



The Effect of Participation in Regular Tennis Exercise on Sportsmanship

Engin EFEK^{1A}, Hakan ERYİĞİT^{2B}

¹Burdur Mehmet Akif Ersoy University, Faculty of Sports Sciences, Department of Physical Education and Sports Education, Department of Psycho-Social Areas in Sports, Burdur/Turkey.

²Burdur Mehmet Akif Ersoy University, Tefenni Vocational School, Department of Management and Organization, Burdur/Turkey.

Address Correspondence E. EFEK: e-mail: enginefek@mehmetakif.edu.tr

Conflicts of Interest: The author(s) has no conflict of interest to declare.

Copyright & License: Authors publishing with the journal retain the copyright to their work licensed under the CC BY-NC 4.0.

Ethical Statement: It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited.

(Date Of Received): 12/03/2022 (Date of Acceptance): 12.10.2022 (Date of Publication): 30.04.2023

A: Orcid ID: 0000-0002-7889-8151 B: Orcid ID: 0000-0002-8756-3070

Abstract

This study examines the effect of participation in regular tennis exercise on sportsmanship in secondary school students. The research was carried out with an experimental method and sequential design. The study sample, 46 volunteer students, was divided into two groups as experimental and control groups. The "Personal Information Form" and the "Physical Education Lesson Sportsmanship Behavior Scale" were applied to the students in both groups as a pre-test in the first week and as a post-test after 12 weeks. Statistical Package for Social Sciences (SPSS) 17.0 program was used for data analysis. As a result of the normality tests (Skewness and Kurtosis), it was determined that the data showed normal distribution, so the Independent Sample T-Test and Paired Samples T-Test were applied. The significance level was accepted as $p < 0.05$. According to the findings of the study, while there was a statistically significant difference between the pre-test (90.82 ± 14) and post-test (97.52 ± 10) of the experimental group's sportsmanship level, no statistically significant difference between the pre-test (85.73 ± 12) and post-test (83.52 ± 14) of the control group's sportsmanship levels between. Consequently, this study reveals that participation in 12 weeks of regular tennis exercise significantly increases the sportsmanship level of secondary school students.

Keywords: Physical activity, regular exercise, secondary school, sportsmanship, student, tennis

Düzenli Tenis Egzersizine Katılımın Sportmenlik Üzerine Etkisi

Bu çalışma ortaokul öğrencilerinde düzenli tenis egzersizine katılımın sportmenliğe etkisini incelemektedir. Araştırma deneysel yöntem ve sırasal tasarım ile gerçekleştirilmiştir. 46 gönüllü öğrenciden oluşan çalışma örneği deney ve kontrol grubu olarak iki gruba ayrıldı. Her iki gruptaki öğrencilere "Kişisel Bilgi Formu" ve "Beden Eğitimi Dersi Sportmenlik Davranışı Ölçeği" ilk hafta ön test, 12 hafta sonra ise son test olarak uygulanmıştır. Verilerin analizinde Statistical Package for the Social Sciences (SPSS) 17.0 programı kullanılmıştır. Normallik testleri (Çarpıklık ve Basıklık) sonucunda verilerin normal dağılım gösterdiği tespit edilmiş, bu nedenle Bağımsız Örneklem T-Testi ve Eşleştirilmiş Örneklem T-Testi uygulanmıştır. Anlamlılık düzeyi ise $p < 0.05$ olarak kabul

edilmiştir. Araştırmanın bulgularına göre, deney grubunun sportmenlik düzeyi ön test (90.82 ± 14) ve son test (97.52 ± 10) arasında istatistiksel olarak anlamlı bir fark bulunurken; kontrol grubunun sportmenlik düzeylerinde ise ön test (85.73 ± 12) ve son test (83.52 ± 14) arasında istatistiksel açıdan anlamlı bir fark bulunamamıştır. Sonuç olarak, bu çalışma 12 haftalık düzenli tenis egzersizine katılımın ortaokul öğrencilerinin sportmenlik düzeyini önemli ölçüde artırdığını ortaya koymaktadır.

Anahtar Kelimeler: Fiziksel aktivite, düzenli egzersiz, ortaokul, sportmenlik, öğrenci, tenis

INTRODUCTION

Regular participation in physical activity has a positive effect on the behavioral, academic, and psychological characteristics of children and youth (8). So, first, it is helpful to define physical activity. Physical activity is a body movement produced due to the contraction of skeletal muscles, which requires people to spend more energy than they spend at rest (6).

The World Health Organization (32) recommends at least 60 minutes of moderate-to- vigorous intensity and mostly aerobic exercise once a week for children and adolescents aged 5-17 years. In addition, vigorous-intensity aerobic exercises at least three days a week and activities that strengthen muscles and bones are recommended for children and adolescents.

However, the COVID19 epidemic has affected the lives of individuals of all ages, including students. This situation has led to severe restrictions on education, school, and exercise (15, 26). Such adverse conditions can exacerbate stress, fear, and mental health disorders and cause psychological problems (14). Therefore, it is possible to say that the stress level of children and adolescents exposed to closure with the pandemic period and have additional problems due to this will increase. In the literature, it has been stated that with the increase of stress, a decrease in sportsmanship behaviors occurs (10). Therefore, it is a critical issue to examine the sportsmanship behaviors of adolescents through physical activities that they will participate in, especially during the pandemic period when they experience more stress, and to determine the factors that will positively affect their sportsmanship behaviors.

Sportsmanship refers to obeying the rules, not only winning but also enjoying participating in competitions, playing fair, and congratulating the opponent regardless of the result (22). However, the fact that sports have become increasingly political and commercial has overshadowed sportsmanship and fair play and has prevented amateur competition. The understanding of sportsmanship has changed its meaning in this process. Only following the rules has come to be understood as sufficient for sportsmanship. However, sportsmanship behavior is an understanding with high human values such as refusing to establish superiority unfairly, respecting the opponent in every sense, seeing the opponent as a friend rather than an enemy, and competing by keeping and preserving justice (33). Therefore, it is necessary for today's and future sports to convey the primary purpose of sportsmanship to children and adolescents correctly and to display their sportsmanship behaviors with a correct understanding. This approach expresses another importance of our study.

Many studies have been conducted in the literature to analyze sportsmanship. Especially since various practices in the field of physical education suggest improving sportsmanship, there have been promising findings in terms of sportsmanship. For example, it has been reported that sportsmanship behaviors increase through fair play practices (12), discussion groups (19), and problem-solving activities (3). In addition, previous studies based on the sports education model have revealed positive educational effects for students with physical education practices in schools (2, 5, 11, 13, 31). However, some studies have indicated that previous studies generally focused only on physical education interventions in schools, intervention times were also partially lower, and the need for different types of analyses (23, 25). Furthermore, studies emphasizing the importance of different samples, age groups, and extracurricular activities in analyzing sportsmanship also inspired our study. Therefore, we think that our research will contribute to the literature by addressing the shortcomings emphasized by previous studies.

The study aims to examine the effect of secondary school students' participation in regular tennis exercise on their sportsmanship levels. Therefore, it was assumed that the students participating in the study responded to the scale questions sincerely, that the sample selected for the study represented the population, and that the scales used could measure the sportsmanship level of the students.

Data are limited to the scales used and the sample selected. However, based on the relevant literature (21, 24, 27), it has been suggested that exercises performed for 12 weeks, five days a week, and 1.5 hours a day will increase the sportsmanship level of students:

H0: Participation in 12-week regular tennis exercise has a significant and positive effect on the sportsmanship levels of secondary school students.

MATERIALS AND METHODS

Study Model: This research was conducted with an experimental and sequential design.

Study Design: The research group consisted of 46 people, 23 people in the experimental group, and 23 people in the control group. The experimental group of the study consisted of 290 secondary school students who participated as athletes in the sports activities carried out by Turkey's Burdur/Bucak Youth and Sports District Directorate. The sample consisted of 23 secondary school students (16 females and seven males) between the ages of 10-13 who were selected by random sampling and volunteered to participate in the research. The population of the control group of the study was 73 secondary school students studying at Burdur/Bucak Gündoğdu Secondary School in Turkey, the sample was selected by criterion sampling method because there were some criteria (not participating in any sportive activity) that the control group had to meet, and the sample was similar to other demographic characteristics of the experimental group, The study consisted of 23 secondary school students (11 females and 12 males) aged 10-13 who did not participate in any sports activities and volunteered to participate in the research.

Table 1: Socio-demographical characteristics of the participants (n=46)

Characteristics		Frequency	%
Gender	Female	27	58,7
	Male	19	41,3
Age	10	7	15,2
	11	15	32,6
	12	17	37,0
	13	7	15,2
Grade	5. grade	14	30,4
	6. grade	15	32,6
	7. grade	17	37,0

Place and Date of the Study: This study was conducted by the Declaration of Helsinki. All participants were informed about the study processes, and an informed consent form was obtained from each participant. The experimental implementation phase of the research was carried out in the gym of the Burdur/Bucak Youth and Sports District Directorate for 12 weeks between November 2019 and January 2020. The first measurement was taken in November 2019, and the second was taken in the gym in January 2020. In addition, the scale application phase for the control group of the research was carried out in Burdur/Bucak Gündoğdu Secondary School classrooms. The scales were applied face to face with the students. The study, carried out in 2 sessions, started with the first measurement in November 2019 and ended with the last measurement in January 2020. For this reason, the ethics committee report was not requested. The necessary permission was obtained from the institutions where the data were collected. The data in the study I sent were collected before 2020, and in line with the information provided by ULAKBİM TR Directory on ethical rules, ("Should a retrospective ethics committee permission be obtained for the studies completed in the past years and the thesis?" Research data before 2020 were used, master's/ Ethics committee approval is not required for articles produced from doctoral studies (must be specified in the article), for which an application for publication was made to the journal in the previous year, accepted but not yet published.") Ethics committee report was not requested in the current study.

Procedure: The scale application phase for the experimental group was carried out in 2 sessions. The first session started in November 2019, and the second session ended in January 2020. The experimental implementation phase was continued for 12 weeks between these dates. Physical activities were planned for 1.5 hours, five days a week, after the necessary safety precautions were taken, and were done in 3 parts. The first is the preparatory phase, which includes various educational games and warm-up exercises. The second stage is the main stage in which loads affect different motoric features. At this stage, exercises such as rally training, throwing the ball to the target, forehand exercises, backhand exercises, service target exercises, forehand and backhand target training and volley target training were performed. The third phase is the final phase, which includes cool-down and recovery exercises. In any phase of physical activities, the loading intensity did not exceed 50%. The intensity of exercise was determined by the Rating of Perceived Exertion (RPE). The scale application phase for the control group of the research was carried out in Burdur/Bucak Gündoğdu Secondary School classrooms. The scales were applied face to face with the students. The study, carried out in 2 sessions, started with the first measurement in November 2019 and ended with the last measurement in January 2020. Control group students were not included in any exercise program.

Data Collection: A 3-question "Personal Information Form" created by the researchers was used to determine the participants' demographic characteristics (gender, age, and class). To determine the sportsmanship levels of the participants, the 'Physical Education Class Sportsmanship Behavior Scale (BEDSS)' was used.

Physical Education Lesson Sportsmanship Behavior Scale (PELSBS): The scale was developed by Koç (18) to measure the sportsmanship behaviors of secondary school students. The scale is in 5-point Likert type and consists of 22 items. 'Exhibiting Positive Behaviors' (Items 1, 2, 4, 7, 9, 11, 12, 14, 16, 19, and 21) and 'Avoiding Negative Behaviors'

(Items 3, 5, 6, 8, 10, 13), 15, 17, 18, 20 and 22) factors. Avoidance of Inappropriate Behavior factor is scored inversely. The answers to the scale questions were listed as "(5) Always, (4) Very Often, (3) Sometimes, (2) Rarely, and (1) Never". The score obtained from the scale's total is evaluated as 'Total Sportsmanship.' In the present study, the total sportsmanship score was used. The lowest total score obtained from the scale is 22, and the highest total score is

110. A high score on the scale indicates high sportsmanship. The Cronbach Alpha value of the full scale was calculated as 0.85. The Pearson Product Moments correlation coefficient of the scale was determined as 0.81.

Data Analysis: Statistical Package for Social Sciences (SPSS) 17.0 package program was used for data analysis. First, a descriptive statistical test was conducted to indicate the socio-demographic characteristics of the participants. Then, normality tests (Skewness and Kurtosis/Kolmogorov Smirnov) were applied to determine whether the data showed normal distribution, and it was determined that the data showed normal distribution. Finally, the independent sample t-test and Paired Samples t-test were applied because the data met the assumption of normal distribution. The significance level was determined as $p < 0.05$.

RESULTS

This section shows the findings related to the normality test, pre-and post-test scores, and the differences between the experimental and control groups' scores from the sportsmanship scale are presented in tables.

Table 2: Normality test of pre-test and post-test scores obtained from the sportsmanship scale

Test	Skewness		Kurtosis	
	Value	SE	Value	SE
Pre-test	-,387	,350	-,858	,688
Post-test	-,551	,350	-,787	,688

The normality test was applied for the full scale, and skewness and kurtosis values were found to be between -1.5 and +1.5. Therefore, if the skewness and kurtosis values are between -1.5 and +1.5, the scores are considered to be normally distributed (29).

Table 3: The differences between experimental and control groups regarding pre-tests

Group	n	x	SD	df	t	p
Experimental	23	90,82	14,35	44	1,294	,203
Control	23	85,73	12,22			

(p>0,05).

When Table 3 is examined, it is seen that there is no statistically significant difference between the pre-test scores of the sportsmanship levels of the experimental and control groups (p>0.05).

Table 4: The differences between experimental and control groups regarding post-tests

Group	n	x	SD	df	t	p
Experimental	23	97,52	10,28	44	3,819	,000*
Control	23	83,52	14,26			

(p<0,05).

When Table 4 is examined, it is seen that there is a statistically significant difference between the post-test scores of the sportsmanship levels of the experimental and control groups in favor of the experimental group (p<0.05)

Table 5: Pre- and post-test comparison of experimental and control groups

Group	Test	n	x	SD	df	t	p
Experimental	Pre-test	23	90,82	14,35	22	-2,112	,046*
	Post-test	23	97,52	10,28			
Control	Pre-test	23	85,73	12,22	22	,914	,371
	Post-test	23	83,52	14,26			

(p<0,05).

When Table 5 is examined, there is a statistically significant difference between the pre- test (90.82 ± 14) and post-test (97.52 ± 10) scores of the experimental group (p<0.05). However, there was no statistically significant difference between the pre-test (85.73 ± 12) and post-test (83.52 ± 14) scores of the control group (p>0.05).

DISCUSSION AND CONCLUSION

In this part of the study, which was conducted to determine the effect of 12-week regular tennis exercise participation of secondary school students on sportsmanship, the data we obtained were discussed considering the relevant literature.

46 (23 control, 23 experimental) secondary school students voluntarily participated in the study. According to the test finding conducted in line with the research hypothesis (Table 5), participation in the 12-week regular tennis exercise had a significantly positive effect on the sportsmanship behaviors of secondary school students. This finding reveals that participation in a 12-week regular tennis exercise program significantly increases the sportsmanship behavior levels of secondary school students. The result obtained in the study supports the hypothesis of the research. When the literature is examined, it is seen that there are many study findings consistent with the results of the current study:

Mendez Gimenez, Fernandez Rio and Mendez Alonso (20) revealed that the sports education model significantly increases students' sportsmanship levels. Davidson and Moran Miller (9) stated that positive changes occur in citizenship, character, sociability, and morality in individuals participating in physical education and sports activities. Hupp and Reitman (16), in their study on children with attention deficit-hyperactivity disorder, revealed that the sportsmanship levels of children who received sports training increased. Efek (10) stated that the sportsmanship levels of individuals who do sports are higher than the sportsmanship levels of those who do not do sports. Kahya (17) revealed that participation in regular sports positively affects appropriate play behaviors. Altun and Güvendi (1) compared secondary school students who do sports with those who do not. As a result of the study, it was stated that secondary school students who do sports exhibit a higher level of sportsmanship than secondary school students who do not. In the study carried out by Wahl-Alexander, Sinelnikov and Curtner-Smith (34), it is concluded that students who attend 5 years of sports education season experienced a stronger feeling of fair play at the end of 5 seasons. The

findings of the study with Russian students, carried out by Sinelnikov and Hastie (35), have revealed that sports education increases sportsmanship behaviors.

The present study results support the findings of the studies mentioned above. However, there are also different studies in the literature that are not consistent with the results of the present study:

Şeker and Uslu (28) stated that the aggression scores of university students who are engaged in sports are higher than those who do not engage in sports. Certel, Bahadır and Çelik (7) revealed that team sports athletes have lower avoidance scores for inappropriate behavior than those who do not. In addition, Barkoukis and Mouratidou (4) stated that there is no statistically significant difference between the level of sportsmanship and sports experience. The inconsistencies between the findings of the present study and these studies may have resulted from the selected sample group and the method of the studies. While the experimental and the sequential process were used in the present study, the method of the studies that gave inconsistent results with this study was cross-sectional. The sample group selected for the present study is a group that has just started sports and whose purpose is not to achieve outcomes such as awards and medals. The sample groups in other studies consisted of individuals who do sports at a higher level, older ages, and who do sports to win. Some factors, such as people's expectations from sports, the purpose of doing sports, and the desire for absolute victory, may lead to a low level of sportsmanship in people (30).

In accordance with the hypothesis of the research (H0: Participation in 12-week regular tennis exercise has a significant and positive effect on the sportsmanship levels of secondary school students.) and within the scope of the related literature, participation in regular tennis exercises improves sportsmanship behavior. But factors which are existent in sports such as high levels of competition environment, material or nonmaterial prizes and the idea of winning at any cost should not be involved in the exercise. The idea of winning at any cost which is existent within the nature of sports may lead to emergence of unsportsmanlike acts as mentioned in the discussion section. However, when participation in tennis is in the form of exercise and is practiced regularly students behave more sportsman-like and this indicates that regular tennis exercises would improve sportsmanship and the sports environment would gain more friendly atmosphere. Another comment which can be deduced from the studies in the discussion section and from the current study is that regular participation to the exercise is significant for improving sportsmanship.

The demographic characteristics of the participants selected for the present study, their different mental features, their relationships with the environment they live in, the type and intensity of exercise, and the biased responses they may have given to the scales are among the limitations of this study. Participants who gave incorrect answers to the scales or for different purposes were excluded from the process at the beginning of the study and were not included in the analysis before the statistical analysis was performed. It was assumed that all the remaining participants gave unbiased answers to the scales.

In conclusion, this study revealed that participation in 12-week regular tennis exercise significantly and positively affects the sportsmanship level of secondary school students. This result obtained in the study demonstrates the importance of involvement in physical activities in the development of sportsmanship, thus supporting and recommending physical activity participation to improve sportsmanship. In addition, based on the results obtained in the study, the following suggestions can be made for future research: Different variables may directly affect the sportsmanship levels of individuals. For this reason, different independent variables can be used in studies. In addition, larger sample groups from different ages and cultures can be studied with varying exercise studies.

REFERENCES

1. Altun M, Güvendi B. Ortaokul öğrencilerinin beden eğitimi ve spor dersi sportmenlik davranışlarının bazı değişkenlere göre incelenmesi. *OPUS Uluslararası Toplum Araştırmaları Dergisi*, 2019; 11(18): 2224-2240. Doi: 10.26466/opus.570922.
2. Araujo R, Mesquita I, Hastie PA. Review of the status of learning in research on Sport Education: Future research and practice. *J. Sport Sci. Med*, 2014; 13, 846-858. PMCID: PMC4234955. PMID: 25435778.
3. Balaguer Vives J. Study of a core skill factor through the z game. *Apunt. Educ. Física Deporte*, 2017; 128, 48-63. Doi: [http://dx.doi.org/10.5672/apunts.2014-0983.es.\(2017/2\).128.03](http://dx.doi.org/10.5672/apunts.2014-0983.es.(2017/2).128.03).
4. Barkoukis V, Mouratidou K. Achievement goals and sportpersonship orientations in team sports. The Moderating Role of Demographic Characteristics. *Ethics in Progress*, 2015; 6(2), 74-92. Doi: <https://doi.org/10.14746/eip.2015.2.6>.

5. Bessa C, Hastie PA, Araújo R, Mesquita I. What do we know about the development of personal and social skills within the sport education model: A systematic review. *J. Sport. Sci. Med*, 2019; 18, 812–829. PMID: PMC6873138. PMID: 31827367.
6. Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public health reports*, 1985; 100(2), 126–131. PMID: 3920711 PMID: PMC1424733.
7. Certel Z, Bahadır Z, Çelik B. Ortaokul öğrencilerinin beden eğitimi dersi sportmenlik davranışları. *Spor ve Performans Araştırmaları Dergisi*, 2020; 11(3), 231-244. Doi: 10.17155/omuspd.676577.
8. Chang M, Bang H, Kim S, Nam Speers J. Do sports help students stay away from misbehavior, suspension, or dropout? *Studies in Educational Evaluation*, 2021; 70, 101066. <https://doi.org/10.1016/j.stueduc.2021.101066>.
9. Davidson ML, Moran Miller KE. Charecter development in sport an ethnographic study of charecter development in an elite prep-school basketball program. *Journal of Research in Charecter Education*, 2005; 3(2), 121-138.
10. Efek E. Atletizmin stres, atılganlık ve sportmenlik ile ilişkisi. *Gazi Kitabevi*, 2021.
11. Evangelio C, Sierra Díaz J, González Villora S, Fernández Río J. The sport education model in elementary and secondary education: A systematic review. *Movimento*, 2018; 24, 931–946. Doi: 10.22456/1982-8918.81689.
12. Gibbons SL, Ebbeck V. The effect of different teaching strategies on the moral development of physical education students. *J. Teach. Phys. Educ*, 1997; 17, 85–98. Doi: <https://doi.org/10.1123/jtpe.17.1.85>.
13. Hastie PA, Martínez de Ojeda D, Calderón A. A review of research on Sport Education: 2004 to the present. *Phys. Educ. Sport Pedagog*, 2011; 16, 103–132. Doi: <https://doi.org/10.1080/17408989.2010.535202>.
14. Horesh D, Brown AD. Traumatic stress in the age of COVID-19: A call to close critical gaps and adapt to new realities. *Psychological Trauma: Theory, Research, Practice, and Policy*, 2020; 12(4), 331-335. doi: 10.1037/tra0000592.
15. Howard J, Huang A, Li Z, Tufekci Z, Zdimal V, Van Der Westhuizen HM, ... Rimoim, AW. An evidence review of face masks against COVID-19. *Proceedings of the National Academy of Sciences of the United States of America*, 2021; 118(4), 1-12. <https://doi.org/10.1073/pnas.2014564118>.
16. Hupp SDA, Reitman D. Improving sports skills and sportsmanship in children diagnosed with attention-deficit/hyperactivity disorder. *Child and Family Behavior Therapy*, 1999; 21, 35–51. Doi: https://doi.org/10.1300/J019v21n03_03.
17. Kahya Y. Lisanslı spor yapan gençler ile lisanssız spor yapan gençlerin fair play anlayışları. *Düşünce ve Toplum Sosyal Bilimler Dergisi*, 2020; 2, 52-66. Retrieved from <https://dergipark.org.tr/tr/pub/dusuncevetoplum/issue/54892/719142>.
18. Koç Y. Beden eğitimi dersi sportmenlik davranışı ölçeği (BEDSDÖ). *Erzincan Üniversitesi Eğitim Fakültesi Dergisi*, 2013; 15(1), 96-114. Retrieved from <https://dergipark.org.tr/tr/pub/erziefd/issue/6010/80380>.
19. Lamonedá J, Huertas FJ. Effects of a fair play program applied to young football players to improve sportspersonship. *Rev. Iberoam Psicol. Ejerc Deporte*, 2017; 254, 244–254. Available at: <https://www.redalyc.org/articulo.oa?id=311148817011>.
20. Méndez Giménez A, Fernández Río J, Méndez Alonso D. Sport education model versus traditional model: effects on motivation and sportsmanship. *Revista Internacional de Medicina y Ciencias de la Actividad Física y del Deporte*, 2015; 15(59): 449–466. Doi: <http://dx.doi.org/10.15366/rimcafd2015.59.004>.
21. Naylor AH, Yeager JM. A 21st-century framework for character formation in sports. *Peabody Journal of Education*, 2013; 88, 212–224. Doi: <https://doi.org/10.1080/0161956X.2013.775878>.
22. Pehlivan Z, Konukman F. Fair-play kavramının geliştirilmesinde okul sporunun yeri ve önemi. *Sportmetre Beden Eğitimi ve Spor Bilimleri Dergisi*, 2004; 2 (2), 49-53. Doi: 10.1501/Sporm_0000000028.
23. Pennington C. Moral development and sportsmanship in physical education and sport. *Journal of Physical Education Recreation and Dance*, 2017; 88(9), 36–42. Doi: <https://doi.org/10.1080/07303084.2017.1367745>.
24. Rasmussen K. The changing sports scene. *Educational Leadership*, 2000; 57(4), 26–29.
25. Sanchez RD, Hanrahan T, Concannon J. Promoting sportsmanship awareness: An application of teaching a personal and social responsibility model in middle school physical education. *Journal of Physical Education and Sport Management*, 2021; 12(1), 19-33. Doi: <https://doi.org/10.5897/JPEM2021.0360>.
26. Scheid JL, Lupien SP, Ford GS, West SL. Commentary: Physiological and psychological impact of face mask usage during the Covid-19 pandemic. *International Journal of Environmental Research and Public Health*, 2020; 17, 1–12. <https://doi.org/10.3390/ijerph17186655>.
27. Stoll SK, Beller JM. The effect of a longitudinal teaching methodology and classroom environment on both cognitive and behavioral moral development. *Proceedings from the American Alliance for Health, Physical Education, Recreation and Dance*, 1993; Washington, DC.
28. Şeker İ, Uslu T. Spor yapan ve spor yapmayan üniversite öğrencilerinin sosyal beceri, saldırganlık ve spor ahlakı düzeylerinin incelenmesi: Harran Üniversitesi örneği. *Spor Eğitim Dergisi*, 2020; 4(2), 172-189. Retrieved from <https://dergipark.org.tr/tr/pub/seder/issue/54136/740226>.
29. Tabachnick BG, Fidell LS. *Using multivariate statistics*. Boston, Pearson, 2013.
30. Ulukan H, Ulukan M, Esenkaya A. Atletlerde sportmen davranış ve spora yönelik tutumun incelenmesi. *Bilge Uluslararası Sosyal Araştırmalar Dergisi*, 2021; 5(2): 169- 180. Doi: 10.47257/busad.1020861.
31. Wallhead T, O'Sullivan M. Sport Education: Physical education for the new millennium? *Phys. Educ. Sport Pedagog*, 2005; 10, 181–210. Doi: <https://doi.org/10.1080/17408980500105098>.
32. Who. [homepage on the Internet] Geneva: Media centre; [Erişim Tarihi: Ocak 2, 2022]. Physical activity, Fact sheet. 2020. Available from: <http://www.who.int/en/>.

33. Yıldırım İ. Fair play eğitiminde beden eğitiminin rolü. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, 2005; 10(1), 3-16. Retrieved from <https://dergipark.org.tr/tr/pub/gbesbd/issue/27983/304948>.
34. Wahl-Alexander Z, Sinelnikov O, Curtner-Smith M. A longitudinal analysis of students' autobiographical memories of participation in multiple Sport Education seasons. *European Physical Education Review*, 2017; 23(1), 25-40. Doi: <https://doi.org/10.1177/1356336X15624246>.
35. Sinelnikov OA, Hastie PA. Teaching sport education to Russian students: An ecological analysis. *Eur. Phys. Educ. Rev.*, 2008; 14, 203-222. Doi: <https://doi.org/10.1177/1356336X08090706>.