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## Examination of The Relationship between Physical Activity Level and Social Skills Level of Individuals Diagnosed with Special Learning Disability\*

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## **Abstract**

The aim of this study is to examine the relationship between physical activity level and social skill level of individuals diagnosed with special learning disabilities. The research is descriptive by nature, one of the quantitative research models (screening). A total of 210 (100 female, 110 male) individuals diagnosed with Special Learning Disability [SLD] participated in the study. The 'International Physical Activity Questionnaire (Short)' was used to determine the physical activity level of individuals, and the 'Social Skills Scale for Children' was used to determine the social skill level. The data of the research were analyzed with the SPSS 25 package program. As a result of the normality analysis, it was determined that the data were normally distributed. For this reason, statistical analyzes were made with the Independent Sample t-test and One-Way Analysis of Variance, which are parametric tests. Pearson correlation analysis was performed to determine the relationship between the groups. The significance value was determined as  $p < .05$ . No significant difference was found between the social skills of individuals according to gender, and there was no significant difference between the physical activity levels of individuals according to gender ( $p > .05$ ). A positive and significant relationship was found between individuals' physical activity level and social skill level ( $r = .367$ ,  $p < .001$ ). According to the results of the study, as the level of physical activity increments individuals with SLD, the level of social skills also increases. These individuals should be encouraged to participate in physical activities such as exercise, games and sports in order to increase their social skill levels.

**Keywords:** Learning disability, physical activity, social skills.

## **Introduction**

More than an estimated 1 billion (15%) of the world's population suffer from some form of disability and this number increases day by day. Studies show that the most common group among disability groups is individuals with special learning difficulties known as late and difficult learning (World Health Organization [WHO], 2021). According to DSM-V data, the rate of SLD in school-aged individuals is between 5% and 15%, while this rate is 4% in adults (Koroğlu, 2014).

According to the latest statistics, the population of our country is 83.614.362. The child population is 22,750,657 (27.2%) (Turkish Statistical Institute [TurkStat], 2020). According to the Disability Survey of Turkey (2002), the disability rate in Turkey is 12.3. Learning difficulties constitute 0.48 of these rates (TurkStat, 2002). According to the published Turkey Health Survey report (2020), individuals between the ages of 15-75 who have difficulty in learning 3.4% in 2012, 6.7% in 2014, 6.7% in 2016 and 5.4% in 2019. It is seen that the rate of individuals who have difficulty in learning among children at the age of 12 is 1.1% in 2019. (TurkStat, 2020). As can be seen, the rate of individuals diagnosed with SLD in the total population has tended to increase in recent years.

Having a learning disability with normal or above-normal intelligence capacity, no mental illness, and no problems in using brain functions and affective skills; It refers to the situation of individuals who have inadequacy in communication, reading and writing skills, cognitive, and mathematical operations and turning them into skills (Korkmazlar, 1999). Individuals with SLD also have poor social perception and interactions, and poor self-management skills (Hammill, 1990). Apart from these reasons, learning disabilities seen in

individuals with physical, mental, auditory, and visual disabilities, experiencing various emotional disorders, and socioeconomically disadvantaged individuals are not included in the scope of learning disabilities (Individuals with Disabilities Education Improvement Act [IDEA], 2004).

In addition to increasing the resistance of individuals to diseases, keeping their body weights at a normal level, and helping to prevent various diseases, physical activities also improve the mental health, quality of life and living standards of individuals (Arslandoğan et al., 2021; Kurtoğlu et al., 2022). It is seen that regular physical activity contributes to the psychological development of individuals, increases the quality of life, and has positive effects on stress and social variables (Kurtoğlu et al., 2022; Reynolds et al., 1990).

The development of physical activity and sportive activities, which are a part of education and training activities, necessitated further studies on the physical, mental, and social development of individuals with special needs. Physical activity and sportive activities contribute to the physical, emotional, cognitive, and social development of individuals and positively affect individuals in terms of their integration into society (Kurtoğlu et al., 2023). The initial studies conducted with individuals diagnosed with ASD focused on their physical performance, reporting frequent motor impairments and low physical performance (Bluechartd & Shephard, 1996; Demirci & Toptaş-Demirci, 2016). Subsequent research has focused on the effects of exercise interventions on physical fitness parameters in these individuals and has demonstrated the effectiveness of exercise interventions (Yılmaz et al., 2017). No other research has been found that examines the relationship between physical activity levels and social skills in these individuals.

It is extremely important to facilitate the social adaptation of individuals with learning disabilities, to remind them that they are a part of social life, and to carry out studies in this direction. This study aims to examine the relationship between the level of physical activity and social skill levels of individuals with SLD. According to the results of this study, experts will have the opportunity to organize the educational environment and educational process of these individuals. Families will have more information about their children's development and adaptation to social life. Healthy steps can be taken towards the development of the individual on the axis of family, individual, and school. It has been observed that there are few studies (Bluechartd and Shephard, 1996; Demirci and Toptaş-Demirci, 2016; Yılmaz et al., 2017) in the physical learning literature on participants who have special learning disability with this OGG, so it is thought that the results of our study will fill a gap in the literature. More than an estimated 1 billion (15%) of the world's population suffer from some form of disability and this number is increasing day by day. Studies show that the most common group among disability groups is individuals with special learning difficulties known as late and difficult learning (WHO, 2021). According to DSM – V data, the rate of SLD in school-aged individuals is between 5% and 15%, while this rate is 4% in adults (Köroğlu, 2014).

## **Method**

### **Research Model**

The research is descriptive, one of the quantitative research models (Akarsu, 2019). Descriptive research comprises studies carried out in large groups to receive opinions and observe the attitudes of individuals in such groups concerning a fact or event, as well as describing these facts and events (Karakaya, 2012). The purpose of descriptive studies is to describe individuals, events, or conditions by studying them as they are in nature (Houser, 2008). In this type of research, the researcher does not manipulate any of the variables but rather only describes the sample and/or the variables (Stangor & Wallings, 2014).

### **Participants**

The research is descriptive, one of the quantitative research models (Akarsu, 2019). Participants in the study were determined by simple random sampling method. The participants included in the study consist of individuals diagnosed with Specific Learning Disability who have mild symptoms and normal or near-normal intelligence scores (Deniz et al., 2009). The individuals participating in the study were evaluated in terms of medical and educational aspects and were diagnosed with SLD. The medical diagnosis was made by the Training and Research Hospitals, and the educational diagnosis was made by the Sivas Guidance and Research Center [RAM] after the necessary evaluations were completed. The population of the research consists of individuals with a diagnosis of SLD who are educated in secondary education institutions in Sivas. Among these individuals, those with any diagnosis other than SLD were not included in the study. G Power 3.1 software was used to determine the research sample size (Cohen, 1992). In the power analysis, Type I error ( $\alpha=.05$ ), (power= $1-\beta$ ) .80 effect size 2.2, it was determined that at least 190 participants should participate in the study. In this context, a total of 210 participants, 100 female (Age;  $15.88\pm 1.328$ ), and 110 male (Age;  $15.67\pm 1.539$ ) were included in this study.

### **Data Collection**

Necessary information about the research was given to the individuals participating in the study. They were asked to read the survey questions carefully. It was stated that the research was based on volunteerism. During the application, the necessary feedbacks were given to the questions from the individuals. An 8 item Personal Information Form was prepared to determine the demographic characteristics of the individuals participating in the research. In this form, individuals were asked about their age, height, weight, gender, which grade they were and where they lived (city center, district center, village).

### ***International Physical Activity Questionnaire (Short Form) (IPAQ)***

The IPAQ is a questionnaire used in determining the level of physical activity, the validity and reliability of which was made by Öztürk. This scale is used 15-65 age for individuals. In this study, it was used to determine the physical activity level of individuals with SLD (Öztürk, 2005). The participants were asked to think back on the previous week's activities. With a survey consisting of 7 questions in total, the number of days and duration of physical activity in the previous week was determined and the energy which is consumed by

individuals in a week was calculated. The weekly required energy is calculated by calculating the Metabolic Equation (MET-min/week) score. This calculation;

$$\text{MET-min/week} = \text{Standard Value} \times \text{Number of Days of Activity} \times \text{Duration (min)}$$

After these scores are calculated, the classification is as follows (Savcı et al., 2006).

- Inactive Category: <600 MET-min/week
- Minimally Active: 600-3000 MET min/week
- Very Active: >3000 MET min/week

Individuals with MET min/week scores in the inactive category were classified as low FA, minimally active individuals as moderate FA, and highly active individuals as high FA.

### ***Social Skills Scale for Children***

The "Social Skills Scale" was developed by Yurdakavuştu (2012) and was used in this study to measure the social skill levels of individuals with SLD. The fact that the items in the scale were short, clear, and understandable provided convenience at the point of application in individuals with SLD. The scale has a total of 20 items. It is prepared as a 4-point Likert scale. Scoring the answers given to the scale; always: 4 points, often: 3 points, occasionally: 2 points, and never: 1 point. Accordingly, a minimum of 20 points and a maximum of 80 points can be obtained from this scale. The scores obtained from the scale throughout the research reveal the social skill levels of the children. The validity and reliability study of the scale was carried out and the Cronbach alpha reliability coefficient was found to be .87. This scale has no sub-dimensions.

### **Statistical Analysis**

Statistical analyses of the research were made with the SPSS 25 package program. Variables in the personal information form; Evaluated in terms of percentage (%), frequency, and mean values. Normality analyses of the data were performed with Kolmogorow-Smirnov and Shapiro-Wilk tests. It was determined that the data were normally distributed and for two-group comparisons, the Independent Sample t-test, one of the parametric tests, was performed with One-Way Analysis of Variance for more than two-group analysis. In addition, Scheffe and Tukey HSD tests from Post Hoc tests were applied to determine the relationship between groups. In our study, the level of significance was determined as  $p < .05$ . Pearson correlation analysis was performed to determine the relationship between the groups (-1, +1).

### **Ethical Permits of Research:**

In this study, all the rules specified to be followed within the scope of "Higher Education Institutions Scientific Research and Publication Ethics Directive" were complied with. None of the actions specified under the heading "Actions Contrary to Scientific Research and Publication Ethics", which is the second part of the directive, have been taken.

### Ethics Committee Permission Information:

Name of the committee that made the ethical evaluation = Sivas Cumhuriyet University Scientific Research and Publication Ethics Social and Human Sciences Committee

Date of ethical review decision= 04.10.2021

Ethics assessment document issue number= 2021-10-11/15

## Findings

**Table 1.**

*Personal Information of Participants*

		<i>f</i>	<i>%</i>
Grade	9 <sup>th</sup> grade	77	36.7
	10 <sup>th</sup> grade	52	24.8
	11 <sup>th</sup> grade	45	21.4
	12 <sup>th</sup> grade	36	17.1
Gender	Girl	100	47.6
	Male	110	52.4
Living place	Town center	124	59.0
	District center	52	24.8
	Village	34	16.2

When the personal information table of the participants is examined; 100 (47.6%) of the 210 people participating in the research are women and 110 (52.4%) are men. Of these individuals, 77 (36.7%) were 9<sup>th</sup> grade, 52 (24.8%) were 10<sup>th</sup> grade, 45 (21.4%) were 11<sup>th</sup> grade and 36 (17.1%) were 12<sup>th</sup> grade student. It is seen that the number of individuals residing in the city center is 124 (59.9%), the number of individuals residing in the district center is 52 (24.8%) and finally the number of individuals residing in the village is 34 (16.2%).

**Table 2.**

*Comparison of Participants' Social Skill Scores by Gender*

Gender	<i>n</i>	<i>M ± SD</i>	<i>t</i>	<i>p</i>
Female	100	59.100±11.870	.416	.193
Male	110	58.381±13.048		

When the Independent Samples t-test comparison table of the total social skill scores of the participants by gender was examined, no significant difference was found between the social skill total scores of women and men ( $p > .05$ ).

**Table 3.**

*Comparison of Participants' MET ml/kg/min Scores by Gender*

Gender	<i>M ± SD</i>	<i>t</i>	<i>p</i>
Female	2269.1±2677.4	-1.778	.158
Male	2932.8±2724.0		

When the Independent Samples t-test comparison table of the MET ml/kg/min scores of the participants by gender was analyzed, no significant difference was found between the MET ml/kg/min averages of women and the MET ml/kg/min averages of men ( $p > .05$ ).



**Table 4.***Comparison of Physical Activity Level and Social Skill Level*

Physical activity level	<i>M ± SD</i>	Min.	Max.	<i>f</i>	<i>p</i>
Low PA (n=35)	45.6±11.7	20.0	63.0	44.818	.000**
Middle PA (n=119)	58.7±10.4	20.0	76.0		
High PA (n=56)	66.9±9.5	32.0	80.0		
Total	58.7±12.4	20.0	80.0		

When Table 4 is examined, a significant difference was found between the social skills of individuals with low physical activity 45.600±11.760, moderate physical activity 58.705±10.479, and high physical activity 66.964±9.574 ( $p < .001$ ). According to the results of the Tukey HSD test, it was observed that the social skills of individuals with high physical activity levels were higher.

**Table 5.***Examining the Relationship Between Participants' MET Values and Social Skill Scores*

Parameters	<i>M ± SD</i>	<i>r</i>	<i>p</i>
MET ml/kg/min	2616.8±2715.8	.367	.000**
Social skill score	58.7±12.4		

When the Pearson correlation results of the relationship between individuals' mean MET ml/kg/min mean scores and their total mean scores for social skills were examined, it was determined that there was a significant positive relationship for these values ( $r = .367$ ,  $p < .001$ ).

## Discussion and Conclusion

In addition to the limitations observed in cognitive skills, individuals diagnosed with Specific Learning Disability [SLD] may also experience problems in their physical and social skills. Identifying the relationship between the level of participation in physical activities and the level of social skills in these individuals could be beneficial for rehabilitating potential limitations they face. For this purpose, it is aimed to determine the correlation between the level of physical activity and the level of social skills in individuals diagnosed with SLD. As there lack many research looking at social skills and physical activity levels in people with SLD, the results were compared with those from other studies. We believe that our study is groundbreaking in this regard.

When comparing the social skill scores of individuals diagnosed with SLD who participated in the study by gender, it was found that there was no significant difference in the social skill levels between female and male students ( $p > .05$ ). According to a study by Kalafat and Kınca (2008), women scored on average higher than men did for social skills. Furthermore, research revealed that women who engaged in physical activities in secondary education institutions have much better social skills than men who did the same (Akbaş & Eyüboğlu, 2019). Examining the literature reveals that our research on gender differences in social skill levels is not consistent with the level found in it. It is believed that the variation in the sample group is the cause of this discrepancy.

When comparing the physical activity levels of individuals diagnosed with SLD who participated in the study by gender, it was found that although males had a higher average

score, these averages were not statistically significant ( $p > .05$ ). In a study conducted by DeWolfe et al., (2020) the researchers investigated the physical activity levels of individuals based on their gender. The findings revealed that women exhibited a lower level of physical activity compared to men. A separate investigation analyzed the prevalence of obesity, levels of physical activity, and adherence to good lifestyle habits among teenage children. The study revealed a considerable disparity in physical activity based on gender, with boys exhibiting higher levels of physical activity compared to females (Coşkun & Karagöz, 2021). Unlike the aforementioned research, a recent study investigating the social skills and physical activity attributes of secondary school students revealed that there was no statistically significant correlation between physical activity and the gender variable (Kara & Şahin, 2021). Upon reviewing the literature, it was observed that there were both similar and distinct studies in relation to our own study. The variation in the physical activity level of patients diagnosed with SLD according to gender is believed to be attributed to the disparity in the sample group.

This study discovered that there is a positive correlation between the physical activity level and social abilities of patients diagnosed with SLD. When the physical activity level grew, correspondingly rose the level of social skills. Based on these findings, it was concluded that there exists a notable and favorable association between the degree of physical exercise and the level of social skills in persons. According to Zhao and Chen (2018), a physical activity plan enhances individuals' social abilities. Furthermore, a study conducted by İlkm (2018) revealed that children's social adaption and skill levels experienced enhancement as a result of their involvement in athletic endeavors. Furthermore, Zaboni and Solari (2019), discovered that engaging in physical activities had a good impact on the social skills of individuals and led to an improvement in problem behaviors. Participating in physical activity has a favorable impact on persons' social abilities, as shown by another study. According to a paper by Kuruoğlu and Uzunçayır (2020), increasing the degree of physical activity in individuals has a favorable impact on behaviors such as beginning and maintaining communication, emotional skills, self-control, accepting results, and following directions. In a study by Aksoy (2020) investigating the impact of recreational physical activity on the social development of individuals with autism, it was observed that those who engaged in physical activities demonstrated higher levels of social development compared to those who did not participate. The involvement in physical activity had a positive influence on individuals' social skills, self-control, group cooperation, and communication abilities.

Furthermore, a study investigating the social skills and physical activity levels of students in secondary school revealed a direct correlation between an individual's physical activity level and their degree of social skills. According to a report by Kara and Şahin (2021), those who engage in regular physical activity possess superior social attitudes and communication skills compared to those who live a physically inactive lifestyle. Upon reviewing the literature, it becomes evident that the findings from studies investigating the correlation between physical activity and social skills are very consistent. These studies reveal a substantial and favorable association between the amount of physical activity and the level of social skills. It is believed that the amount of physical exercise has a favorable impact on social skills and enhances the social life of individuals, including various participant groups. The current body of literature supports our research.



## **Recommendations**

The problems experienced by individuals with SLD during the process of displaying social skills can be reduced by participating in physical activity. Physically active individuals; can successfully fulfill their social roles, social duties, and responsibilities. Various activities and projects can be carried out to increase the physical activity levels of individuals with Special Learning Disability by carrying out studies based on the Ministry, schools, families, and students.

Various seminars can be organized for physical education teachers working under the Ministry of National Education and their families, and information can be given to individuals with SLD.

To determine the physical activities suitable for the developmental characteristics of individuals with a diagnosis, research can be conducted on these individuals.

Research on physical activity and social development can be done by taking the opinions of families and teachers who are close to individuals and have the opportunity to observe individuals constantly.

More research can be conducted to determine whether the level of physical activity and social skills are different according to the gender variable in individuals with SLD.

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## **BIOGRAPHICAL NOTES**

### **Contribution Rate of Researchers**

Author 1: 50%

Author 2: 50%

### **Conflict Statement**

There is no conflict of interest that the authors will declare in the research.

# Özel Öğrenme Güçlüğü Olan Bireylerin Fiziksel Aktivite Düzeyi ile Sosyal Beceri Düzeyi Arasındaki İlişkinin İncelenmesi



## Özet

Bu çalışmanın amacı, özel öğrenme güçlüğü tanısı almış bireylerin fiziksel aktivite düzeyi ile sosyal beceri düzeyi arasındaki ilişkiyi incelemektir. Araştırma, nicel araştırma modellerinden biri olan tarama modelinde, betimsel niteliktedir. Çalışmaya, Özel Öğrenme Güçlüğü [ÖÖG] tanısı almış toplam 210 birey (100 kadın, 110 erkek) katılmıştır. Bireylerin fiziksel aktivite düzeylerini belirlemek için 'Uluslararası Fiziksel Aktivite Anketi (Kısa Form) ve sosyal beceri düzeylerini belirlemek için 'Çocuklar İçin Sosyal Beceriler Ölçeği' kullanılmıştır. Araştırmanın verileri SPSS 25 paket programı ile analiz edilmiştir. Normallik analizi sonucunda verilerin normal dağıldığı belirlenmiştir. Bu nedenle, istatistiksel analizler parametrik testler olan Bağımsız Örneklem t-testi ve Tek Yönlü Varyans Analizi ile yapılmıştır. Gruplar arasındaki ilişkiyi belirlemek için Pearson korelasyon analizi yapılmıştır. Anlamlılık değeri  $p < .05$  olarak belirlenmiştir. Cinsiyete göre bireylerin sosyal becerileri arasında ve fiziksel aktivite düzeyleri arasında anlamlı bir fark bulunmamıştır ( $p > .05$ ). Bireylerin fiziksel aktivite düzeyi ile sosyal beceri düzeyi arasında pozitif ve anlamlı bir ilişki bulunmuştur ( $r = .367$ ,  $p < .001$ ). Çalışmanın sonuçlarına göre, ÖÖG tanısı almış bireylerin fiziksel aktivite düzeyi arttıkça, sosyal beceri düzeyleri de artmaktadır. Bu bireylerin sosyal beceri düzeylerini artırmak için egzersiz, oyun ve spor gibi fiziksel aktivitelere katılmaları teşvik edilmelidir.

**Anahtar Kelimeler:** Öğrenme güçlüğü, fiziksel aktivite, sosyal beceriler.

## Giriş

Öğrenme güçlüğü, normal veya normalin de üstünde zeka kapasitesi olan ruhsal rahatsızlığı, beyin fonksiyonlarını kullanma sorunları olmayan; iletişim kurma, okuma ve yazma, akıl yürütme ile matematiksel işlemleri beceriye dönüştürme noktasında yetersizlik yaşayan bireylerin durumunu ifade etmektedir. Özel Öğrenme Güçlüğü [ÖÖG] tanılı bireyler sosyal algı ve etkileşimlerde, kendini idare etme becerileri zayıftır. Fiziksel, zihinsel, işitsel, görsel yetersizlikleri olan, çeşitli duyu bozuklukları yaşayan ve sosyoekonomik açıdan dezavantajlı bireylerdeki öğrenme yetersizlikleri bu kapsamda değerlendirilmemektedir.

Eğitim öğretim faaliyetlerinin bir parçası olan fiziksel aktivite ve sportif faaliyetlerin zamanla gelişmesi özel gereksinimli bireylerin fiziksel, zihinsel ve sosyal gelişimlerine yönelik daha fazla çalışmanın yapılmasını gerekli kılmıştır. Fiziksel aktivite ve sportif faaliyetler bireylerin fiziksel, duygusal, bilişsel ve sosyal gelişimlerine katkı sağlamakta, topluma entegrasyonları noktasında bireyleri olumlu yönde etkilemektedir. Öğrenme güçlüğü tanılı bireylerin sosyal adaptasyonunu kolaylaştırmak toplumsal hayatın bir parçası olduklarını hatırlatmak ve bu yönde çalışmalar yapmak son derece önemlidir.

Bu araştırmanın amacı; ÖÖG tanılı bireylerin fiziksel aktivite yapma düzeyi ile sosyal beceri düzeyleri arasındaki ilişkinin incelenmesidir. Uzmanlar bu çalışmanın sonucuna göre bu bireylerin eğitim ortamlarını ve eğitim sürecini düzenleme imkanı bulabileceklerdir. Aileler, çocuklarının gelişimine ve sosyal hayata adaptasyonu konusunda daha fazla bilgi sahibi



olacaktır. Aile, birey ve okul ekseninde bireyin gelişimine yönelik sağlıklı adımlar atılabilecektir.

## Yöntem

Araştırmada nicel araştırma modellerinden betimsel (tarama) modeli kullanılmıştır (Akarsu, 2019). Araştırmaya katılan bireyler, tıbbi ve eğitsel açıdan değerlendirilmiş ve ÖÖG tanısı almıştır. Tıbbi tanısı Eğitim ve Araştırma hastaneleri tarafından yapılmış, eğitsel tanısı ise Sivas Rehberlik ve Araştırma Merkezi [RAM] tarafından gerekli değerlendirmeler yapıldıktan sonra konulmuştur. Araştırmanın evrenini Sivas ilindeki ortaöğretim kurumlarında eğitim gören ÖÖG tanılı bireyler oluşturmaktadır. Bu bireylerden ÖÖG tanısı dışında herhangi bir tanısı olanlar araştırmaya dahil edilmemiştir. Bu bağlamda araştırmaya 210 (100 kadın, 110 erkek) katılımcı dahil edilmiştir.

Veri toplama aracı olarak, araştırmaya katılan bireyler için 8 maddelik Kişisel Bilgi Formu hazırlanmıştır. Uluslararası Fiziksel Aktivite Anketi [UFAA] fiziksel aktivite düzeyini belirlenmesinde kullanılan geçerliliği ve güvenilirliği Öztür (2005) tarafından yapılan bir anket kullanılmıştır. Ayrıca, ÖÖG tanılı bireylerin sosyal beceri düzeylerini ölçmek için Yurdakavuştu (2012) tarafından geliştirilen "Çocuklar için Sosyal Beceri Ölçeği" kullanılmıştır.

Araştırmanın istatistiksel analizleri SPSS 25 paket programı ile yapılmıştır. Kişisel bilgi formundaki değişkenler; yüzde (%), frekans, ortalama değerler açısından değerlendirilmiştir. Verilerin normallik analizleri Kolmogorow-Smirnov ve Shapiro Wilk testleri ile yapılmıştır. Parametrik testlerden Bağımsız Örneklem t-testi, ikiden fazla grup analizleri için Tek Yönlü Varyans Analizi ile yapılmıştır. Ayrıca gruplar arası ilişkinin belirlenmesi için Post Hoc testlerinden Scheffe ve Tukey HSD testleri uygulanmıştır. Gruplar arasındaki ilişkinin belirlenmesi için Pearson korelasyonu analizi yapılmıştır (-1, +1).

## Araştırmanın Etik İzinleri:

Bu çalışmada "Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi" kapsamında uyulması gerektiği belirtilen tüm kurallara uyulmuştur. Yönergenin ikinci bölümü olan "Bilimsel Araştırma ve Yayın Etiğine Aykırı Eylemler" başlığı altında belirtilen eylemlerin hiçbiri gerçekleştirilmemiştir.

## Etik Kurul İzin Bilgileri:

Etik değerlendirmeyi yapan kurulun adı = Sivas Cumhuriyet Üniversitesi Bilimsel Araştırma ve Yayın Etiği Sosyal ve Beşeri Bilimler Kurulu

Etik Kurul Etik inceleme karar tarihi= 04.10.2021

Etik değerlendirme belgesi konu numarası= 2021-10-11/15

## Bulgular

**Tablo 1.**

*Cinsiyete göre Katılımcıların Sosyal Beceri Puanlarının Karşılaştırılması*

Değişkenler	<i>n</i>	<i>M ± SD</i>	<i>t</i>	<i>p</i>
Kadın	100	59.100±11.870	.416	.193
Erkek	110	58.381±13.048		

Cinsiyete göre katılımcıların sosyal beceri toplam puanlarının Independent Samples t-test karşılaştırılması tablosu incelendiğinde kadınlar ile erkeklerin sosyal beceri toplam puan ortalamaları arasında anlamlı fark tespit edilmemiştir ( $p > .05$ ).

**Tablo 2.**

*Cinsiyete göre Katılımcıların MET ml/kg/dk Puanlarının Karşılaştırılması*

Değişkenler	<i>n</i>	<i>M ± SD</i>	<i>t</i>	<i>p</i>
Kadın	100	2269.160±2677.484	-1.778	.158
Erkek	110	2932.854±2724.006		

Cinsiyete göre katılımcıların MET ml/kg/dk puanlarının Bağımsız Örneklem t-testi karşılaştırılması tablosu incelendiğinde kadınların MET ml/kg/dk ortalamaları ile erkeklerin MET ml/kg/dk puan ortalamaları arasında anlamlı fark tespit edilmemiştir ( $p > .05$ ).

**Tablo 3.**

*Fiziksel Aktivite Düzeyi ile Sosyal Beceri Düzeyinin Karşılaştırması*

Değişkenler	<i>n</i>	<i>M ± SD</i>	Min.	Max.	<i>f</i>	<i>p</i>
Düşük FA	35	45.600±11.760	20.00	63.00	44.818	.000**
Orta FA	119	58.705±10.479	20.00	76.00		
Yüksek FA	56	66.964±9.574	32.00	80.00		
Toplam	210	58.723±12.476	20.00	80.00		

\*\* $p < .001$  FA: Fiziksel Aktivite

Tablo 3 incelendiğinde; düşük fiziksel aktivite 45.600±11.760, orta fiziksel aktivite 58.705±10.479 ve yüksek fiziksel aktivite 66.964±9.574 düzeyinde olan bireylerin sosyal becerileri arasında anlamlı fark tespit edilmiştir ( $p < .001$ ). Yapılan Tukey HSD testi sonucuna göre fiziksel aktivite düzeyi yüksek olan bireylerin sosyal becerilerinin daha yüksek olduğu görülmüştür.

**Tablo 4.**

*Bireylerin MET ml/kg/dk Puanları ile Sosyal Beceri Puanları Arasındaki İlişkinin Pearson Korelasyon Tablosu*

Değişkenler	<i>n</i>	<i>M ± SD</i>	<i>r</i>	<i>p</i>
MET ml/kg/dk	210	2616.809±2715.893	.367	.000*
Sosyal beceri puanı	210	58.723±12.476		

\*\* $p < .001$

Bireylerin MET ml/kg/dk puan ortalamaları ile sosyal becerilerine ilişkin toplam puan ortalamaları arasındaki ilişkinin Pearson korelasyonu sonuçlarına bakıldığında bu değerler için anlamlı düzeyde pozitif bir ilişki olduğu tespit edilmiştir ( $r = .367$ ,  $p < .001$ ).

## Tartışma ve Sonuç

Araştırmaya katılan ÖÖG tanılı bireylerin sosyal beceri puanlarını cinsiyete göre karşılaştırdığında kadın ve erkek öğrencilerin sosyal beceri düzeyleri arasında anlamlı bir fark olmadığı tespit edilmiştir ( $p > .05$ ). Mevcut literatür incelendiğinde cinsiyete göre sosyal beceri düzeyinin araştırma ile farklılık gösterdiği görülmektedir. ÖÖG tanılı bireylerin sosyal beceri düzeyinin, cinsiyete göre farklılık göstermemesinin sebebi; örneklem grubunun tanısı, kadın ve erkek bireylerin bu tanıdan benzer oranda etkilenmelerinden kaynaklı olduğu düşünülmektedir.

Araştırmaya katılan ÖÖG tanılı bireylerin fiziksel aktivite düzeyleri cinsiyete göre karşılaştırıldığında, erkeklerin daha yüksek puan ortalamasına sahip olduğu bulunmuş olsa da

bu ortalamaların istatistiksel açıdan anlamlı olmadığı tespit edilmiştir ( $p>.05$ ). Mevcut literatür incelendiğinde; elde edilen verilerin araştırma ile farklılık gösterdiği tespit edilmiştir. ÖÖG tanılı bireylerin fiziksel aktivite düzeyinin cinsiyete göre farklılık göstermemesinin sebebinin; örneklem grubunun farklı olmasından ve yaşadıkları yetersizliklerin cinsiyet fark etmeksizin bireyleri benzer oranda etkilemesinden kaynaklandığı düşünülmektedir.

Araştırmaya katılan ÖÖG tanılı bireylerin fiziksel aktivite düzeyi ile sosyal beceri düzeyi arasında pozitif yönlü anlamlı bir korelasyon olduğu tespit edilmiştir. Mevcut literatür incelendiğinde; fiziksel aktivite ve sosyal beceri üzerine yapılan araştırmalardan elde edilen sonuçların yüksek oranda benzerlik gösterdiği, fiziksel aktivite düzeyi ile sosyal beceri düzeyi arasında pozitif yönlü anlamlı bir ilişki olduğu görülmektedir. Örneklem grubu fark etmeksizin bireylerin fiziksel aktivite düzeyinin sosyal beceri düzeyini olumlu yönde etkilediği ve bireylerin sosyal yaşamını geliştirdiği düşünülmektedir.

Sonuç olarak, yapılan araştırmalar, ÖÖG tanılı bireylerde fiziksel aktivite ile sosyal beceri arasında anlamlı ve pozitif bir ilişki olduğunu ortaya koymaktadır. Araştırma bulgularına göre, fiziksel aktivite düzeyi arttıkça bu bireylerin sosyal becerileri de artmaktadır. Fiziksel aktivitenin, bireylerin sosyal beceri gelişimi üzerinde önemli ve olumlu bir etkisi olduğu görülmüştür. Ayrıca, cinsiyete göre ÖÖG tanılı bireylerin sosyal beceri ve fiziksel aktivite düzeyleri arasında anlamlı bir fark bulunmamış, kadın ve erkeklerin sosyal beceri ve fiziksel aktivite düzeylerinin benzer olduğu belirlenmiştir.

## **Öneriler**

ÖÖG olan bireylerin sosyal becerileri sergileme sürecinde yaşadıkları sorunlar, fiziksel aktiviteye katılım ile azaltılabilir. Fiziksel olarak aktif bireyler; sosyal rollerini, toplumsal görev ve sorumluluklarını başarıyla yerine getirebilirler. Bakanlık, okullar, aileler ve öğrenciler bazında çalışmalar yapılarak Özel Öğrenme Güçlüğü olan bireylerin fiziksel aktivite düzeylerinin artırılmasına yönelik çeşitli faaliyet ve projeler yürütülebilir.

Millî Eğitim Bakanlığı bünyesinde görev yapan beden eğitimi öğretmenlerine ve ailelerine yönelik çeşitli seminerler düzenlenerek ÖÖG olan bireylere bilgilendirme yapılabilir. Tanısı olan bireylerin gelişimsel özelliklerine uygun fiziksel aktivitelerin belirlenmesi için bu bireyler üzerinde araştırmalar yapılabilir.

Bireylere yakın olan ve bireyleri sürekli gözlemleme fırsatı olan ailelerin ve öğretmenlerin görüşleri alınarak fiziksel aktivite ve sosyal gelişim üzerine araştırmalar yapılabilir. ÖÖG tanılı bireylerde fiziksel aktivite ve sosyal beceri düzeyinin cinsiyet değişkenine göre farklı olup olmadığını belirlemeye yönelik daha fazla araştırma yapılabilir.