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Attitudes of secondary school students towards physical education lessons

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Original article

Abstract

Introduction: Shaping students' attitudes towards effort, health, physical education lessons, and physical activity has become one of the main goals of physical education. Emotions play a crucial role in the educational process, as they influence student engagement and the long-term shaping of attitudes. Students' attitudes towards broadly understood physical culture impact their later behaviors related to health, regardless of the influence of school or family.

Material and methods: The study employed a diagnostic survey method using the Baumgartner and Jackson Attitude Questionnaire to measure attitudes in three dimensions: evaluation, intensity, and activity. The survey was conducted among 751 students from different secondary schools (59.4%), technical schools (32.5%), and vocational schools (8.1%) in Tarnów. The results were processed using various descriptive statistics and inferential techniques, with the significance level set at $\alpha = 0.05$.

Results: The overall opinions of students regarding their attitude towards physical education lessons can be considered optimistic (23.63 ± 3.69). Women (23.98 ± 3.20) showed slightly higher scores than men (23.28 ± 4.09), and the differences were statistically significant at the $\alpha < 0.05$ level. Men, on the other hand, attributed statistically significantly greater importance to the intensity (15.42 ± 4.39) and activity (12.74 ± 4.89) dimensions during lessons, which may have contributed to their stronger stimulation. The analysis of the results indicated that physical education lessons had a less positive value for students from general secondary schools (23.34 ± 3.57) compared to their peers from technical schools (23.89 ± 3.77). However, in both groups, positive attitudes prevailed.

Practical implication: When planning physical education lessons, it is worth considering all components and dimensions of attitudes towards physical culture, including physical education lessons. A holistic approach to the topic of shaping attitudes will allow for a stronger influence on the changes in this area of activity.

Keywords

- physical education
- student attitudes
- secondary school
- physical culture

Contribution

A – Preparation of the research project
B – Assembly of data
C – Conducting of statistical analysis
D – Interpretation of results
E – Manuscript preparation
F – Literature review
G – Revising the manuscript

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Introduction

Shaping attitudes towards effort, health, physical education lessons, and physical activity has become one of the basic goals of physical education.[1] This is facilitated by both lessons and the specific relationship between the teacher and students.[1,2,3,4,5,6] Creating appropriate interactions is one of the many challenges that teachers face when working at school.

Shaping the desired attitudes towards broadly understood physical culture is possible thanks to the appropriate saturation of lessons with emotional experiences.[7] According to the author, "even if the teacher makes students aware of what and why they will learn and provides a specific amount of information, but does not saturate the entire lesson with emotions, the effectiveness of his influence on shaping attitudes will be negligible".[7] A similar opinion is expressed by Leisterer and Jekauc,[8] who believe that the emotional activation of students during physical education lessons is important for the entire and long-term educational process. Emotions are considered a source of strong stimulation during physical education lessons, guiding the physical activity of children and adolescents.[9,10,11]

A properly developed system of attitudes and beliefs in students is one of the most important goals of education. The attitudes, behavior, and functioning of students are the results of the work of the educator and the role of education.[12,13,14] The impact of attitudes on human functioning is often complex and not always clear. However, "the attitude of a given person towards a specific object may influence his or her behavior in relation to this object (...), moreover (...) the attitude towards one attitude object may influence (...) behavior and attitudes towards other attitude objects (...) moreover, the attitude of one person may influence the behavior of another person".[15]

It is observed that individuals with different attitudes and values avoid each other, while people with similar attitudes and values become closer. How we respond to social signals, how we perceive them, and how we behave towards them depends largely on our attitudes.[16,17] "In sum, attitudes are a central issue in much research by social psychologists. Perhaps even more important is that they shape the social world of individuals, groups, and entire societies; attitudes are of fundamental importance for the everyday life of every person".[15]

Appropriately formed attitudes of students towards physical culture (physical activity, rest, psychophysical condition, etc.) determine their care for their own health even after the end of family or school influence.

Material and methods

Objective of the work

The aim of the research was to determine the attitudes of secondary school students towards physical education lessons.

Research questions

The research was intended to provide answers to the following questions:

1. What is the level of attitudes towards physical education lessons among students graduating from secondary schools?
2. To what extent do gender and type of school differentiate respondents' attitudes towards physical education lessons?

Dependent and independent variables

The research included the following dependent and independent variables:

1. Dependent variables:

Related to attitudes towards physical education lessons:

- Valuation dimension
- Intensity dimension
- Activity dimension
- Overall attitude score

2. Independent variables (predictors):
   - Gender
   - Type of school.

Research methods and tools

The basic method in the research was a diagnostic survey. To obtain the necessary data for verifying the hypotheses, a survey technique was used, with the Baumgarter and Jackson Attitude Questionnaire as the research tool. This questionnaire enabled the measurement of students' attitudes towards physical education lessons. It was based on a semantic scale[18] and contained twelve pairs of opposite adjectives, categorized into four pairs for each examined dimension: evaluation, intensity, and activity. The Polish adaptation of the questionnaire used eleven pairs of adjectives (the

activity dimension included three scales).[3] These pairs of opposite adjectives were arranged on a seven-interval scale. According to M. Brudnik, who adapted this questionnaire for Polish conditions, "each pair of opposite adjectives is treated as a continuum consisting of seven sections that can be assigned from 1 to 7 points, so each cross of the respondent corresponds to a numerical value".[3] A particular dimension is calculated by summing the numerical values of the oppositions within that dimension. When a "negative" adjective is on the right side, the scoring is reversed. The questionnaire was completed by 10 randomly selected participants (using tables of random numbers) after a physical education lesson.

The classification of the examined individuals was defined at three levels:

1. High rating: values equal to or greater than x (average) + 0.5 s;
2. Average rating: values greater than x – 0.5 s and less than x + 0.5 s;
3. Low rating: values equal to or less than x – 0.5 s.

Organization of research and characteristics of the study population

The research covered students from Tarnów who attended the last grades of general secondary schools, technical schools, and first-level vocational schools (then called Basic Vocational Schools). In the first stage of the research, which took place in September and November 2016, the Education Department of the Tarnów Town Hall was asked for a current list of schools in Tarnów. After receiving the full list of schools, 26 of them were taken into consideration. At this stage, the Center for Vocational and Continuing Education and the Music School Complex were excluded from the research due to the small number of students. The remaining 24 schools (92%) were included in the draw using tables of random numbers.[18] From these, 9 schools (38%) were selected, including 4 secondary schools (high schools) (30.8%), 3 vocational technical schools (37.5%), and 2 first-level vocational schools (40%). The research covered a total of 751 students, including 338 (45%) women and 413 (55%) men (Table 1).

Table 1. Number and percentage of respondents divided by school type and gender

School type	Gender of the respondents					
	W		M		Total	
	N	%	N	%	N	%
Secondary	278	82.3	168	40.7	446	59.4
Technical	37	10.9	207	50.1	244	32.5
Vocational	23	6.8	38	9.2	61	8.1
Total	338	45.0	413	55.0	751	100

The principals of the selected schools were asked in writing for consent to participate in the study. After presenting the project, all school principals agreed, but with reservations regarding students entering full personal data. Subsequently, teachers and physical education teachers were directly contacted to present the detailed assumptions of the research project, collect lists of students, and obtain lesson plans for individual classes. The second stage of the research was carried out from the beginning of December 2016 to the end of March 2017. This period was deliberately chosen to minimize disruptions to the teaching process in high schools and technical schools due to high school leaving and vocational exams. The research was conducted after 40 randomly selected physical education lessons of each type, in the presence of the authors, which allowed for the supervision of data collection and the provision of assistance and information as needed, in accordance with research procedure principles.[19] Ten women or men were randomly selected to complete the surveys (Table 2). As requested by school principals, the survey questionnaires were completed anonymously but included an individual student code (school number, class number, journal number, initials, gender, and age).

Table 2. Number of respondents depending on gender and type of school

School type	Gender of the respondents		Total
	W	M	
Secondary	200	200	400

School type	Gender of the respondents		Total
	W	M	
Technical	200	200	400
Vocational	200	200	400
Total	600	600	1200

Methods of statistical analysis of research results

The collected research material was statistically processed based on the research questions posed. The following techniques were used:

1. For ordinal variables, percentage distributions were utilized. Descriptive statistics, such as mean, standard deviation, and coefficient of variation, were used to characterize the study groups.
2. In order to compare two groups in which the requirement of normal distribution was not met, the nonparametric Mann–Whitney *U* test was used.
3. The chi-square test was used to assess the finding between the distribution of response frequencies in one variable, in relation to the other variable.
4. To check the significance of differences in variables between three groups, the nonparametric equivalent of one-way analysis of variance, the Kruskal-Wallis test, was used. If a statistically significant was found, post-hoc tests were performed to determine which pairs of groups were significantly different. The Hochberg GT2 test was used for unequal group sizes.

Findings

Analyzing the results of attitudes towards physical education lessons in the area of unpleasant/pleasant, it was found that for the majority of surveyed students (5.82 ± 1.21), physical education lessons were pleasant (Table 3). The mean values for women (5.97 ± 1.07) were higher than for men (5.67 ± 1.32), and the differences were statistically significant ($p < 0.001$).

Lessons were rated slightly differently in terms of tense/relaxing. The average score was 2.88 ± 1.87, indicating that students more often perceived lessons as tense rather than relaxing. Women had a lower average score (2.55 ± 1.68) than men (3.21 ± 1.99), suggesting that activity-related strain was more common among women. The gender differences were statistically significant ($p < 0.001$).

Statistical significance ($p < 0.001$) between male and female scores was also observed in the calm/lively rating. Women had a lower average value (3.66 ± 2.07) compared to men (4.42 ± 2.11), indicating that lessons were perceived as more lively by men.

In evaluating the lessons as success/failure, the average for all respondents was 5.65 ± 1.49, indicating that the majority of students considered physical education lessons to be successful. There was no significant difference between genders in this assessment.

There was similar agreement between genders in the delicate/severe assessment, with an average value of 3.12 ± 1.66. Therefore, physical education classes were perceived as more gentle than strict, with the result close to neutral.

When defining the physical education lesson as slow/fast, the average score was 4.02 ± 2.13, suggesting that lessons were perceived as quick. Statistically significant differences were found between genders ($p < 0.001$), with men having a higher mean value (4.43 ± 2.12) than women (3.60 ± 2.07), indicating that lessons were perceived as quicker by men.

High average point values (5.82 ± 1.30) were recorded when assessing lessons in terms of bad/good, indicating that students viewed physical education lessons positively.

In the weak/strong rating, statistically significant gender differences were found ($p < 0.01$). Women had a lower average score (3.79 ± 1.92) than men (4.11 ± 2.00), indicating that men found PE lessons more intense. The average for all students was 3.95 ± 1.96.

In assessing physical education lessons as lazy/hard-working, the average for all students was 3.79 ± 1.98, suggesting that lessons were perceived as more active than lazy.

Students were also asked to define how they perceived physical education lessons from a female/male perspective. Women's results indicated a more feminine perspective (1.48 ± 1.20), while men's results indicated a more masculine perspective (5.95 ± 1.98). The overall average was 3.71 ± 2.77, showing that PE lessons were perceived as more male-oriented. Statistically significant differences were found between genders ($p < 0.001$).

When assessing lessons as light/heavy, the average score was 1.86 ± 1.40, the lowest of all analyzed pairs. Men had a higher mean value (2.18 ± 1.65) than women (1.54 ± 1.01), with statistically significant differences ($p < 0.001$). Both groups perceived physical education lessons as light.

The highest average values for attitudes towards lessons were recorded for the unfair/fair pair. The overall mean value was 6.34 ± 1.20, indicating that most students found the lessons to be fair. Women rated

the lessons as fair more often (6.55 ± 0.92) than men (6.13 ± 1.39), with the relationship being statistically significant ($p < 0.001$).

In the study of attitudes towards PE lessons using the Baumgarter and Jackson questionnaire, three dimensions were taken into account: valuation (W1), intensity (W2), and activity (W3).

The W1 dimension determined the emotional value of physical education lessons for students. The average value for all respondents was 23.63 ± 3.69, indicating positive attitudes towards physical education lessons. Women showed slightly higher results (23.98 ± 3.20) than men (23.28 ± 4.09), with differences statistically significant at the $p < 0.05$ level.

The W2 dimension measured individual assessments of the intensity of physical education lessons. The average value for the study group was 12.64 ± 4.88, indicating that students' attitudes were generally more negative than positive. Women had a lower average score (9.85 ± 3.60) than men (15.42 ± 4.39), indicating

Table 3. Results of attitude scales towards physical education lessons by gender

Attitude towards the lesson	Gender of the respondents	$\bar{x}$	SD	*U*	*p*
Unpleasant/ pleasant	Women	5.97	1.07	158662.50	**< 0.001**
	Men	5.67	1.32		
	Total	5.82	1.21		
Tense/ relaxing	Women	2.55	1.68	146049.50	**< 0.001**
	Men	3.21	1.99		
	Total	2.88	1.87		
Calm/ lively	Women	3.66	2.07	143370.50	**< 0.001**
	Men	4.42	2.11		
	Total	4.04	2.13		
Failed/ successful	Women	5.65	1.46	177570.00	0.673
	Men	5.65	1.53		
	Total	5.65	1.49		
Delicate/ severe	Women	3.05	1.64	171115.50	0.132
	Men	3.19	1.68		
	Total	3.12	1.66		
Slow/ fast	Women	3.60	2.07	139924.00	**< 0.001**
	Men	4.43	2.12		
	Total	4.02	2.13		
Bad/ good	Women	5.80	1.24	172164.50	0.171
	Men	5.83	1.36		
	Total	5.82	1.30		
Weak/ strong	Women	3.79	1.92	162975.50	**0.004**
	Men	4.11	2.00		
	Total	3.95	1.96		
Lazy/ hardworking	Women	3.70	2.03	169230.00	0.069
	Men	3.89	1.93		
	Total	3.79	1.98		
Feminine/ masculine	Women	1.48	1.20	26160.50	**< 0.001**
	Men	5.95	1.98		
	Total	3.71	2.77		
Light/ heavy	Women	1.54	1.01	139737.50	**< 0.001**
	Men	2.18	1.65		
	Total	1.86	1.40		

Attitude towards the lesson	Gender of the respondents	$\bar{x}$	SD	*U*	*p*
Unfair/fair	Women	6.55	0.92	151920.00	**< 0.001**
	Men	6.13	1.39		
	Total	6.34	1.20		
Dimensions of valuation (W1)	Women	23.98	3.20	167390.00	**0.035**
	Men	23.28	4.09		
	Total	23.63	3.69		
Dimensions of intensity (W2)	Women	9.85	3.60	58252.00	**< 0.001**
	Men	15.42	4.39		
	Total	12.64	4.88		
Dimensions of activity (W3)	Women	10.96	4.32	141158.00	**< 0.001**
	Men	12.74	4.89		
	Total	11.85	4.70		

Where: *U* – Mann–Whitney *U* test.

that men perceived a higher level of intensity. The differences were statistically significant ($p < 0.001$).

The W3 dimension assessed the level of activity stimulation by the lesson. The average value was 11.85 ± 4.70, with attitudes being more negative than positive. Men had a higher average score (12.74 ± 4.89) than women (10.96 ± 4.32), indicating that women were less motivated to be active during physical education classes. The differences were statistically significant ($p < 0.001$).

When it comes to assessing the attitudes of the surveyed students towards physical education lessons depending on the type of school (Table 4), statistically significant relationships were observed in five pairs of adjectives, i.e.: tense/ relaxing, calm/ lively ($p < 0.01$), slow/ fast, bad/ good, unfair/ fair ($p < 0.05$) and in the W1 evaluation dimension ($p < 0.05$). Post-hoc tests were performed for each of the indicated variables in order to identify pairs between which there are statistically significant differences.

In the case of the tense/relaxing pair, the greatest differences occurred between high school and technical school students. The average score of high school students (2.63 ± 1.76) was lower than that of technical secondary school students (3.08 ± 1.92). In both of these schools, students perceive PE lessons as more tense than relaxing, but this is especially true for high school students.

When assessing the lessons in the calm/ lively aspect, statistically significant correlations were found between students of secondary schools and technical schools as well as secondary schools and vocational schools. In both cases, high school students had a lower result (3.75 ± 2.09), both in relation to students of technical secondary schools (4.21 ± 2.09) and vocational schools (4.17 ± 2.17). In each school, lessons were perceived as more lively than calm.

As for the pair of adjectives slow/ fast, statistically significant relationships concerned students of general secondary schools and first-cycle vocational schools. High school students obtained a lower average score (3.80 ± 2.07) than students of vocational schools (4.25 ± 2.17), for whom the lessons were more lively.

In the next pair of adjectives defining bad/ good attitudes, significant relationships were observed between high school students and technical school students. A slightly lower mean value among secondary school students (5.73 ± 1.26) compared to vocational technical secondary school students (5.86 ± 1.29) suggests that technical secondary school students were more likely to describe the lessons as good.

The results of the scales of attitudes towards PE lessons where statistically significant differences were recorded also concerned the unfair/ fair category. Notable differences occurred between students of technical schools and vocational schools. Students of a vocational technical school had a slightly higher average value (6.48 ± 1.09) than students of a first-cycle vocational school (6.26 ± 1.26). It can therefore be assumed that students of technical secondary schools perceived lessons as fair more often.

In the assessment of the valuation dimension (W1), statistically significant differences were revealed between secondary school and technical secondary school students. For high school students, physical education classes had a lower positive attitude value (23.34 ± 3.57) than for technical secondary school students (23.89 ± 3.77). However, in both cases positive attitudes prevailed.

Table 4. Results of attitude scales towards physical education lessons according to the type of school

Attitude towards the lesson	School type	$\bar{x}$	SD	*H*	*p*	*T2*
Unpleasant/ pleasant	Ss	5.75	1.28	1.15	0.562	
	T	5.84	1.24			
	VS	5.86	1.10			
Tense/ relaxing	Ss	2.63	1.76	12.11	**0.002**	LO-T
	T	3.08	1.92			
	VS	2.94	1.90			
Calm/ lively	Ss	3.75	2.09	11.62	**0.003**	LO-T LO-SB
	T	4.21	2.09			
	VS	4.17	2.17			
Failed/ successful	Ss	5.58	1.46	3.20	0.202	
	T	5.71	1.51			
	VS	5.67	1.50			
Delicate/ severe	Ss	3.00	1.62	3.37	0.185	
	T	3.19	1.64			
	VS	3.17	1.73			
Slow/ fast	Ss	3.80	2.07	7.94	**0.019**	LO-SB
	T	4.01	2.14			
	VS	4.25	2.17			
Bad/ good	Ss	5.73	1.26	6.54	**0.038**	LO-T
	T	5.86	1.29			
	VS	5.86	1.35			
Weak/ strong	Ss	3.95	1.87	3.73	0.155	
	T	4.08	1.95			
	VS	3.81	2.06			
Lazy/ hardworking	Ss	3.96	1.93	5.47	0.065	
	T	3.77	1.94			
	VS	3.65	2.06			
Feminine/ masculine	Ss	3.41	2.60	4.27	0.118	
	T	3.80	2.83			
	VS	3.92	2.85			
Light/ heavy	Ss	1.93	1.42	2.62	0.269	
	T	1.79	1.35			
	VS	1.85	1.44			
Unfair/ fair	Ss	6.29	1.24	9.21	**0.010**	T-SB
	T	6.48	1.09			
	VS	6.26	1.26			
Dimensions of valuation (W1)	Ss	23.34	3.57	8.76	**0.013**	LO-T
	T	23.89	3.77			
	VS	23.65	3.71			
Dimensions of intensity (W2)	Ss	12.30	4.53	3.06	0.216	
	T	12.86	4.92			
	VS	12.76	5.18			
Dimensions of activity (W3)	Ss	11.51	4.54	3.28	0.194	
	T	11.98	4.66			
	VS	12.06	4.88			

Where: *H* – Kruskal–Wallis test; *T2* – Tamhane post hoc test.

The valuation dimension (W1) determined the emotional value of a physical education lesson for students and was associated with pairs of adjectives such as unpleasant/ pleasant, unsuccessful/ successful, bad/ good, and unfair/ fair. Based on the results presented in Table 5, the highest percentage of respondents fell into the medium (38.2%) and high (36.7%) valuation dimensions. Women achieved higher percentages in both the high (38.5%) and medium (39.8%) valuation dimensions compared to men (high: 34.8%, medium: 36.7%). Conversely, a higher percentage of men was recorded in the low dimension (men: 28.5%; women: 21.7%).

From this, it can be concluded that physical education lessons have a greater positive emotional value for women than for men. The difference between the valuation dimension (W1) and the students' gender was statistically significant ($p < 0.05$).

Table 5. Dimension of valuation (W1) by gender

Gender of the respondents	The dimension of valuation W1					
	High		Medium		Low	
	N	%	N	%	N	%
Women	231	38.5	239	39.8	130	21.7
Men	209	34.8	220	36.7	171	28.5
Total	440	36.7	459	38.2	301	25.1

Where: $chi^2(2) = 7.47$; $p = 0.024$.

The analysis of the results of the valuation dimension (W1) according to the type of school showed statistical significance at the level of $p < 0.05$ (Table 6). For the high-value dimension, the highest values were recorded among technical secondary school students (41.5%), while the lowest were among secondary school students (30%). High school students dominated in both the medium (43%) and low (26.8%) dimensions.

Table 6. Dimension of valuation (W1) depending on the type of school

School type	The dimension of valuation W1					
	Tall		Mediocre		Short	
	N	%	N	%	N	%
Secondary	121	30.2	172	43.0	107	26.8
Technical	166	41.5	138	34.5	96	24.0
Vocational	153	38.2	149	37.3	98	25.5

Where: $chi^2(4) = 11.933$; $p = 0.018$.

The intensity dimension (W2) allowed for the assessment of the intensity of PE lessons and concerned the following pairs of adjectives: delicate/ severe, weak/ strong, feminine/ masculine, and light/ heavy. As shown in Table 7, men predominated in the high dimension (56%) compared to women (7.3%). Conversely, women predominated in the low dimension (60.7%) compared to men (15%). The average dimension was slightly more common among women (32%) than men (29%).

Therefore, it can be concluded that the perceived intensity of physical education classes was much higher among men than among women. Among all respondents, the highest values (37.8%) in the W2 dimension were recorded in the low range. The differences in results between the intensity dimension (W2) and the gender of students were statistically significant ($p < 0.001$).

Table 7. Dimension of intensity (W2) by gender

Gender of the respondents	The dimension of intensity W2					
	High		Medium		Low	
	N	%	N	%	N	%
Women	44	7.3	192	32.0	364	60.7
Men	336	56.0	174	29.0	90	15.0
Total	380	31.7	366	30.5	454	37.8

Where: $chi^2(2) = 390.63$; $p = 0.001$.

The results in Table 8 showed that the high level of lesson intensity most often concerned students of technical secondary schools (34.7%) and vocational schools (34.5%), while the lowest percentage was associated with high school students (25.7%). In terms of medium (34%) and low (40.3%) levels of intensity (W2), a higher percentage was recorded among high school students. These relationships were statistically significant ($p < 0.05$).

Table 8. Dimension of intensity (W2) depending on the type of school

School type	The dimension of intensity W2					
	Tall		Mediocre		Short	
	N	%	N	%	N	%
Secondary	103	25.7	136	34.0	161	40.3
Technical	139	34.7	118	29.5	143	35.8
Vocational	138	34.5	112	28.0	150	37.5

Where: $chi^2(4) = 10.28$; $p = 0.036$.

The activity dimension (W3) allowed for the assessment of the activity level stimulated by physical education lessons, involving pairs such as tense/ relaxing, calm/ lively, slow/ fast, and lazy/ hardworking (Table 9). High activity levels were more common among men (39.8%) than women (23.2%). Conversely, women were more represented at medium (36.2%) and low (40.6%) activity levels compared to men. Thus, men were characterized by a higher level of activity stimulated by physical education lessons compared to women. The relationships observed between the activity dimension (W3) and the gender of students were statistically significant ($p < 0.001$).

Table 9. Dimension of activity (W3) by gender

Gender of the respondents	The dimension of valuation W3					
	High		Medium		Low	
	N	%	N	%	N	%
Women	139	23.2	217	36.2	244	40.6
Men	239	39.8	186	31.0	175	29.2
Total	378	31.5	403	33.6	419	34.9

Where: $chi^2(2) = 40.20$; $p = 0.001$.

There were no statistically significant differences found between the activity dimension (W3) and the type of school (Table 10). High levels of activity were more commonly reported among students from technical secondary schools (34%) and vocational schools (34%), while medium and low levels of activity were more prevalent among high school students. Detailed data is provided in Table 10.

Table 10. Dimension of activity (W3) depending on the type of school

School type	The dimension of activity W3					
	High		Medium		Low	
	N	%	N	%	N	%
Secondary	231	38.5	239	39.8	130	21.7
Technical	209	34.8	220	36.7	171	28.5
Vocational	440	36.7	459	38.2	301	25.1

Where: $chi^2(4) = 7.86$; $p = 0.097$.

Summary and conclusions

Regarding attitudes towards physical education lessons, the overall opinions of students can be considered optimistic. For women, the emotional value of the lessons held greater significance. In contrast, men placed more importance on the intensity dimension during the classes, which might have contributed to their stronger stimulation (activity dimension). The analysis of the results indicated that physical education lessons had a less positive value for high school students compared to their peers from technical secondary schools. However, positive attitudes prevailed in both groups. Other authors have also emphasized the value of experiencing positive emotions and their significance during physical education lessons.[8,14,20,21]

As mentioned repeatedly, satisfaction with participating in physical education lessons is an important factor in shaping positive attitudes towards physical activity. Analyzing the results in the evaluation dimension, it was noted that men from high schools most often exhibited a low degree of emotional value. This phenomenon may be due to inappropriate organization of lesson units and the misalignment of curriculum content with students' interests. It is worth noting that appropriate organizational changes in the lesson flow positively affect students' attitudes and the effectiveness of classes.[12] The quality of physical education lessons contributes to the later undertaking of physical activity in adult life.[8,22,23]

Considering the results of the conducted research and taking into account the previously posed research questions, the following conclusions were formulated:

The surveyed youth presented positive attitudes towards physical education lessons.

Women showed a greater value of the emotional dimension, while men showed a greater value of the intensity and activity dimensions. The results of attitudes also varied depending on the type of school. For technical school students, physical education lessons had a greater value than for high school students.

Practical implication: when planning physical education lessons, it is worth considering all components and dimensions of attitudes towards physical culture, including physical education lessons. A holistic approach to the topic of shaping attitudes will allow for a stronger influence on the changes in this area of activity.

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