ÖZEL (ÜSTÜN) YETENEKLİ ÜNİVERSİTE ÖĞRENCİLERİNİN EGZERSİZ YAPMA DURUMLARIYLA FİZİKSEL BENLİK ALGILARININ İNCELENMESİ

EXAMINATION OF GIFTED AND TALENTED UNIVERSITY STUDENTS' EXERCISING SITUATIONS AND PHYSICAL SELF PERCEPTIONS

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Özel (Üstün) Yetenekli Üniversite Öğrencilerinin Egzersiz Yapma Durumlarıyla Fiziksel Benlik Algılarının İncelenmesi

ÖZ

Bu araştırma, özel (üstün) yetenekli üniversite öğrencilerinde egzersiz yapma ile fiziksel benlik algıları arasındaki ilişkiyi belirlemeyi, yaş ve cinsiyet değişkenleri açısından incelemeyi amaçlamaktadır. Çalışma grubunu ülkemizdeki çeşitli üniversitelerde öğrenim gören özel (üstün) yetenekli öğrenci oluşturmaktadır. Bu kapsamda 93 (46 erkek, 47 kadın) özel (üstün) yetenekli öğrenciye ulaşılmıştır. Bu çalışmada Fiziksel Benlik Ölçeği (FBÖ) kullanılmıştır. Veriler normal dağılım gösterdiği için ikili gruplarda bağımsız örneklem t-testi kullanılmıştır. Üçlü gruplarda tek yönlü Anova yapılmıştır. Araştırma bulgularında özel (üstün) yetenekli öğrencilerin cinsiyet değişkenine göre; düzenli egzersiz yapanların ölçeğin alt boyutları Fiziksel Kondisyon (FK) ve Fiziksel Kuvvet (FK2)'de erkekler lehine anlamlı farklılık bulunmuştur (p<.05). Özel (üstün) yetenekli üniversite öğrencilerinin egzersiz yapma durumlarına göre, ölçeğin tüm alt boyutlarında anlamlılık gözlenirken (p<.05) egzersiz yapanların ölçek ortalama puanlarının daha yüksek olduğu belirlenmiştir. Yaş düzeyi değişkeni açısından yapılan karşılaştırmada ölçek alt boyutlarıyla yaş düzeyi arasında anlamlı bir farklılık olmadığı tespit edilmiştir (p>.05). Sonuç olarak özel (üstün) yetenekli öğrencilerde düzenli egzersiz yapan erkeklerin fiziksel benlik algıları kadınlardan yüksek bulunmuştur.

Anahtar Kelimeler: Özel (üstün) yetenek, egzersiz, fiziksel benlik algısı

Examination of Special (Gifted) Talented University Students' Exercising Situations and Physical Self Perceptions

ABSTRACT

This study aims to determine the relationship between their exercise status and physical self-perceptions in gifted university students and to examine it in terms of age and gender variables. The study group consists of special (gifted) talented students studying at various universities in Turkey. In this context, 93 (46 male, 47 female) special (gifted) talented students were reached. Physical Self Scale (PSS) was used in the study. Since the data showed a normal distribution, independent samples t-test was used in paired groups. One-way Anova was performed in groups of three. According to the gender variable of the special (gifted) students; there was a significant difference in favor of men in the sub-dimensions Physical Condition (PC) and Physical Strength (PS) of those who exercise regularly (p<.05). While significance (p<.05) was observed in all sub-dimensions of the scale according to the exercise status of special (gifted) university students, it was determined that the average scores of the exercisers were higher. In the comparison made in terms of the age level variable, it was determined that there was no significant difference between the sub-dimensions of the scale and the age level (p>.05). As a result, the physical self-perceptions of the special (gifted) talented male students who exercise regularly were found to be higher than that of the female students.

Key Words: Special (gifted) talented, exercise, physical self perception

INTRODUCTION

The human body shows a continuous progress in terms of physical, emotional, social and mental aspects since before birth[1] . Special (gifted) talents progress gradually from one developmental period to the next, with their individual pace different from their peers in this process[2] . Although the terms "gifted", "talented", and "gifted/talented" are sometimes used interchangeably to describe ambiguous or undefined groups in English, they are commonly used for the "mentally gifted". For special (gifted) talents, definitions such as brilliant, distinguished, expert, genius, precocious, ingenious, dedicated, conscientious, hardworking, persistent and talented are also used related to their superior performance[3]. Special (gifted) talent can sometimes be difficult to recognize in children as in adults, and the performance that results in this label can sometimes differ in nature between childhood and adulthood[4].

Special (gifted) talents are those who score at least two standard deviations above the mean on standardized intelligence tests. They are expected to score 130 IQ or higher on intelligence tests. They may also score at least two grades above their peers on achievement tests, particularly in math and reading. The concept of "talent" in English is widely used for outstanding performance in fields such as sports, drama, dance, leadership, music and visual arts[3].

All gifted learners have three nested sets of characteristics. These are above-average ability, commitment to task, and creativity[5]. Special (gifted) talents are known to differ from their peers in areas such as interest, talent, creativity, motivation, and task responsibility[6] . It is accepted that special (gifted) talents have high capacity and skills in various fields such as general and special academic fields, creativity, leadership and motivation. Special (gifted) talents may also demonstrate exceptional competence in performance areas such as language, mathematics, painting, music, performing arts, dance and sports. Special (gifted) talents show extraordinary proficiency in their structured field of activity or in some sensory-motor skills (mathematics, music, painting, dance, sports)[7] .

With the Turkish Ministry of National Education, Talented Individuals Strategy and Implementation Plan 2013-2017, the definition of "Special Talent" was started to be used for the first time officially and it has been widely used today[8]. In this context, learning faster than their peers, being ahead in creativity, artistic and leadership capacity, having special academic abilities, understanding abstract ideas, liking to act independently in areas of interest, and performing at a high level can be included among the characteristics of gifted individuals[9]. Special (gifted) talents need comprehensive educational opportunities and services that cannot be provided by normal programs[10]. An educationally differentiated, enriched and accelerated program is required in areas where they show different developmental characteristics[11]. Special (gifted) talented people face more emotional and psychological problems than their peers[12] [13]. Self-esteem is among these features[14]. According to Oğurlu and Yaman, (2010)[15] gifted people prefer to choose different ways to adapt more easily in environments where they are not accepted. In addition, they may show a tendency to isolate themselves from the group, to try to attract attention, to behave in order to be accepted or to try to look like everyone else.

In order to develop self-perception and motivation in gifted students, it is necessary to work on tasks that have personal meaning and purpose for students, to create a healthy learning environment, to make choices, to think at a higher level, to develop problem solving and decision-making skills[16]. These children with high mental skills face the problem of self-adaptation compared to their peers[17]. Despite all thesecharacteristics of special (gifted) talented people, they have a very high chance of achieving their goals thanks to effort, practice or psycho-social support.

The self is the subjective side of the individual's personality and is the image that the person designs about himself. It is a person's thoughts, perceptions, self-knowledge and evaluation of his own personality. Self-perception expresses how we see ourselves[18]. High self-esteem and self-confidence can be seen in individuals with high self-perception. They are more successful than their peers in establishing interpersonal relationships and interaction. They have strong features in using social processes better, getting used to new situations and adapting to processes. They may be more successful in social relationships and making new friends. Individuals with a high sense of self also have the ability to be more adaptable and to meet events and facts more cautiously[19].

Physical self-perception, on the other hand, is regarded as an important part of self- confidence and general self-perception, and the most important dimension of the multifaceted and hierarchical structure of self-perception that is affected by exercise and participation in sports[20]. Physical self-perception includes the individual's perception and evaluation of himself/herself in terms of psycho-motor aspects and these characteristics. It can be said that the person's coordination and sports ability are among the psycho-motor features, and the physical fitness features include the state of self-perception and evaluation such as strength, endurance and flexibility. Measurement tools such as the Physical Self-Perception Profile and the Physical Self- DescriptionQuestionnaire are used to measure the physical self-concept. In addition, Rudasill and Callahan, (2008)[21] showed that Self-Perception Profiles for Children and Adolescents SPPC and SPPA scores are reliable for use in studies with gifted populations. Among the factors affecting the formation of self-concept can be listed as family, school life, work life, circle of friends. The individual who encounters many difficulties in school life is affected positively or negatively by the approaches of his friends and teachers. Relationships between peers are also effective in the development of an individual's self-perception. A person's self-perception can also be affected by behaviors such as being acceptance, interest, support and rejection among his peers. The more balanced a person's self-perception is in accepting his or her competencies and inadequacies, the more realistic the self-perception can be. While the closeness of the self-perception to reality enables the person to develop more adaptive behaviors, the unrealistic self-perception may lead to the emergence of maladaptive behaviors. These maladaptive behaviors may appear in the form of rigid attitude, inflexibility and aggression[22]. Special (gifted) talented people may encounter problems related to self-confidence, self-perception, work discipline and success when appropriate conditions are not provided[23]. In cases where special (gifted) talents feel helpless against the events around them due to their hypersensitivity and high awareness, their self-perceptions may be negatively affected[11].

Exercise is body movements performed in a certain area and within the framework of a plan. It is regular, planned and repetitive physical activities aimed at maintaining or improving one or more components of one's physical fitness[24]. People who have sedentary lifestyle experience depression, stress, nervous system diseases, cardiovascular problems, respiratory diseases, physical and psychological problems[25]. Regular physical activity of the person causes changes in self-perception as it will also affect his own insight. It has been determined that those who do regular exercise, physical activity and sports develop a positive self-perception[26][27]. It is known that sense of self and healthy body increase in people who exercise regularly It is also known that those who do regular physical activity have higher body image satisfaction levels. According to Aşçı, (2004)[28] physical self-perception, which is an important dimension of self-perception, is directly related to the individual's quality of life, as well as to mental fitness, and there are many reasons for this change, such as physical change, exercise environment, and communication with other individuals. It is known that researches on special (gifted) talents have been conducted at different education levels from pre-school to high school and on various variables. When the national literature is examined, no research has been found on the physical self-perception of special (gifted) university students. For this reason, it was aimed to investigate the exercise status and physical self-perceptions of the special (gifted) talented students who were educated at the Science and Art Centers (SAC) affiliated to the Ministry of National Education in terms of age and gender variables.

MATERIALS AND METHODS

In this section, information is given about the study group of the research, the data collection tools and content used, how the data was collected, and the statistical techniques applied during the analysis phase.

Research Model

In this study, survey model, which is one of the quantitative research methods, was used. The survey model aims to collect data to identify certain characteristics of a group. According to Karasar, (2008)[29] survey models are research approaches that aim to describe a past or present situation as it is. Permission was obtained in accordance with the decision numbered 4 of the meeting numbered 1 on 15/01/2021 in the Ethics Committee of Ankara University.

Study Group (Population-Sample)

The study group consists of university students who were defined as gifted and talented and graduated after receiving education in Science and Art Centers. The study group of the research consists of 93 (46 male and 47 female) special (gifted) talented students who were selected through random sampling, studying at various universities in Turkey in the 2020-2021 academic year and educated at the Science and Art Center (SAC). Participation in the research is on a voluntary basis and a voluntary consent form was sent to the participants in the digital environment.

Table 1. Gender, regular exercise/non-exercise status and age distribution of the participants

		N	%
Gender	Male	46	49.5 %
	Female	47	50.5 %
Regular Exercise	Exerciser	34	36.6 %
	Non-exercisers	59	63.4 %
Age	18	29	31,1%
	19	17	18,2%
	20	20	21.5%
	21	3	3,2%
	22	24	25.8%

According to Table 1, it is seen that the study group has a balanced distribution according to gender. While 36.6% (n=34) exercise regularly, 63.4% (n=59) do not exercise regularly.

Data Collection Tools
In order to collect data in the research, "Physical Self Scale (PSS)" and "Personal Information Form" developed by the researcher were used.

Physical Self Scale (PSS)
In the study, the Physical Self Inventory (PSI) developed by Ninot et al. and the Physical Self Inventory (PSI) which was adapted into Turkish by Çağlar et al. (2017)[30] were used. It was found that the scale consisted of six factors and they were similar to the factors in the original scale. The 3rd item of the original scale was excluded in the adaptation study due to its low factor loading and explanatory coefficient. The CFA results of the scale showed that the obtained fit index values were sufficient. The Cronbach alpha internal consistency coefficients of the Turkish form of the Physical Self Scale sub-dimensions ranged from .55 (Body attractiveness) to .89 (Sport competence). An application was made to the Ankara University Ethics Committee in order to conduct the research. In accordance with the decision of Ankara University Ethics Committee dated 15/01/2021 and numbered 01/04, it was decided that the research was ethically appropriate.

Personal Information Form
Personal Information Form was sent to the participants electronically. In the form, the participants were asked questions about their gender, age and whether they exercised regularly.

Analysis of Data
In order to provide descriptive information about the participants in the study group, the data were evaluated in the SPSS 22 statistical program. Descriptive statistics were used in the evaluation. The normal distribution of the data was checked with the kurtosis and skewness coefficients (range of +1.5 to -1.5). Parametric analyzes were used due to the normal distribution of the data. In order to show the difference between the variables, t test and ANOVA were performed. The margin of error of the study was accepted as $p < .05$.

FINDINGS

Table 2. Normality distribution table

	GSC	PSW	PC	SC	BA	PS
N	93	93	93	93	93	93
St. Error Mean	0.393	0.570	0.459	0.548	0.261	0.369
Standard Error	3.79	5.50	4.43	5.28	2.51	3.56
Minimum	9	8	6	4	4	3
Maximum	29	30	24	24	18	18
Skewness	-0.919	-0.252	0.0333	0.0869	-0.721	0.0947
St. Error Skewness	0.250	0.250	0.250	0.250	0.250	0.250
Kurtosis	0.854	-0.746	-0.750	-0.764	1.31	-0.711
St. Error Kurtosis	0.495	0.495	0.495	0.495	0.495	0.495

*General self-concept (GSC), Physical self-worth (PSW), Physical condition (PC), Sport competence (SC), Body attractiveness (BA), Physical strength (PS).

The normality assumption values of the data regarding the physical self-perception scores (table 2) are given. Accordingly, it can be said that the data show a normal distribution.

Table 3. Comparison of physical self scale dimensions according to exercise status

Sub-Dimensions	Exercise	N	Mean	Sd	t	p
GSC	Yes	34	23.6176	.52055	2.859	.005
	No	59	21.3729	.51449		
PSW	Yes	34	21.9706	.79041	3.338	.001
	No	59	18.2203	.72044		
PC	Yes	34	17.5000	.66388	5.446	.000
	No	59	12.9661	.50304		
SC	Yes	34	14.9706	.88912	3.021	.003
	No	59	11.6780	.64979		
BA	Yes	34	14.2647	.37836	2.328	.022
	No	59	13.0339	.33670		
PS	Yes	34	11.9118	.59013	3.379	.001
	No	59	9.4576	.43403		

*(p<.05)

In the comparison of special (gifted) talented university students according to their physical self-scale sub-dimensions according to their exercise status (table 3), in all sub-dimensions of the physical self-scale according to the exercise status of special (gifted) university students General self-concept (GSC) {t=2.859; p<.005}, Physical self-worth (PSW) {t=3.338; p<.001}, Physical condition (PC) {t=5.446; p<.000}, Sport competence (SC) {t=3.021; p<.003}, Body attractiveness (BA) {t=2.328;p<.022}, Physical strength (PS) {t=3.379;p<.001} were observed to be significant, it was determined that the mean scores of the exercisers were higher.

Table 4. Comparison of physical self-scale sub-dimensions by gender

Sub-Dimensions	Gender	N	x̄	Sd	t	p
GSC	Male	46	22.1957	.58369	.005	.996
	Female	47	22.1915	.53260		
PSW	Male	46	20.3696	.79513	1.357	.178
	Female	47	18.8298	.80947		
PC	Male	46	15.5435	.70997	2.015	.047
	Female	47	13.7234	.56223		
SC	Male	46	13.8478	.80155	1.765	.081
	Female	47	11.9362	.72958		
BA	Male	46	13.0217	.36974	-1.774	.079
	Female	47	13.9362	.35911		
PS	Male	46	11.0870	.49522	1.994	.049
	Female	47	9.6383	.53067		

*(p<.05)

In the comparison of Physical Self scores of special (gifted) university students doing exercises according to the gender variable (Table 4), there are significant differences in favor of men in the sub-dimensions Physical Condition (PC) {t=2.015;p<.047} and Physical Strength (PS) {t=1.994;p<.049}.The mean of male was found to be higher than the mean of females. It was observed that there was no significant difference in the mean scores of the other sub-dimensions of the scale in terms of the gender variable (p>.05).

Table 5. Comparison of physical self-scale sub-dimensions by age level

Sub-dimensions	Source of Variation	Sum of Squares	Sd	Mean of Squares	F	p
GSC	Intergroup	16.568	4	4.142	.280	.890
	Ingroup	1301.948	88	14.795		
	Total	1318.516	92			
PSW	Intergroup	29.536	4	7.384	.236	.917
	Ingroup	2750.937	88	31.261		
	Total	2780.473	92			
PC	Intergroup	49.172	4	12.293	.617	.652
	Ingroup	1754.656	88	19.939		
	Total	1803.828	92			
SC	Intergroup	33.584	4	8.396	.292	.883
	Ingroup	2532.115	88	28.774		
	Total	2565.699	92			
BA	Intergroup	40.378	4	10.095	1.642	.171
	Ingroup	540.847	88	6.146		
	Total	581.226	92			
PS	Intergroup	51.799	4	12.950	1.023	.400
	Ingroup	1113.491	88	12.653		
	Total	116.290	92			

*(p<.05)

When the comparison was made according to the age variable (table 5), it was determined that there was no significant difference (p>.05).

DISCUSSION

When the difference between the exercise status of the gifted and talented people in the study group and the physical self-scale sub-dimensions was examined, it was observed that there was a significant difference in favor of those who regularly exercise in all sub-dimensions (p<.05). Previous studies examining the relationship between exercise and physical self-perception yielded similar results to the findings of this study. Pehlivan, (2010)[31] found that those who actively participate in sports have higher attitude scores than those who do not. Physical self-perceptions of those who actively participate in sports were found to be higher than those who do not. While a significant increase occurred in the subscales of sports ability and appearance as the program applied to the group progressed, a decrease was observed in the subscales of body fat and general physical competence. Makar, (2016)[32] found a positive relationship between social skills obtained from men and women, and physical self-perception and physical activity values. Yaman et al. (2008)[33] found that the physical self-perception levels of table tennis players were higher than those of other branch athletes. In the study of Köksal et al.(2006)[34], a significant difference was found in favor of those who applied the program when the physical self-perception was examined in the pretest- posttest score results after the program. According to Roh, (2018)[35] the participation of female university students in pilates classes seems to be effective on their physical self-perceptions. The physical self-perceptions of female university students attending Pilates classes seem to be effective on their psychological health as well. According to the study, there is a causal relationship between female university students' participation in pilates classes and their health status, psychological health and physical self-perception. McIntyre et al. (2014)[36] found a significant difference in perceived physical condition, attractive body, and physical condition between strength subfield scores in the pre-test and post-test. Accordingly, exercise intervention has a positive effect on physical self-perceptions, especially in men. In her study, Aşçı, (2004)[11] found that physical self-perception was affected by gender and physical activity level, and also revealed that boys had a more positive physical self-perception than girls and those who were physically active than those with low activity levels.

Considering the results of the physical self-scale sub-dimensions of the special (gifted) talented people in the study group according to gender, a significant difference was found in favor of men in the sub-dimensions of physical condition (PC) and physical strength (PS) (p<.05). This result is similar to the results of many studies that found significant results in favor of men who exercise. Hagger et al. (2005)[37] found that physical self-perception scores were higher in boys and in the seventh grade. According to Blanco et al. (2016)[38], men scored higher in physical ability, physical fitness, physical attractiveness, power, general physical self-concept and general self- concept sub-dimensions compared to women. Ildız et al.(2015)[39] found that male participants had better physical self-perceptions, body compositions and physical activity levels than female participants. Inchley et al. (2011)[40] stated that girls have lower levels of perceived competence, self-esteem, and physical self-worth than boys. Çoknaz et al. (2019)[41] found in their study that men have higher

physical self- perception scores than women. In the study conducted by Metin and Kangal, (2012)[42], when the differences between the mean scores of general self-concept according to gender were examined, the difference between the mean scores of the sub-factors of happiness, popularity, behavior, harmony and conformity, physical appearance, mental and school status was found to be significant in favor of men. According to Hersch et al. (1997)[43], while gender had a significant effect, age did not. Men scored significantly higher on general and physical self-concepts, while women scored higher on social self-concept. In her study, Viira, (2011)[44] revealed that in longitudinal studies, boys' perceptions of physical activity are higher in the areas of status, sport, body, strength, physical self-worth, and general self-worth compared to girls. For girls, body and conditioning areas emerged as important. Turan et al. (2019)[45] found problems with students' body posture in their study, and they concluded that gender plays a role in posture and self-perception. Baceviciene et al. (2019)[46] for women, age and BMI; lower physical activity and self-perceived inadequate physical activity, perceived physical fitness, and not participating in sports were associated with more somatic and psychological complaints.

According to the results of the research, when the results of the special (gifted) talents in the study group are examined according to the physical self-scale sub-dimensions, significant results were found in favor of those who exercise regularly in all of the sub- dimensions of the scale; General self-concept (GSC), Physical self-worth (PSW), Physical condition (PC), Sport competence (SC), Body attractiveness (BA), Physical strength (PS) ($p<.05$). Accordingly, it can be said that exercising affects the physical self-perception positively. According to gender, physical self-perceptions of those who exercise regularly were found to be significant in favor of men in the sub-dimensions of Physical condition (PC) and Physical strength (PS) ($p<.05$). According to the results of this study, it can be said that men have higher average scores in only two sub- dimensions of the physical self-scale than women, while there is no significant difference between genders in other sub-dimensions. According to the results of the study, it was found that there was no significant difference between the sub-dimensions of the scale among the age groups of the gifted ($p<.05$). In this direction, the study can be repeated in different age groups.

The selection of the study group can be formed more inclusively in order to obtain generalizable information about all special (gifted) talents. Other studies can be carried out in which special (gifted) talent and normal population can be compared. The limitations of this study are the study group and measurement tool. Further studies can be planned by using other variables that may affect physical self-perception of special (gifted) talented individuals.

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