muş Alparslan University / Publication Ethics Board with the decision numbered E.13014 dated 06.11.2020.

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