Gender and environmental conditions regarding the attitudes of German high-school students towards selected aspects of school physical education

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Abstract

Problem Statement and Approach. Physical education is an important element of the didactic and educational process in Germany. Its purpose, apart from school educational activities, is to prepare school students for sports and physical activity after completing school education. The aim of this paper is to examine the attitudes of German high-school students towards physical education at school, taking the sex of the respondents and the size of their place of residence (large city, small town) into account. This concerns the position of physical education among other school subjects, as well as students' declarations about their grades obtained for physical education, opinions on the number of hours devoted to this subject and the intention to practice sports after completing school education. **Material and Methods.** The sample comprised 387 school students. Two research tools were used in the study on students' attitudes towards physical education. The first is the Questionnaire of Attitudes and Behaviour Towards Sports Activity. The second one used in the study is a value scale aimed at determining the place and importance of physical education compared to other school subjects. **Results.** The results of the research show generally positive attitudes of the respondents towards physical education. It concerns great interest in the subject of physical education, especially among boys, as well as the desire to increase the number of hours devoted to physical education at school. Moreover, regardless of gender and size of place of residence, the respondents declare that they obtain good and very good grades in physical education and they intend to practice sports after completing school education. **Conclusions.** The results of the research indicate positive attitudes of students towards school physical education and may be useful as guidelines for optimising the process of school physical education.

Keywords: school sport, secondary schools, pupils, Germany.

Introduction

Physical education plays a significant role in the German educational system. It is a compulsory school subject as well as an important element of the overall didactic and educational process. After the German unification, the position and role of physical education in the school education system were centrally determined at special meetings of the Conference of Ministers of Culture and Science of all lands. The most imperative of these was the Conference of the Ministers of Culture and Science on February 22, 1991 in Bonn, which approved, inter alia, a uniform physical education curriculum for all German schools throughout the country following its unification. Physical education was officially recognised as an independent subject of school curriculum and, at the same time, a component of the school's educational programme.

At this conference, the following main goals of school physical education were also identified:

- implementing systematic physical activity;
- preserving and enhancing health;
- developing motor skills;
- supporting the development of volitional and personality-related traits;
- supporting mental development;
- stimulating sports interests and raising awareness of the benefits from regular exercise;
- creating a base for cooperation with school and after-school sports clubs.

(Press release from the 252nd meeting of the Conference of the Ministers of Culture and Science, Bonn 1991).

As earlier mentioned, physical education is a compulsory school subject in Germany. It is included in the curriculum from the first year of primary education to the final year of high-school. It is worth adding that in higher educational institutions, so-called academic sport, which is not a compulsory subject, is nonetheless of great popularity among students. In primary and secondary education, the average number of hours devoted to physical education is 3 hours per week. It should be emphasized here that both at primary and secondary schools, additional sports activities are organised, an average of 2 hours a week, while for students participating in so-

called "all-day school", there are also 1-2 hours of sports activities which take place every day in the afternoon (Baumann & Holze, 2015).

At the beginning of the 1970s, dynamic development of theories and didactic concepts occurred with regard to school physical education in Germany. Various theories, models, concepts or positions have emerged which, according to Balz (2009), should always be analysed in light of separate criteria. A typical example here is the "concept of sports", which dates back to the period when physical education was transformed from gymnastic to more sports-related. According to this concept, developed by Söll (1995), the school's task is to familiarise students with various forms of sports activity divided into 3 basic categories:

1. Fitness – e.g. track-and-field;
2. Artistic – e.g. instrumental gymnastics;
3. Fun – e.g. sports games.

The selection of appropriate sports disciplines takes place according to the above-mentioned criteria and the objectives are physical exercise of the body and learning selected sports and physical forms within the context of extracurricular, free-time sports activities. Prohl (2012a), Stibbe (2013) and Aschebrock & Stibbe (2013) emphasize the importance of Kurz's concept (1977), the basic element of which is "the ability to carry out action in the area of sports activity", and it is used both in school physical education and during extracurricular sports activities. The author is of the opinion that the positive attitude of students towards school activities in physical education may have a decisive influence on undertaking sports activities in their free time. Grössing (2007) also emphasizes the great role of physical education both in terms of school sports and physical activities, as well as preparing students for sports activities after completing school education.

At the end of the 1970s, Ehni (1977) and Kurz (1977) developed a multi-perspective didactic concept of physical education, in which they particularly emphasized 2 directions of pedagogical activity:

- the meaning of human sports activity;
- the scope of the ability to act in terms of active participation in sport.

The subject of the didactic assumptions regarding this concept is broadly understood sport and motor activity in terms of motor learning and physical exercise of the body, acquiring technical as well as sport skills and competences, using sports equipment, gaining experience in the field of sports competition, reaching the ability to cooperate and communicate in a group, etc. In addition, deliberate pedagogical activity during physical education classes is emphasized, which should lead to the combination of skills in sports activities with a permanent, positive emotional state towards sports. This is treated equally with the basic goal of physical education. In following years, the multi-perspective concept of physical education was further developed by Kurz (2004), who distinguished 6 directions concerning the sense of sport and physical activity:

1. *Sport and motor fitness* understood as general physical activity, sports possibilities and skills, competition and sports rivalry, experiences related to practicing sports;
2. *Health* understood as well-being, the opportunity to relax and improve fitness level;
3. *Impressions* understood as exploration, experiences and incidences related to playing sports, experiences related to the phenomenon of nature;
4. *Expression* understood as shaping expressive skills of the body in terms of sport and physical activity;
5. *Interpersonal communication* understood as the possibility and ability to devote time to sports, social community;
6. *Emotions, tension* understood as undertaking risky forms of sports activity and sports competition as a source of experiences.

According to the multi-perspective concept of physical education, the above-mentioned types of sense in sports activities are also directly related to the second direction of pedagogical activity: "sports action ability". Kurz (2004) additionally presents the following 4 elements, which are the result of the skill of carrying out sports action. These are:

1. Recognising the sense of sports activity;
2. Integration of lifestyle into sports activities;
3. Understanding the idea of sport;
4. Organisation of sports activities.

In the multi-perspective concept of physical education, Balz and Neumann (2013) distinguish the following 6 main pedagogical perspectives, which are also understood as the objectives of the school physical education process:

1. Sport and motor education in terms of improving receptivity and extending experiences related to movement;
2. Aesthetic education concerning the movement and expression skills of the body;
3. Education concentrated on responsibility and courage in terms of sport and physical activity;
4. Upbringing focused on sport and motor skills;
5. Social education concerning co-operation and competition in sport and interpersonal communications;
6. Health education understood as promoting and supporting health, as well as raising the level of pro-health awareness.

Moreover, Balz and Neumann (2013) also point to other important pedagogical ideas of physical education, which include: education focused on communing with the natural environment, understanding gender differences and roles in sport, multicultural issues, teacher-student relations and school sports development. Due to its constant topicality, the multi-perspective concept of physical education has been used in practice among the educational programmes of schools in Germany for many years (Grössing, 2007; Kurz, 2011). This concept is also part of the latest concept of physical education in Germany - school sports activities of an educational nature. Balz (2009) developed this concept and presented a general didactic model for school physical education. This model is based on 3 principles:

1. The aim of the educational activity concerns motor and sports skills as well as the development of a pupil's personality;
2. The scope of the content is understood as a variety of sports and other forms of movement;
3. Open and closed methods of the teaching process.

This model is based on 3 educational concepts of physical education:

1. Conservative concept - education focused on sports activity;
2. Alternative concept - education through movement;
3. Indirect concept - education focused on sport and through sport.

The main objective of the conservative education concept for sports activity is to familiarise students with the principles of physical culture, with particular emphasis on sports activities, while the goal is to acquire sports and motor skills that condition active participation in sports, mainly in free time. The didactic content of this concept includes sports disciplines that will potentially be practiced by young people both in the present (temporarily) and in the future. On the other hand, the pedagogical goal is, apart from shaping the body, to equip the student with motor skills that will help a student to act consciously and rationally in the area of general physical activity. Prohl (2012a) adds that with this goal, it is also necessary to define appropriate shaping of a student's personality traits, thanks to which rational motor activity will be possible. Balz (2009), in contrast to the conservative concept (classic sports), included broadly-understood motor activity into the content regarding the alternative concept of physical education. The third concept of physical education - the so-called indirect concept is a complex form of the pedagogical approach to physical education. This concept shows the dual task of school physical education. Students participating in physical education should be physically prepared for active participation in sport, and be able and willing to be physically active by appropriate personality education. The basic goals regarding the concept of indirect physical education include the ability to act and make decisions in the field of sport and physical activity, while the content includes various forms of sport activity (sports disciplines and other forms of movement).

The final didactic model of physical education in the educational aspect was presented by Prohl (2012b), according to which the most important elements are motor and sports competences as well as personality traits of the student. This original educational potential, which creates the dual task of physical education, can be used as content in various areas of movement, where pedagogical perspectives may provide an orientation framework for various forms of physical education activities and sports. The areas of movement include such content as: games, gymnastic exercises with and without the use of instruments, gymnastic and dance exercises, running, jumps, throws, swimming, exercises performed with a partner, strength and endurance training, and others (Wydra, 2001; Stibbe & Aschebrock, 2007; Prohl, 2012b).

The concept of physical education regarding an educational profile has been used in the didactic curriculums of German education since 2000, while in the 1990s, discussions on the pedagogical orientation of physical education and its justification for existence in the school educational programme intensified. Initially, this concept was applied in the most populous German land - Nordrhein-Westfalen (17.9 million inhabitants), and in the following years in other German lands (Aschebrock, 2013). Concluding, it should be stated that according to the main concepts of school physical education in Germany, the great role of this subject should be emphasized, especially in preparing students for sports activities after completing their school education. Moreover, Marttinen et al. (2018) believe that getting to know students' attitudes towards physical education can provide useful information about their perception of physical education classes, and can also be useful in formulating important guidelines for teachers in the process of physical education carried out at school. With this in mind, as well as the small number of studies on the quality of physical education classes, the aim of this paper is to examine the attitudes of German high-school students towards physical education at school. This mainly concerns the place of physical education among other school subjects, as well as students' declarations about their grades obtained for physical education, opinions on the number of hours devoted to this subject and the intention to play sports after completing school education. In the research took, the gender of respondents as well as their residential environment (big city, small town) were taken into account. The following research questions were formulated:

1. What is the position of physical education among other school subjects?
2. What is the attitude towards the number of obligatory hours of physical education?
3. What grades do school students receive in physical education?
4. What is the prognosis for school students to undertake sports after graduation?
5. Do the sex and environmental as well as housing conditions of the surveyed youth differentiate their attitudes towards physical education?

Material and methods

Participants

387 persons at the age of 18 ($M=18.48\pm0.31$ years) from technical colleges and high schools in southern Germany were surveyed, included 91 boys and 97 girls from large cities (more than 500,000 inhabitants) as well as 93 boys and 106 girls from small towns (approximately 10,000 inhabitants).

The research was personally carried out by the author of this work. The adolescents included in the study were selected in accordance with the rules of random sampling, based on random selection of school classes (Rea & Parker, 2014).

Research methods

In the diagnostic survey method, a questionnaire technique was used, thanks to which it was possible to obtain the respondents' written answers to the posed questions. Two research tools were used in the study on students' attitudes towards physical education. The first tool used in the study is the so-called Questionnaire of Attitudes and Behaviour Towards Sports Activity prepared according to the assumptions proposed by Digel (1996) and Wydra (2001). It consists of 3 parts:

- Declarations of the weekly number of hours of physical education (sufficient, too small, too big);
- Grade obtained in physical education (very good, good, satisfactory);
- Declarations of intention to play sports after graduation (confirming, denying, no decision).

The second tool used in the study is the so-called a scale of values, aimed at determining the position and importance of physical education compared to other school subjects such as: German, mathematics, English, physics, history, geography, biology, art education and Latin (Rost, 2004). The criterion of this study is the attitude of the surveyed students towards particular school subjects.

Statistical analysis

The results of the author's research were subjected to statistical analysis using the ROC (Receiver Operating Characteristic) method. The purpose of this method was to determine the significance of differences between the variables: gender and environmental conditions of the studied youth, as well as to determine the relative value of the respondents' ability to participate in a given activity or occurrence of a specific behaviour. It was determined using the Odds Ratio (OR) according to Bradley (1997). Furthermore, the level of statistical significance was assumed as $p<0.05$.

Results

The position of physical education among other school subjects declared by the German school students

In order to determine the position of physical education among other school subjects, the so-called value scale was used. In Figure 1, results are demonstrated for the preferences of individual school subjects declared by the surveyed youth from German schools. It follows that the favourite school subjects are physical education, art education and English, while Latin is considered to be the least favoured subject.

Fig. 1. Favourite school subjects declared by German school students (in percentages)

According to the declarations of the surveyed boys, regardless of their place of residence, physical education was definitely considered their favourite school subject (Figure 1). Further parts of this list include English, physics and mathematics. It is worth noting the greater geography preference of the boys in the large cities compared to their counterparts in smaller towns ($p=0.00364$; $OR=2.38$). In addition, for boys from large cities, it is more important to have subjects such as art education ($OR=1.74$), German ($OR=1.43$) or English ($OR=1.26$), although no statistically significant differences were noted among these subjects ($p>0.05$).

Among the surveyed girls from both backgrounds (Figure 1), the favourite school subject is art education, whereas physical education is ranked second. Further positions were occupied by biology, German

and history, as well as the less favoured scientific subjects such as mathematics or physics. Nonetheless, no statistically significant differences ($p>0.05$) were found among them. It should be emphasized that according to ROC statistical analysis, girls from big cities prefer more English because they were twice as likely to choose this subject than their peers from small towns ($OR=2.11$).

In accordance with the results of ROC statistical analysis (Table 1), the studied boys and girls perceive some school subjects in different ways. The boys are much more likely to prefer mathematics than the girls, as they declared preference of this subject almost three times more often ($OR=2.81$; $p=0.0024$). Additionally, physics ($OR=2.67$; $p=0.00788$), English ($OR=1.83$; $p=0.00441$) and physical education seem to be more popular among boys than girls. For girls, art education is more important for them than boys, as shown by statistical analysis regarding this subject ($OR=1.52$; $p<0.00001$). Other school subjects have similar significance for the studied boys and girls, which is confirmed by the lack of highly relevant differences and the similar Odds Ratio values in these categories.

Table 1. Favourite school subjects declared by the German school students

(boys: $n=184$; girls: $n=203$)

Subject	AUC	SE	95% CI	p	OR
Physical Education	0.6359	0.02831	0.5804 to 0.6914	0.00000*	1.74
Geography	0.5077	0.02943	0.4500 to 0.5654	0.79330	1.08
English	0.5838	0.02911	0.5267 to 0.6409	0.00441*	1.83
Physics	0.5782	0.02921	0.5209 to 0.6355	0.00788*	2.67
Mathematics	0.5893	0.02911	0.5323 to 0.6464	0.00240*	2.81
German	0.5141	0.02944	0.4564 to 0.5718	0.63220	1.17
Art Education	0.6458	0.02796	0.5910 to 0.7007	0.00000*	1.52
History	0.5141	0.02938	0.4564 to 0.5716	0.63350	1.04
History	0.5141	0.02938	0.4564 to 0.5716	0.63350	1.04
Biology	0.5088	0.02948	0.4512 to 0.5665	0.76360	1.02
Latin	0.5063	0.02943	0.4486 to 0.5640	0.83110	1.18

*level of significance $p<0.05$

Declarations of German school students regarding the number of physical education lessons

One of the most important attitudes towards physical education, it seems, is the opinion expressed in the declarations of the surveyed students regarding the number of hours of this subject carried out by the school. According to the results of the research (Figure 2), almost $\frac{1}{2}$ of the examined youth think that the number of hours of physical education is too small and 38% consider this number sufficient. In addition, due to the low percentage of respondents' answers stating "the number of physical education hours is too high" (13%), it should be considered that the school youth in question has a generally positive attitude towards school physical education.

Fig. 2. Declarations of German students regarding the number of physical education lessons (in percentages)

ROC statistical analysis on the opinion of German youth concerning the number of hours of physical education at school (Table 2) allowed to indicate that there are statistically significant differences between genders in this area ($p<0.0000$). Girls almost 4 times more often declare that the current number of hours of physical education is sufficient for them ($OR=3.81$), while boys more than twice as often declare that they would like to have more hours of physical education at school ($OR=2.21$).

Table 2. Declarations of German school students regarding the number of physical education lessons (boys: n=184; girls: n=203)

Cut-off	AUC	SE	95% CI	p	OR
Overall	0.6743	0.02800	0.6194 to 0.7292	0.00000	
>0.500					3.81
>1.500					2.21
>2.500					0.87

Answer categories: 1. Enough, 2. Too small, 3. Too big

The results of the statistical analysis included in Table 3 and 4, relate to declarations of German boys and girls from various residential environments on the number of hours of physical education at school. Based on the results of the analysis, it can be concluded that both the studied boys and girls have similar needs regarding the number of hours of physical education because no statistically significant differences were found. Also noteworthy are the twice as frequent declarations of boys from large cities, stating that the number of hours of physical education is sufficient, and the 1.7 times more frequent declarations of boys from small towns who are of the opinion that the number of physical education hours at school is too big. The studied girls from small cities 1.64 times more often than girls from small towns declare that there are too many hours of physical education at school, while girls from large cities declare 1.23 times more often that for them, the number of physical education hours is sufficient.

Table 3. Declarations of German male students regarding the number of physical education lessons (large city: n=91; small town: n=93)

Cut-off	AUC	SE	95% CI	p	OR
Overall	0.5756	0.04206	0.4932 to 0.6581	0.07648	
>0.500					2.04
>1.500					1.07
>2.500					1.70

Answer categories: 1. Enough, 2. Too small, 3. Too big

Table 4. Declarations of German female students regarding the number of physical education lessons (large city: n=97; small town: n=106)

Cut-off	AUC	SE	95% CI	p	OR
Overall	0.5660	0.04021	0.4872 to 0.6448	0.1047	
>0.500					1.23
>1.500					1.08
>2.500					1.64

Answer categories: 1. Enough, 2. Too small, 3. Too big

Declarations of German school students on marks in physical education

School students' attitudes towards physical education may be assessed, among others, by the obtained marks in this subject. Figure 3 presents the results of research on received grades from physical education at the end of the previous school year. The most frequently issued mark in physical education was 'good', which was obtained by almost ½ of the respondents. A 'very good' mark was received by 1/3 of the surveyed German school students, while only 1/5 of the respondents received 'satisfactory' marks. Due to the dominance of 'good' and 'very good' marks (about 80%), it can be assumed that physical education is an important school subject for the examined German school students.

Fig. 3. Declarations of German school students on marks in physical education (in percentages)

The ROC statistics on the German school students' declarations regarding their most recent marks in physical education (Table 5) did not show statistically significant differences between the boys and girls ($p>0.05$). This gives rise to the conclusion that the examined boys and girls receive similar marks in physical education (OR values from 0.91 to 1.18).

Table 5. Declarations of German school students on marks in physical education
(boys: n=184; girls: n=203)

Cut-off	AUC	SE	95% CI	<i>p</i>	OR
Overall	0.5135	0.02952	0.4556 to 0.5714	0.64620	
>0.500					1.18
>1.500					0.97
>2.500					0.91

Answer categories: 1. Very good, 2. Good, 3. Satisfactory

The results of the statistical analysis included in Tables 6 and 7 relate to declarations of German boys and girls from various residential environments on the subject of physical education marks at school. Based on the results of analysis, it can be concluded that both boys and girls receive similar grades in this subject since no statistically significant differences were found in any category of responses ($p>0.05$).

Table 6. Declarations of German male school students on marks in physical education
(large city: n=91; small town: n=93)

Cut-off	AUC	SE	95% CI	<i>p</i>	OR
Overall	0.5289	0.04264	0.4453 to 0.6125	0.4985	
>0.500					1.05
>1.500					1.13
>2.500					0.97

Answer categories: 1. Very good, 2. Good, 3. Satisfactory

Table 7. Declarations of German female school students on marks in physical education
(large city: n=97; small town: n=106)

Cut-off	AUC	SE	95% CI	<i>p</i>	OR
Overall	0.5146	0.04066	0.4349 to 0.5943	0.7198	
>0.500					1.09
>1.500					1.01
>2.500					1.19

Answer categories: 1. Very good, 2. Good, 3. Satisfactory

Declarations of German school students on practicing sports after graduating from school

In the study, the opinions of German school students were also examined regarding their intended sport activity after completing school education. The vast majority of respondents declare their intention to practice sport after finishing school (Figure 4). At the same time, the very low percentage of respondents who do not intend to be active in sports in the future (8%) deserves to be emphasized. Taking into account all the opinions of the surveyed youth, it is possible to positively forecast their participation in sporting activities in the future.

Fig. 4. Declarations of German students on practicing sports after graduating from school (in percentages)

ROC statistical analysis regarding the German school students' declarations to practice sports after graduation (Table 8) did not show statistically significant differences between boys and girls ($p>0.05$). It should be emphasized that the surveyed girls 1.8 times more often than boys declare that they do not intend to do sports after graduation and almost twice as often, that they have not yet decided whether they will practice sports in the future (OR=1.98).

Table 8. Declarations of German school students on practicing sports after finishing school (boys: n=184; girls: n=203)

Cut-off	AUC	SE	95% CI	p	OR
Overall	0.5553	0.02914	0.4982 to 0.6124	0.06030	
>0.500					1.15
>1.500					1.80
>2.500					1.98

Answer categories: 1. Yes, 2. No, 3. I don't know

The results of ROC statistical analysis included in Tables 9 and 10 relate to declarations of German boys and girls from various residential environments about the intention to practice recreational sport after graduating from school. Based on the results of analysis, it can be concluded that both boys and girls report similar predictions because no response categories showed statistically significant differences ($p>0.05$). It is worth emphasizing that boys from large cities almost twice as often as boys from small towns declare that they do not yet know whether they will play sports after graduating from school (OR=1.84).

Table 9. Declarations of German male school students on practicing sports after finishing school (large city: n=91; small town: n=93)

Cut-off	AUC	SE	95% CI	p	OR
Overall	0.5243	0.04265	0.4407 to 0.6080	0.56850	
>0.500					1.15
>1.500					1.01
>2.500					1.84

Answer categories: 1. Yes, 2. No, 3. I don't know

Table 10. Declarations of German female school students on practicing sports after finishing school (large city: n=97; small town: n=106)

Cut-off	AUC	SE	95% CI	p	OR
Overall	0.5150	0.04067	0.4353 to 0.5947	0.7126	
>0.500					1.04
>1.500					1.14
>2.500					1.09

Answer categories: 1. Yes, 2. No, 3. I don't know

Discussion

As already mentioned at the beginning of the presented work, physical education has great significance in the functioning of the educational system in Germany. It is a compulsory school subject as well as an important element of the overall didactic and educational process. In numerous studies, the positive impact of physical education on taking up sports and recreational activity in one's free time has been emphasized (Kurz, 2004; Grössing, 2007; Balz, 2009; Prohl, 2012a; Aschebrock & Stibbe, 2013; Sawicki, 2015; Sawicki & Suchý 2017; Burrmann, 2020). Due to the significant relationship between school physical education and leisure, recreational and sports activities, it was decided to examine the behaviour and attitudes of school students towards selected aspects of physical education, including the position of physical education among other school subjects, opinions on the number of hours devoted to this subject, students' declarations about the grades obtained in physical education and the intention to continue playing sports after completing their school education.

In order to determine the place of physical education among other school subjects, the so-called value scale was implemented. The results of the authors' research allow to indicate that the most favoured school subjects among the surveyed students, regardless of the degree of urbanisation of their place of residence, include physical education, art education and English, with physical education being much more preferred by boys than girls (2nd place preceded by art education).

Similar research results are presented in the research conducted by Digel (1996), Kruber (1996) and Oppel (1996), who emphasize the great interest in physical education, especially among male youth. Wydra (2001), who examined school youth aged 10-18 years, found that the interest in physical education declines with age only among girls, who, aged 17-18, prefer English rather than school sports. Of similar opinion are Gerlach et al. (2006), Lazarević et al. (2015) and Burrmann (2020). Moreover, the very high popularity of school physical education among high-school school students is confirmed in the studies by Aust (2010), Vishnu et al. (2010), Zeng et al. (2011), Barney & Christenson (2012), Atan & Imamoglu (2016), Zengin et al. (2016), Keskin et al. (2017), Ding & Sugiyama (2018), Balga et al. (2019) and Muszkieta et al. (2019). Atan & Imamoglu

(2016), Balga et al. (2019) and Vashliaeva et al. (2019) also demonstrate the generally positive psychological attitudes of sports and physical culture students towards physical education and general physical activity.

Another important aspect of physical education, which was the subject of this research, was the attitude towards physical education expressed by the respondents' declarations about the number of hours devoted to this subject at school. According to the research results, almost half of the respondents believe that the number of hours devoted to physical education is too little, while 38% consider this number to be sufficient, however, significant differences were noted between the sexes. Girls almost 4 times more often declare that the current number of hours of physical education is sufficient for them (OR = 3.81), while boys more than twice as often declare that they would like to have more physical education classes at school (OR = 2.21). Taking the size of the respondents' place of residence (large city, small town) into consideration, no statistical differences were noted, which means that the demand for physical education hours is similar among people from both backgrounds. According to Kruber (1996), 60% of the students surveyed by him declared that they would like more hours of physical education, according to Wydra (2001), this was true for even 75% of boys and 41% of girls, while Opper (1996) also emphasizes the much greater demand for more hours of school physical education by boys. Seyda (2006) postulates the need for 1 hour of physical education at school daily. This opinion, nonetheless, is not met with wide interest among school students, especially girls.

Positive attitudes of school students towards physical education can be proved by the results of the author's research concerning high grades in physical education obtained by school youth. The most common grade in physical education turned out to be 'good', which was obtained by almost half of the respondents, while 1/3 of the examined German school youth received a 'very good' mark, and only 1/5 of the respondents received a 'satisfactory' grade. Neither the respondents' sex nor the size of place of residence effected their declarations regarding the assessment of physical education. Due to the high percentage of 'good' and 'very good' grades, it can be assumed that physical education is an important and valued school subject for the examined German youth. Similar results were obtained in the research by Kruber (1996), Klenk (2004) and Digel (1996), noting 36% of respondents received 'very good', 44% 'good', and 17% 'satisfactory' marks. In their studies, Opper (1996) and Wydra (2001) emphasized that male school youth achieve statistically higher grades in physical education than female youth. This may indicate a greater interest in physical education among boys. Gerlach et al. (2006), examining the attitudes of German school students, indicated the dominance of higher grades obtained in physical education by students of general secondary schools compared to youth from real and main schools, while the grades obtained for physical education were much higher (average mark: 'good') compared to those for mathematics and German (average grade: 'satisfactory').

Similar conclusions were also presented by other authors studying the issues of physical education in various types of German secondary schools, such as Stibbe (2010), Burrmann (2015) and Burrmann & Zander (2017) and Meyer (2020). In the work, opinions regarding the intention to continue carrying out sports activity following graduation were also assessed. The vast majority of respondents declare their intention to play sports after graduating from school. At the same time, it is worth emphasizing that there is a very low percentage of respondents who do not intend to be physically active in the future (7.9%). The statistical analysis did not allow to indicate any statistically significant differences concerning the declarations for future sports practice with regard to gender of the respondents or their environments. Taking the opinions of the surveyed youth into account, it is possible to positively forecast their participation in sports activities after completing school education.

Conclusions

Based on the analysis of the results of the author's research, the following conclusions may be formulated:

1. Taking the position of physical education among other school subjects into account, regardless of the size of the place of residence, the surveyed boys show more interest in physical education than girls.
2. In their declarations, surveyed male school youth expresses the desire for a significant increase in the number of hours of school physical education than female youth.
3. School youth, regardless of gender or size of place of residence, mostly achieve 'good' and 'very good' marks in physical education.
4. Regardless of the respondents' sex and size of their place of residence, the vast majority of respondents declare their intention to perform sports after graduating from school.
5. Declarations of German school students regarding selected elements of physical education indicate their positive attitudes towards school physical education.

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