

Attitudes of elementary school pupils towards physical education and their differentiation from the point of view of age, sporting level and gender

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Abstract:

The paper presents the results of research focused on the attitudes of 8 to 13-year elementary school pupils to physical and sport education. The research group consisted of 438 elementary school pupils from Bratislava. As a basic research tool, a standardized attitudinal questionnaire for primary school pupils was used. We determined that in primary school pupils there predominate positive attitudes towards physical and sport education over indifferent attitudes. It has been shown that attitudes of pupils to physical and sport education are differentiated in terms of age, in terms of level of sport, but are not differentiated from the point of view of gender.

Key words: attitudes, physical and sports education, pupils, elementary school.

Introduction

Technology dependent life in adolescence and period of development keeps children away from street games and physical activities and leads them to an inactive life. Studies have shown that contributing to the physical development of individuals is specific to physical education.

Physical and sport education is a specific subject as it focuses not only on physical, functional, motoric, but also psychological and intellectual improvements of pupils, and one of its main goals is, among other things, to form a positive attitude towards not only this subject, but also to physical activity and sport in general.

We are inclined to agree with the opinion of Dobrý (2006), who states that one of the most effective means of forming, strengthening the positive attitude of pupils towards physical education is a well-lead physical education process characterized by versatility, reasonable intensity, originality and proper emotionality. In this process, a teacher of physical and sports education plays an important role and through his expertise and attitude significantly influences his pupils to physical education as a subject and to movement activity and sport. It can often happen that even a less able-bodied pupil will perform better than his technically and tactically better teammate. The difference lies in the attitude, i.e. in endeavour, in mettle, in enthusiasm in fulfilling tasks. Therefore, it is very important for physical education teachers and sports trainers to comprehend that the sport and movement experience gained during the puberty, especially around the 12 years of age, can significantly affect the attitudes that a young person will keep towards physical activity and sport in general. (Dobrý, 2006).

Attitudes are formed by beliefs and experiences a person has in their life (Silverman & Subramaniam, 1999). Attitude influences much of what we do and can impact our social and personal lives. It is a little thing that has the ability to make a difference, both positively and negatively (Phillips & Silverman, 2015).

Attitudes can be viewed in various positive and negative angles. Positive attitudes evoke positive thoughts about a situation, whilst negative attitudes evoke negative thoughts about a situation. Individuals fail to show their knowledge and skills in a subject they have negative attitudes towards. It is always easier for them to show their knowledge and skills in situations they have positive attitudes towards. Thus, attitudes should not be overlooked and should be developed positively during the process of education in order to change and develop an individual's behaviour in the desired course. Individuals are not born with attitudes; they acquire attitudes. Attitudes can always change and be shaped (Atan & Imamoglu, 2016).

Attitude has several components. It has been viewed by researchers as a single-, two-, or multicomponent construct (Subramaniam & Silverman, 2007). The single-component view restricts the use of the term to the affective component. Utilising this point of view could result in measuring only a part of attitude. The two-component view suggests that attitude involves the cognitive and affective aspects (Gonzalez, 1992; Mohsin, 1990; Oppenheim, 2009).

In the literature, the following elements of attitude are most frequently mentioned (Subramaniam & Silverman, 2007; Boroš 2001; Görner & Starší, 2001):

The cognitive component (epistemic) - is associated with the rational evaluation of the object of attitude, it expresses its value in the sense of right - wrong, reasonable - stupid, bad - good, fair - unfair, worthy -

worthless, etc. There is included what the subject knows about the object of his attitude. It consists of thoughts, opinions of an individual about a subject or a phenomenon, while the opinions about the evaluation, which includes desirable and undesirable characters, are considered as the most complex. This component of attitude is the most commonly formed by emulate other people.

The emotional component (affective) refers to emotions associated with an object or phenomenon, with emotions expressing the dynamics of the attitudes towards the favourite or unpopular objects. It expresses the emotional relationship to the object of attitude, in the sense of I love - I do not love, I like it - I do not like it, it brings joy – sadness; it is formed more often by personal experience with the subject of attitude.

The constitutive component (behavioural predisposition) – it is an emergency behaviour related to attitude - aid, support, reward or damage, punishment, restraint, destruction. Attitudes created in conjunction with activity are more clearly defined, more stable in time, more retainable in memory and more resilient against change. It manifests itself in a tendency to act, respond in a certain way to the object of attitude, in the sense I want it - I do not want it, I approach - I flee. This component follows from the previous two.

Students' beliefs about PE affect their feelings toward the subject matter, which may subsequently determine the formation of attitude (Ajzen, 1993; Biddle & Mutrie, 2008; Eagly & Chaiken, 1993; Hagger et al., 2002; Ding & Sugiyama, 2018). Attitude is particularly important in the area of PE. The promotion of positive attitudes is one of the key components that impacts students' learning (Solmon, 2003).

Current school population surveys on attitudes to school physical education and sport in children and adolescents at schools are showing a decline in positive attitudes, an increase in indifferent attitudes and negative attitudes, as shown by the findings of the authors both at home and abroad. One of the ways to change this condition is among others well-managed school physical and sports education and sport.

Physical and sport education is according to Antala et al. (2012) a space where the values, attitudes and views of pupils towards health, an active lifestyle involving regular exercise or sport can be influenced.

Material & methods

The survey consisted of 8-13 year old pupils of elementary schools and grammar schools Bilíkova, Vazovova, Esprit, Cífer, Gorkého, Juraja Hronca, Novohradská, Košická, Nemecká. Altogether, 438 pupils were involved in the research, 214 boys and 224 girls. The main research method was the attitude questionnaire for primary school pupils according to Sivák et al. (2000). The questionnaire contains 51 entries and focuses on three separate attitude components - the cognitive, emotional and constitutive component of attitude. For each of these components, 17 items are specified. The maximum number of points for the entire questionnaire is 102 points. Intensity of attitude towards physical education is determined by the total score gain, namely:

- negative attitude - 0 to 34 points,
- indifferent attitude - 35 to 68 points,
- positive attitude - 69 to 102 points.

The research was conducted during May of school year 2016/2017. The distribution and administration of the questionnaires was ensured by the cooperation of the directors of elementary schools and physical and sport education teachers. The results of the questionnaires were evaluated by the percentage analysis and in the search for correlations between the selected indicators we applied the correlation analysis and Chi-square test (χ^2).

Results

Attitude questionnaire analysis results are shown in Table 1.

Table 1. Attitudes of pupils to physical and sport education

Attitudes	boys		girls		Total	
	n	%	n	%	n	%
positive	147	68,69%	151	67,41%	298	68,04%
indifferent	63	29,44%	69	30,80%	132	30,14%
negative	4	1,87%	4	1,79%	8	1,83%
Total	214	100,00%	224	100,00%	438	100,00%

By exploring the attitudes towards physical and sport education, we have found prevailing positive attitudes towards physical and sport education over indifferent attitudes in the research sample. Out of the 438 pupils in our group, 68.04% of pupils showed a positive attitude towards physical and sports education, 30.14% showed an indifferent attitude and a negative attitude was expressed by 1.83% of pupils (Figure 1).

The comparison of the pupils' attitudes in terms of age

When comparing the results of declared attitudes of elementary school pupils in terms of age (Figure 2), differences in the attitudes towards physical and sport education can be noticed. The most positive attitudes were expressed by the youngest 8-9 year old pupils, none of whom showed a negative attitude towards physical and sports education. However, with increasing age, we can see a decline in positive attitudes towards school physical and sports education and sport and, on the contrary, an increase in indifferent attitudes, as well as negative attitudes. These observed differences in the orientation of attitudes between 8-9, 10-11 and 12-13 year-old pupils of primary schools proved to be statistically significant ($p < 0.05$).

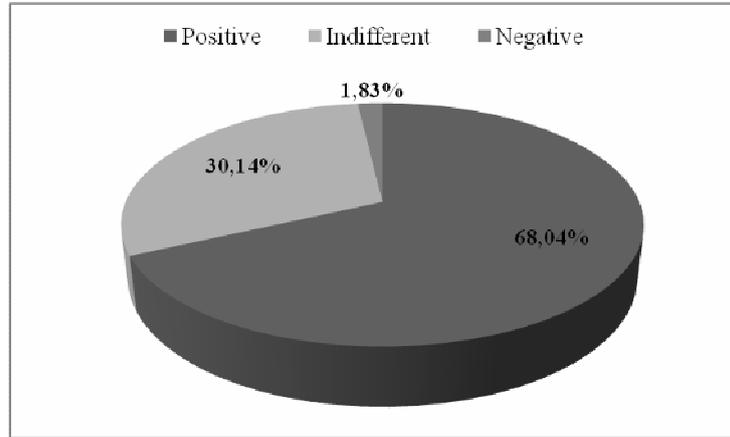


Fig. 1 General attitude towards physical and sport education of elementary school pupils

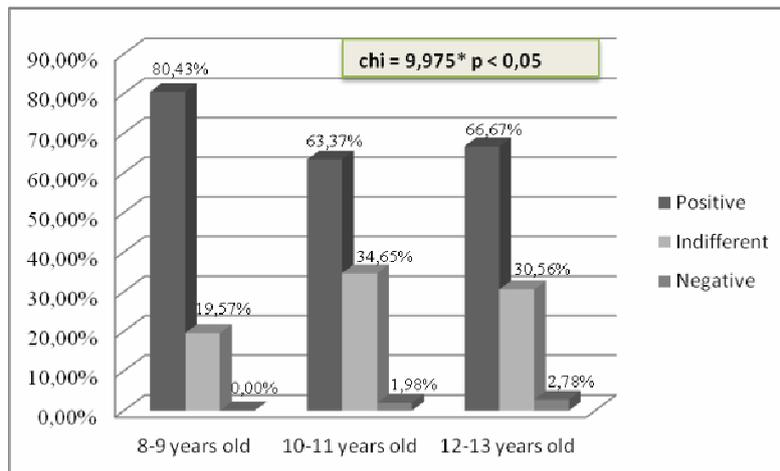


Fig. 2 Attitudes of pupils to physical and sport education in terms of age

Comparison of attitudes of pupils' attitudes in terms of doing sports

As can be seen from our results, almost half of our pupils (47.03%) of our research sample ($n = 438$) do sports at recreational level. 47.03% of pupils are also engaged in performance sports, and 5.94% of pupils say they do not do any sporting activities at all. Fig. 3 shows a significant difference in the positive attitudes (up to 44.03%) that can be seen between a group of sporting and non-sporting pupils, of course in favour of pupils attending sports clubs.

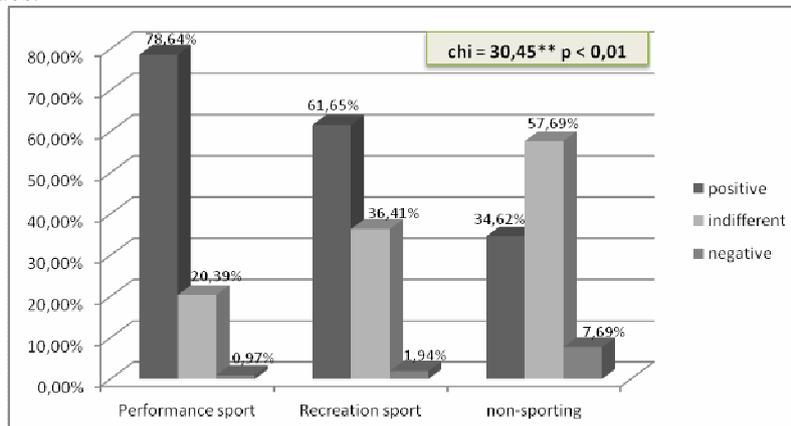


Fig. 3 Attitudes of pupils to physical and sport education in terms of doing sports

On the other hand, despite the fact that the pupils engage in physical activities and sport at the performance level, more than one fifth (26.02%) of them declared an indifferent attitude to physical and sports education and two performance sports pupils even negative attitudes. In the group of recreational sports students, positive attitudes prevail (61.65%) over indifferent attitudes (36.41%). In the group of non-sporting pupils the situation is obvious, any kind of physical activity is put to a halt, due to the prevalence of indifferent attitudes (57.69%) to physical and sport education and also an increased number of negative attitudes (7.69%). Overall, comparison of the attitudes of pupils in terms of sport shows that the less the pupils engage in sports, the less positive attitudes they have and on the contrary the indifferent and negative attitudes increase. These identified differences in the pupils attitudes in terms of their sport activity proved to be significant ($p < 0.01$).

Comparing pupils' attitudes in terms of gender

When comparing the results of declared attitudes of pupils in terms of gender, only minimal differences can be seen (Figure 4). Boys (68.69%) similarly to girls (67.41%), had a positive attitude towards physical and sport education. An indifferent attitude to physical and sport education was expressed by 29.44% of boys and 30.80% of girls, with only 1.87% of boys and 1.79% of girls expressing negative attitude.

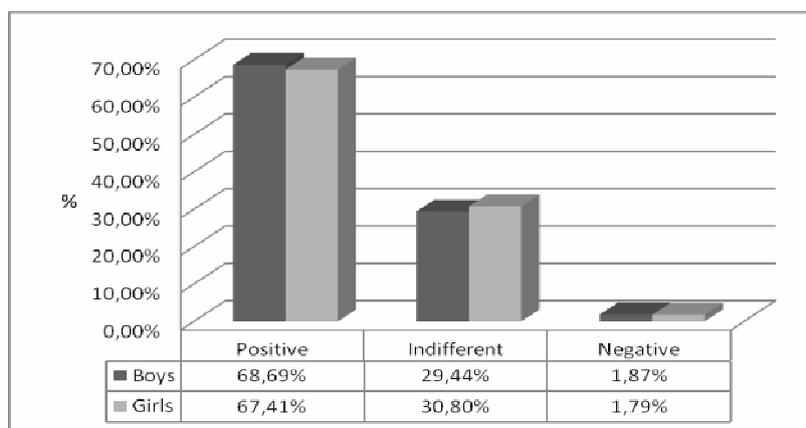


Fig. 4 Attitudes of pupils towards physical and sport education in terms of gender.

Discussion

We have found prevailing positive attitudes towards physical and sport education over indifferent attitudes in the research sample. These results can be compared, for example, with the research of Kolofik (2016), whose research group consisted of 415 pupils. Among the pupils of the 7th year of primary schools in Banská Bystrica there prevailed positive attitudes towards physical and sports education over indifferent attitudes. On the contrary, negative attitudes were the least frequent.

Görner and Starší (2001) found the prevalence of positive attitudes towards school physical education and sport in pupils of the 6th and 8th years in selected primary schools in the central Slovakia. Despite the great problems with maintaining the quality of physical education in schools, the attitudes of pupils of the 6th year of elementary school towards school physical education were mostly positive.

Another research dealing with attitudes towards physical and sport education was conducted by Balga and Antala (2015). They researched 428 pupils in the 5th and 9th grades of elementary schools in Bratislava and Trnava regions, out of which in 6 urban schools and 7 rural schools there were also found predominantly positive attitudes (59.11% respondents) to physical and sports education over indifferent attitudes (37.38% of respondents). Negative attitudes occurred with respondents sporadically (3.51%).

Also work of other authors (Bence, 2009; Mesiarik 2012; Zeng et al., 2011; Barney & Christenson, 2012; Phillips & Silverman, 2015) confirm the positive attitude and high popularity of physical and sports education at elementary schools, which was also confirmed by Antala et al. (2012) in its national research in Slovakia.

The current attitudes toward physical education activity status of the participants appears to be positive. There are some crucial factors that structure the participants' attitudes toward physical education activity. These factors are related to students' perception, benefit, care and value about physical education programmes and sport activities (Zeng et al., 2011)

Since gender and age play an important role in attitudes towards physical education (PE), attitudes of girls and boys in different ages were compared in many researches.

The comparison of the pupils' attitudes in terms of age

Most of the research results (Zegnin et al., 2016; Bartík, 2009) mention positive attitudes towards physical and sport education in younger pupils compared to older pupils. Similar results were obtained by Bartík

and Mesiarik (2011), who found a decrease in positive attitudes towards school physical and sports education and sport in the comparison of pupils' attitudes of 4th, 5th and 9th years of elementary school with increasing age of pupils and the increase of indifferent attitudes, as well as negative attitudes.

Subramanian and Silverman (2007), who have studied the attitudes of 12 to 14-year-old pupils at schools in the United States, found positive attitudes towards school physical and sports education among pupils at lower grades of primary school compared with the higher grades. All students had overall moderately positive attitudes toward physical education. There was, however, a decline in attitude scores as students progressed in grade level. Higher grades had lower mean scores (Subramanian & Silverman, 2007).

In a similar study carried out in several urban, suburban and rural areas of the United States (New York, New Jersey, Connecticut, California and North Carolina) and which examined the attitudes of pupils of the 4th and 5th years of elementary school (upper elementary school) (n=1344) there were significant age-related differences in pupil attitudes towards physical education. Students in fourth grade were found to have significantly higher attitude scores than fifth graders. These results add to the previous research by providing data for a large sample of fourth and fifth grade students (Phillips & Silverman, 2015).

In another recent longitudinal study (Mercier et al., 2017), in which a total of 240 students (118 boys and 122 girls) from a suburban Eastern U.S. school district participated there were observed changes in student attitudes over a 3-year period. Three cohorts of students (cohort 1 = 4-5-6 grades; cohort 2 = 5-6-7; cohort 3 = 6-7-8) were each followed for 3 years to examine changes in attitudes toward physical education. After an initial increase from Grade 4 to Grade 5, a significant decrease was observed from Grades 5 to 8 in students' positive attitudes toward physical education, with a faster rate of change for girls than boys (Mercier et al., 2017).

Research results of many authors (Yavuz, 2016; Arabaci, 2009; Zegnin et al., 2016; Gürbüz and Özkan, 2012) suggest that elementary school pupils have more positive attitudes than secondary school pupils. Yavuz (2016) compared the attitudes of pupils (n = 300) of primary and secondary schools to physical education in Antalya, Turkey. Whereas no statistically significant difference was determined between the attitude scores of students attending secondary school towards physical education in terms of age groups ($p > 0.05$), there is a statistically significant difference between attitude scores of students attending high school towards physical education course in terms of their age groups ($p < 0.05$).

In similar studies results showed that attitudes toward PE were significantly different between high school and secondary school students. Secondary school students show more positive attitudes towards physical education than high school students (Arabaci, 2009; Zegnin et al., 2016).

In the studies conducted on primary and secondary school students, it was emphasized that age factor plays significant role when it comes to attitude levels of students towards physical education course. According to Gürbüz and Özkan (2012), it is possible to consider that students in different education grades are in different adolescence development periods, their expectations, desire and inclinations could differ as well. Therefore, it is possible to observe differences between attitudes of primary and secondary school students towards physical education and sport (Gürbüz and Özkan, 2012).

Previous research clearly suggests that as grade levels increase starting in middle school, student attitude scores decrease (Montalvo & Silverman, 2008; Subramaniam & Silverman, 2007). This decrease in attitude scores toward physical education as student age increases has many implications. Research suggests that student attitude toward physical education can influence activity levels outside of school (Carlson, 1995; Portman, 1995; Solmon & Lee, 2008; Wallhead & Buckworth, 2004) and that PA levels decrease as student age increases (Sallis et al., 2000).

Comparison of attitudes of pupils' attitudes in terms of doing sports

The research of Balga and Antala (2015) has shown similar results, they recorded dominance of negative attitudes over positive attitudes in a group of non-sporting pupils.

The attitudes of sporting and non-sporting pupils in primary and secondary schools were compared also in the study of Yavuz et al. (2016). A statistically significant difference was determined in the attitude of students attending secondary school towards their participation in regular sport activities ($p < 0.05$). On the other hand, a statistically significant difference was determined between attitude scores of high school students towards physical education in terms of participation in regular sport activities ($p < 0.05$) (Yavuz et al., 2016)

In a similar study, attitudes of secondary school students towards physical education course with respect to their sport activity status were evaluated; and it was determined that attitude levels of children who perform professional licensed sport activity towards physical education course were greater than the ones who do not. This result supports our research findings. In a study which investigated the effect of sport participation on attitude level towards physical education course, 867 high school students in total were included in the study; 440 were athletes, 427 were not. Results of the study showed that attitude scores of athletic students were greater than the non - athletic ones (Koca and Demirhan, 2004).

Comparing pupils' attitudes in terms of gender

From the point of view of the influence of gender on the quality and orientation of attitudes towards physical and sport education, we did not find statistically significant differences. Similar results were confirmed

by several authors who also did not determine significant differences in attitudes towards physical education between boys and girls (Phillips & Silverman, 2015; Atan & Imamoglu, 2016; Gürbüz & Özkan, 2012).

In a similar study by Zegnin et al., (2016), conducted on the secondary school students, it was determined that there was no statistically significant difference between genders of students and their attitudes towards physical education, which supports our research findings. However, it was found out that there is a statistically significant difference in the attitudes of the participants towards physical education lessons based on their education level. Thus, education level can be said to be an important determiner in the attitudes of the secondary and high school students. Even though the gender variable is not a determinant of the attitudes towards physical education lesson by itself, the interaction of education level and gender was found to affect the attitude points. The obtained finding reveals the fact that there is a need to put the education level with gender variables together while evaluating the attitudes of the secondary and high school students towards physical education lesson. (Zegnin, 2016).

However, several studies of the attitudes of primary and secondary school pupils have recently revealed significant differences in student attitudes towards physical education in terms of gender. Kocak & Hurmeric (2006); Zeng et al. (2011) and Novotná et al. (2007) found that girls have a more positive attitude to physical education than boys.

However, recent studies (Koca & Demirhan 2004, Arabaci, 2009; Koca et al. 2005; Yavuz et al., 2016; Mesiarik, 2012) reported that boys had a higher attitude scores toward physical education than girls.

In examining the attitudes of pupils at the 4th grade of sixteen primary schools ($n = 553$), Mesiarik (2012) found that boys showed more positive attitudes to physical and sports education than girls in the attitude questionnaire. In a similar study, Arabaci (2009) also examined the attitudes of pupils of elementary ($n = 634$) and secondary schools ($n = 606$) in Turkey. Results indicated a significant gender difference in high school students' attitudes toward physical education. The attitude scores of high school boys were higher than those of girls. Meanwhile, secondary school female and male students' scores on the attitude toward physical education scale were not significantly different. In addition, secondary school students preferred single-sex PE, whereas high school students preferred co-ed PE. (Arabaci, 2009).

Similar results were shown in the study of Yavuz et al. (2016), who researched the attitudes of the students in elementary ($n=150$) and high schools ($n=150$) in Antalya. Attitude scores of male respondents attending secondary school towards physical education course were higher than those of female respondents. Similar finding exists for the students from high school. Whereas no statistically significant difference was determined between attitudes of respondents from secondary school in terms of their gender ($p>0.05$), a statistically significant difference was determined between attitudes of female and male respondents attending to high school ($p<0.05$).

Previous research suggests there is a gender difference which increases as students get older, specifically in adolescence period. In adolescence period, girls interest in physical education decreases dramatically (Wersch et al., 1992; Montalvo & Silverman, 2008; Subramaniam & Silverman, 2007; Arabaci, 2009). No statistical difference was found in our study in terms of the gender variable. This situation might be caused by the teacher having similar approach to female and male students.

Conclusions

Based on information from relevant literature we can see that while some of our findings were consistent with the findings in the literature, some were not.

In hypothesis 1, we assumed that attitudes to physical and sport education would be differentiated from the point of view of gender, with boys taking a more positive attitude than girls. Since we did not determine statistically significant differences in attitudes, this hypothesis was not confirmed.

In hypothesis 2, we assumed that attitudes to physical and sport education would be differentiated in terms of age, with younger pupils having more positive attitude than older pupils. We can confirm the hypothesis, as the results showed that with the increasing age of pupils there is a decrease in positive attitudes towards school physical and sports education and sport, and on the contrary the increase of indifferent attitudes, as well as negative attitudes.

In hypothesis 3, we assumed that attitudes of pupils to physical and sport education will be differentiated from the point of view of their athletic level with a significantly higher incidence of positive attitudes in pupils doing sports than in non-sporting ones. We can confirm the hypothesis, as the results show that the less the pupils devote themselves to sport, the less positive attitudes they have and on the contrary the indifferent and negative attitudes grow.

We realize that the acquired knowledge is limited in scope and requires a more detailed analysis in terms of individual grades and in relation to the other variables (family, school conditions, opinions on physical and sport education teacher) that form the attitudes towards physical and sports education.

Conflicts of interest - The authors declares that there is no conflict of interests.

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