



Interest of Secondary School Pupils in Sport and Physical Activities

Simon Brrunovský

Comenius University, Faculty of Physical Education and Sports, Bratislava, Slovak republic
e-mail: simon.brunovsky@uniba.sk

Abstract

This study examines the interest of secondary school students in sports and physical activities. Adolescence is a critical period characterized by physical and psychological changes, affecting students' motivation and engagement in extracurricular activities, including sports. The study aims to analyze the level of participation in physical activities among students and identify the factors influencing their involvement. A questionnaire-based survey was conducted among 375 students (182 females, 193 males) aged 15–20 years from four secondary schools. The results indicate a declining trend in active sports participation with increasing age, with 82% of female students and 75% of male students engaging in at least one sport under professional supervision. However, 18% of females and 25% of males do not participate in organized sports. Additionally, 97% of females and 90% of males meet the recommended level of physical activity for a healthy lifestyle, including recreational activities. The findings highlight the importance of physical education teachers in motivating students and implementing innovative approaches to increase engagement. While male students predominantly prefer team sports such as football, female students favor individual activities like dance, fitness training, and swimming. The study suggests that enhancing physical education through attractive, diverse, and modern teaching methods could foster greater participation in sports and physical activities among adolescents.

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corresponding author: simon.brunovsky@uniba.sk

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A. Introduction

High school students fall into the category of adolescents. This period is characterized mainly by its turbulence and is one of the most difficult periods in a person's life. In addition to psychological changes, one of the most significant changes is the physiological change in body proportions. Changes in behavior, opinions, and interpersonal relationships are also common. Interests, attitudes, motivation, and individual life models also change (Stromájer et al., 202; Barnová et al., 2025). A major theme in this period of life is spending extracurricular activities and shaping one's own body, as students become aware of differences in appearance and significant changes are noticeable during this time. According to a study conducted on adolescents, 57.4% of girls and only 34.3% of boys are satisfied with their bodies (Barbierik et al., 2023). Thanks to these findings, it is possible to motivate students towards physical activity, which has a significant impact on body shaping and fat reduction. A very important factor is the physical education and sports teacher, who in some cases is the only expert on the proper implementation of physical activities in students' lives. It is equally important to know students' interests and use innovative forms that increase the interest and motivation of high school students themselves. The teacher must know the latest trends and be able to communicate properly with students (Petříková and Brunovský, 2023; Vančo and Zemánková, 2023).

Sport influences many people around the world and has become a global cultural phenomenon (Giulianotti and Numareto, 2018). It

affects daily life in schools, companies, states, and many organizations regardless of gender, race, religion, and sexual orientation. Sport, as a complex consisting of many sporting disciplines, could be characterized as a physical activity with psychological demands governed by rules (Ketelhut, 2021) and (Beissel et al., 2022). To consider a certain physical activity as a sport, Mareš (2023) states three basic characteristics:

- Competitiveness
- Effort to achieve maximum performance
- Uniform rules

Sport is closely related to play from which sport itself evolved over time. Participation in a game or sports activity motivates participants, they participate voluntarily, they have precise rules that all participants must follow, and the outcome can change throughout the game. Prudky (2022) defines the following functions of modern sport:

- Educational function of sport
- Cultural function of sport
- Health function of sport
- Cognitive function of sport
- Representative function of sport
- Social function of sport
- Economic function of sport.

Sports or proper and regular movement is important for children especially in terms of healthy development. If there was insufficient physical activity in childhood, it would have a significantly negative effect on the child's physical condition and possible growth disorders, as well as a negative impact on their mental development. For children, we understand sport as all movement and sports activities (tag, hide-and-seek, team sports...) during

which they fulfill needs arising from their age (need for social contact, recognition by the collective, emancipation). Physically active children have functional abilities of the organism at a higher level compared to children who had significantly less physical activity (Chaput et al. 2020 and Ilić et al., 2024).

Sport and movement play an irreplaceable role in shaping society in many areas of life. It significantly influences not only the life around us but also within ourselves. Sport is especially a place of common socialization for different people who are united by the sport given. Sport itself does not cause changes in personality traits, attitudes, and behavior of people. It acts simultaneously with specific influences of the social environment and the broader context of socialization processes (Turner and Carnicelli, 2017).

Research by Johansen et al., (2023) and Husu et al., (2024) shows a decreased interest in physical activity among students with increasing age. Primary school students seek physical activities to a greater extent not only at school but also in extracurricular activities, compared to high school students. Van Sluijjs et al. (2021) in his research states that up to 20% of students do not engage in physical activities or sports outside of physical education and sports classes. This situation is alarming in terms of insufficient movement for $\frac{1}{4}$ of students, with this number increasing with the advancing age of students.

The Covid-19 pandemic brought reduced activity among students, but the return of students to in-person teaching restarted their interest in

physical activity. This fact was discovered by Brunovský and Petriková (2021) in their research, where interest and especially active participation in physical activities of male students increased by 7% after the Covid-19 pandemic, and in the case of female students, it was an improvement of 21%. Brunovský (2022) and Henjilito et al. (2023) also mentions the need for increased motivation of students by physical education and sports teachers. He recommends using innovative methods and also popular activities. Thanks to these facts, it is possible to activate even less active students.

Oja and Piksööt (2022) found from his research that 88.7% of boys and up to 93.1% of girls are aware of the importance of physical activity for their health. Approximately the same number of male and female students also confirmed the importance of sport for individual health. The results show a high awareness among high school students, but it is necessary to show them attractive ways of physical activities that could significantly motivate them.

Based on the findings, physical activity among secondary school students is low and there is a need for increased physical activity among them. Our effort is to reveal the current status and also to find out their preferences. Based on the given findings, we can adjust the teaching process in schools to be more effective.

Hypothesis 1: We assume that more girls are engaged in sports than boys. Hypothesis 2: We assume that more girls are engaged in physical activities than boys. Our aim is to find out the current interest in specific sports activities preferred by boys and girls. Based on the given findings, it

is possible to adjust the educational process of physical and sport education in schools and to engage pupils.

B. Methods

This ex-post facto study examined both quantitative and qualitative indicators related to physical activity among secondary school students. The research aimed to enhance the current understanding of students' movement preferences while providing recommendations for optimal physical activities.

We involved 375 students from four high schools in our research from grades 1 to 5. The research group consisted of 182 girls (48.5%) and

193 boys (51.5%). In total, we tested 375 students. All subjects were between 15 and 20 years old. In Table 1, we present the number of boys and girls in all age categories. Through collaboration with selected schools and the questionnaire method, we reached a substantial portion of the student population, obtaining relevant data and results. We chose high school students due to their higher age, which enhanced the quality of results. Additionally, high school students typically demonstrate lower motivation and increased resistance toward physical activity, particularly in school physical education and sports classes.

Table 1 Research Group

Age	Number of Girls	Number of Boys	Total	% Representation
15 years	44	28	72	19,2%
16 years	43	39	82	21,9%
17 years	41	43	84	22,4%
18 years	29	45	74	19,7%
19 years	17	29	46	12,3%
20 years	8	9	17	4,5%

For data collection, we used a questionnaire designed for students at the selected school. The questionnaire was completed electronically through Google Forms. Teachers at the school assisted us with distribution and supervision of students during completion. The questionnaire contained closed-ended questions investigating students' participation in any sports and other physical activities besides sports. Additionally, there were open-ended questions where students listed sports and physical activities they enjoy.

We initiated our research by creating a questionnaire and selecting

a suitable school. We sent an electronic questionnaire to the school, which we designed according to our specific requirements. Student testing was conducted at the end of 2024, and data evaluation took place in 2025. All student responses were recorded using Google Forms and subsequently processed in Excel. From the responses, we analyzed students' attitudes toward sports and physical activity, as well as which sports activities could potentially interest them. This selection of sports activities is crucial for improving physical education and sports in schools.

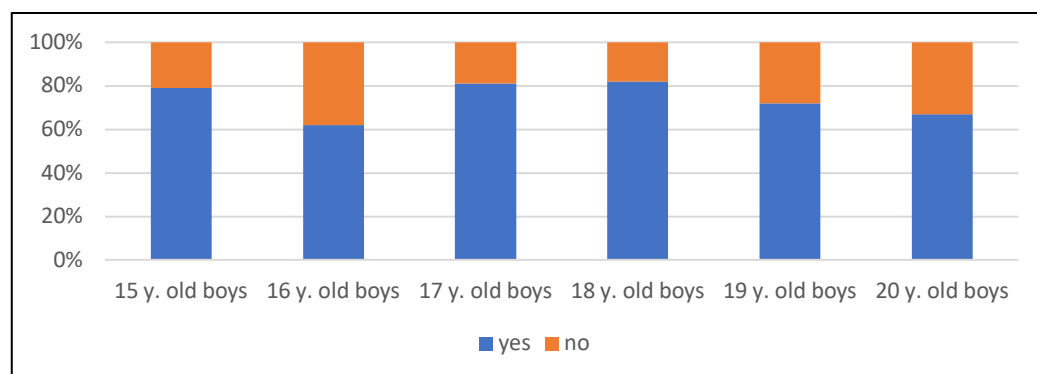
Data recording and evaluation were performed using Excel software, primarily employing mathematical-statistical methods (arithmetic mean, median, percentage representation).

C. Result and Discussion

The first question we asked high school female students was: "Do you actively engage in at least one sport?" (Active engagement means at least 3x60 minutes per week under professional supervision of a coach). In Graph 1, we present the responses of female students according to their age. With increasing age, there is a noticeable decrease in active sports participation, which may be caused by, for example, preparation for university and changes in interests and priorities. The overall results show that 82% of high school female students actively engage in any sport,

and 18% do not participate in sports in extracurricular activities. The results indicate a need for higher motivation, especially among older female students.

From the responses of male students in Graph 2, whom we asked the same question, we recorded worse results compared to girls. However, we can also observe a slightly decreasing tendency in sports activity with the increasing age of the students. This may be caused by the difficulty of studies, changing interests, or preparation for university studies. From the overall results, 75% of male students engage in sports, while 25% do not participate in any sport. Based on the results, we conclude the confirmation of hypothesis 1 implying that girls are engaged in any sport compared to boys.



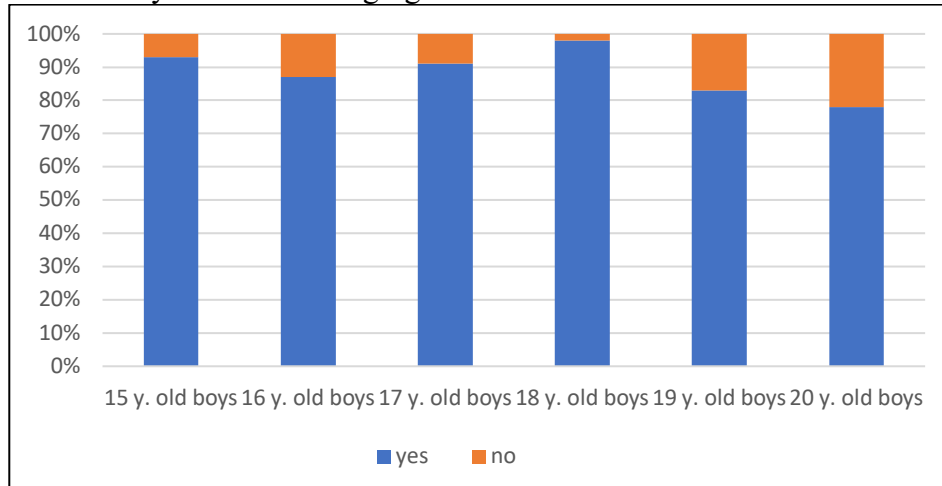
Graph 1 Girls' Sport

The next research question we asked the female students was: "Do you engage in physical activity that contributes to a healthy lifestyle?" Students who don't participate in a specific sport but engage in various recreational physical activities for at least 3x60 minutes per week without professional supervision of a coach could also answer positively. The responses from female students show that up to 97% meet these conditions, and 3% do not engage in any physical

activity for a sufficient duration. Graph 3 illustrates the responses of female students based on their age. Up to 100% of girls aged 15, 19, and 20 engage in any physical activity lasting at least 180 minutes per week. We recorded worse results among female students aged 16-18, with the poorest results observed among 16-year-olds. Physical activity of boys compared to girls is at a lower level. From the responses to the same question, it is clear that 90% of male

students perform any physical activity in the specified volume. 10% of students do not perform it. Graph 4 shows the individual responses of male students according to their age. There is a noticeable decrease in physical activity with increasing age

among male students. We recorded the best results in the 18-year-old category. From the results given we can confirm hypothesis 2, which proves that girls engage in any kind of physical activity more than boys.



Graph 2 Physical Activity of Boys

We further asked the students: "What physical activity did you enjoy in the past?"

Table 2. Favorite sports activities

Boys	Number of Responses	Girls	Number of Responses
Soccer	46	Dancing	41
Running	28	Strength training	34
Martial arts	27	Swimming	28
Strength training	20	Running	23
Swimming	15	Martial arts	19
Tennis	12	Gymnastics	14
Floorball	8	Volleyball	12
Ice hockey	7	Soccer	11
Basketball	6	Floorball	9
Triathlon	5	Tennis	9
Dancing	5	Cycling	7
Skiing	5	Triathlon	6
Cycling	4	Horse riding	5
Hiking	4	Yoga	4
Table tennis	3	Skiing	4
Skateboarding	3	Basketball	4
Volleyball	—	—	—

As movement to music is typical for girls, this was also demonstrated in our research (Table 2).

Discussion

The findings of this study indicate that female students demonstrate higher participation in physical activity, both under professional supervision and independently, compared to male students. This result is consistent with previous studies by Brown (2017) and Dennaoui et al. (2024), which reported a greater interest in sports among adolescent girls. However, it contrasts with findings by Öztürk, Kose, and Özcan (2021) and Hopkins et al. (2022), who identified higher participation levels among boys. These inconsistencies suggest that participation in physical activity is strongly influenced by contextual, cultural, and individual factors, rather than gender alone.

In terms of activity preferences, female students predominantly chose dance, strength training, swimming, running, martial arts, and gymnastics, while male students preferred football, running, martial arts, strength training, and swimming. The high popularity of swimming among both groups may be attributed to increased exposure through school-based programs and a growing awareness of its health benefits, as also highlighted by Labudová (2024). Notably, dance emerged as the most preferred activity among female students, which aligns with findings by Rustad et al. (2025) and Marcen et al. (2024), suggesting that aesthetic and fitness-oriented activities play an important role in female adolescents' motivation to engage in physical activity.

Furthermore, strength training was also highly preferred among both genders, indicating an increasing awareness of physical fitness, body composition, and health-related outcomes. Endurance-based activities such as running and swimming were also prominent, reflecting their accessibility and effectiveness in improving cardiovascular fitness. Interestingly, martial arts appeared among the top preferences for both groups, indicating a growing interest in activities that combine physical fitness, discipline, and self-defense.

From a broader perspective, the findings suggest that individual and non-team sports tend to be more dominant among students compared to team sports, particularly among female students. While football remains the most popular sport among male students, consistent with global trends and previous research (Frömel et al., 2022; Zeng & He, 2024), male students also show a tendency toward individual activities such as running and strength training. This shift may reflect changing lifestyle patterns and personal fitness goals among adolescents.

The results also highlight that selecting appropriate types of physical activity alone is insufficient to ensure student engagement. The effectiveness of physical education depends significantly on the teaching approach employed. The integration of innovative teaching methods, experiential learning strategies, and the use of modern instructional media can enhance student motivation and participation. Previous studies by Brunovský (2023) and Buen et al. (2024) support the use of non-traditional games, frequent variation of activities, and rule modifications to

create a more engaging learning environment.

Therefore, it is essential to develop more student-centered physical education programs that align with students' interests and preferences. Enhancing teacher involvement through effective lesson planning, the use of appropriate teaching aids, and optimal time management during classes can further improve learning outcomes. This approach is supported by McGuine et al. (2021) and Zemánková and Vančo (2023), who emphasized that engaging and well-structured physical education programs can positively influence students' motivation and their participation in extracurricular physical activities.

D. Conclusion

Comparing the responses of female students to the first and second questions, it was found that 82% of female students engage in physical activity under professional supervision, 15% participate without supervision, and 3% do not engage in any physical activity. In contrast, among male students, 75% engage in physical activity under professional supervision, 15% without supervision, and 10% do not engage in any physical activity. These findings indicate that female students show higher participation in both supervised and unsupervised sports activities, whereas male students demonstrate relatively lower participation levels.

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F. Conflict of Interest

No conflict of interest.

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