

# YOUTH PHYSICAL ACTIVITY AND THE PROCESS OF PHYSICAL EDUCATION IN LUBLIN PROVINCE, POLAND

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**Abstract.** *The research was conducted on a randomly chosen group of 916 students aged 16-18 in Lublin Province, Poland. The research was carried out in 2016 using the International Physical Activity Questionnaire, the extended version, and supplemented with additional questions regarding the students' assessment of physical education lessons. The majority of students (77.4 %) meet the requirements for a high level of physical activity, with the remaining 16.5 % demonstrating moderate and only 6.1 % – low level. There were no significant reductions of physical activity visible in the older age group, although in subsequent periods (in 16-18 year-olds), it was successively lower. The mean level of total physical activity in boys was 65566 MET<sup>1</sup> - min week, and it was significantly higher than in girls, i.e. 5345,5 MET-min/week. The vast majority of students (92.2 %) participate in school physical education classes, and over 75 % think that they like these activities. Students enrolled in physical education classes demonstrate a higher level of total physical activity (5960.5MET-min/week), in contrast to the non-participating ones (5637,2MET-min/week); however, no significant relationship has been found. Furthermore, it has been shown that girls and boys were willing to get involved in different physical activities. Apart from PE classes, boys would mainly get involved in football (23.2 %), volleyball (15.5 %), table tennis (13.0 %), and swimming (12.5 %). Girls would instead choose volleyball (14.7 %), football (12.6 %), swimming (9.4 %) and gymnastics (8.9 %). This favourable image of physical activity of students in the Polish schools in Lublin Province can contribute to the discussion of the place of physical activities in the modern school educational process.*

**Keywords:** *PE classes, physical activity, school youth.*

## Introduction

According to the WHO, physical activity is one of the essential components in maintaining a healthy lifestyle, and its lack is a common cause of poor health at various stages of ontogenesis, including school-age youth.

Therefore, in addition to providing knowledge, it is necessary to properly care for the appropriate level of physical activity in students in the school didactic

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<sup>1</sup> 1 MET - corresponds to the amount of oxygen consumed at rest and is equal to 3.5 ml of oxygen per kg body weight per minute.

process. It should be emphasised that in Poland the Ministry of Sport and Tourism initiated the campaign “Prevent sick absences in PE classes” in 2012, in which many well-known athletes and actors took part. Then, in the years 2013-2016, the programme “Physical Education in Class” was introduced in which over 3,000 schools, 7,000 teachers and 200,000 students participated. It aimed to increase the awareness of pupils, parents and those who issue exemptions from the PE classes.

To closely follow the level of physical activity of societies from different countries, the International Physical Activity Questionnaire was developed (Booth, 2000). It has been used over the years to test schoolchildren from various countries including Spain (Cocca et al., 2014) of Norway (Rangul et al., 2014), Brazil (Pellegrini et al., 2014), Nepal (Paudel et al., 2014), the Visegrad countries (Ács et al., 2016), Lithuania (Bergier B., Bergier J., & Wojtyła, 2012) as well as some other countries (Mazur, 2013).

The results of these studies point to an unfavourable phenomenon of low physical activity prevalence in adolescents, which comes with age and a lower level of physical activity in girls when compared to boys.

Thus, it seems vital to emphasise the place the school takes in popularising physical activity with young people (Kretchmar, 2006; Mc Kenzie et al., 2000; Woynarowska, 2011; Ács et al., 2016; Vanhelst et al., 2010; Zaza, Briss, & Harris, 2005).

### **Aim of the work**

The primary objective of the following work was to learn about students’ health behaviour drawing on the data on their physical activity and participation in PE lessons. Accordingly, the following research questions were posed:

1. What is the level of physical activity of students?
2. Which sociodemographic factors (gender, age) determine physical activity?
3. In what way the participation in the PE classes, including their positive assessment, and the level of physical activity are linked?

### **Methodology of the research**

#### **Material and the method**

The study was conducted in 2016 on a randomly chosen group of 916 students aged 16-18, in which 16 year-olds constituted 21.9 % (177 persons), 17 year-olds – 37.1 % (299) and 18 year-olds – 41.0 % (331), all coming from Lublin Province, Poland. The study based on the International Physical Activity Questionnaire (IPAQ – the extended version), supplemented with data concerning the participation in physical education lessons.

## Results

### *Level of physical activity in students*

The research results showed that the majority of students (77.4 %) meet the requirements of a high level of physical activity, 16.5 % demonstrate a moderate level and only 6.1 % – low (fig. 1).

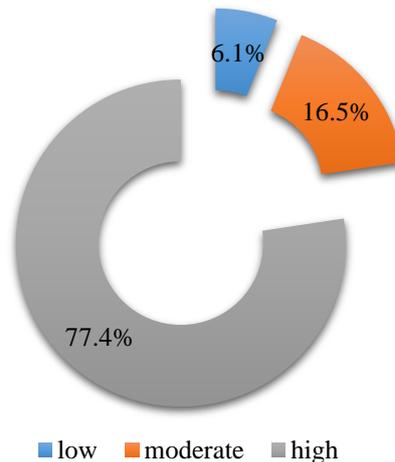


Figure 1. **Level of youth physical activity**

### *Gender and physical activity*

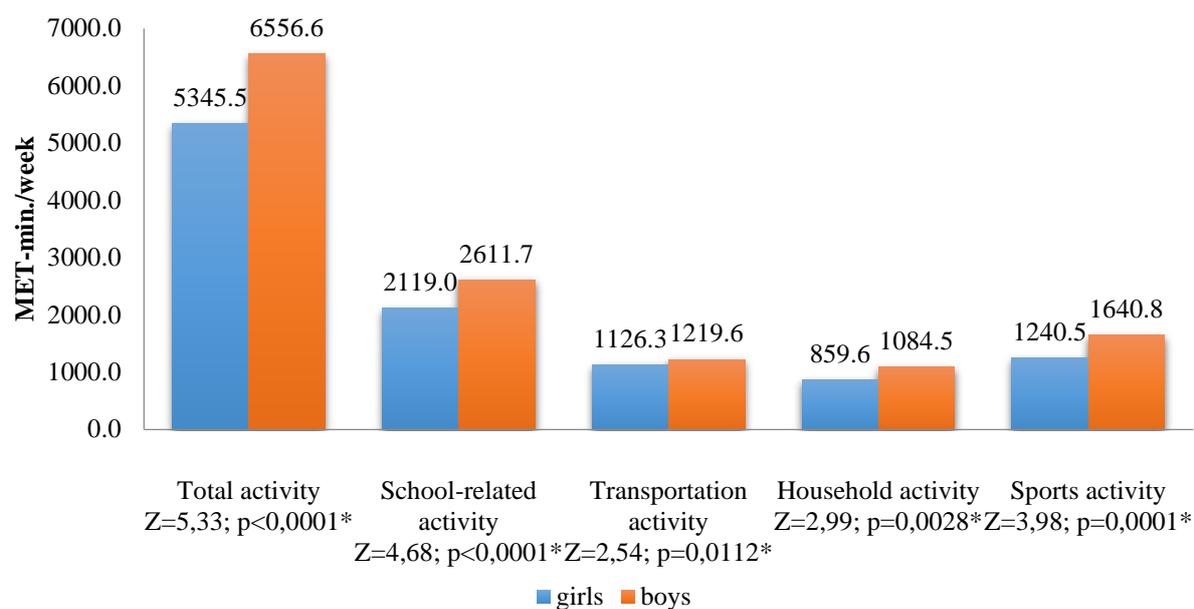
The level of total physical activity in boys amounted to 6556,6 MET-min / wk<sup>2</sup> and was significantly higher than in girls - 5,345,6 MET-min / wk<sup>3</sup>. Essential differences in favour of the boys were found in each of the four domains of physical activity: in the school-related activity, transportation activity, housework activity and sports (Fig. 2).

### *Age and physical activity*

As for the place of residence, i.e. a village, a small town, a medium town or a large city, no significant differences were found at the level of total physical activity in pupils. However, significant variation was visible in the area of housework-related physical activity which was the highest in the students coming from rural areas (1,220.6 MET) and small towns (1,061.1 MET) when compared to those living in medium-sized cities (719.3 MET) and big ones (728.3 MET) (Fig. 3).

<sup>2</sup> 1 MET

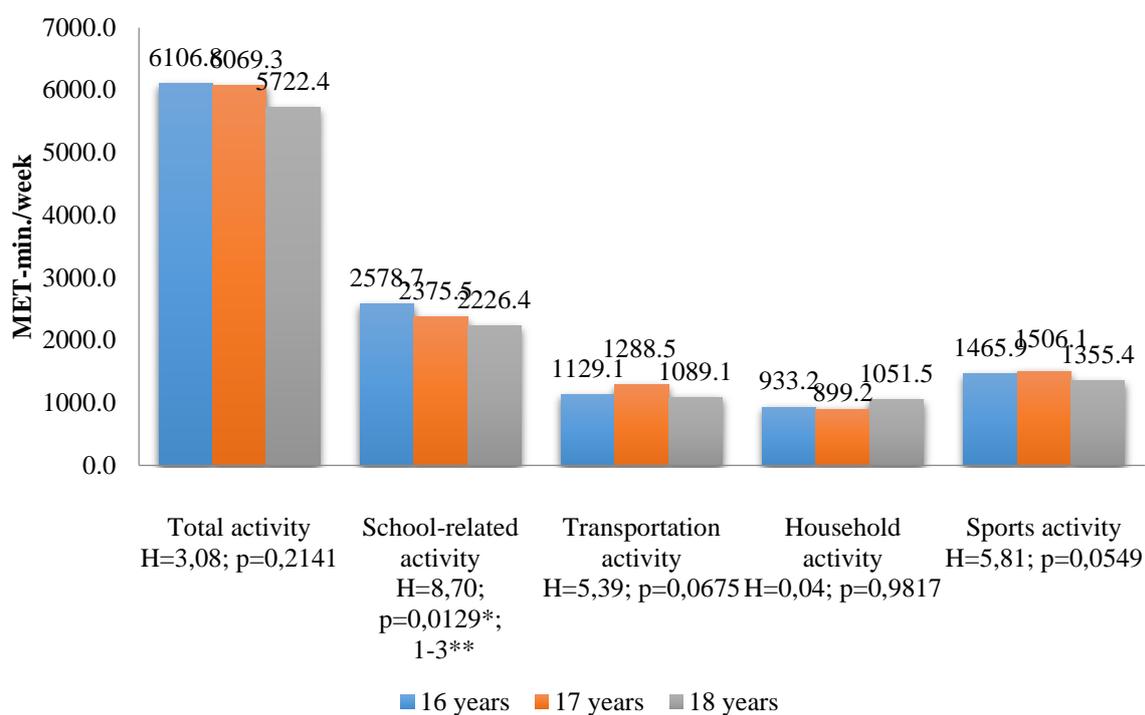
<sup>3</sup> in the further part of the work the abbreviation "MET" will be used.



Z- value of Mann-Whitney U-test

\* significant variation at  $p < 0,05$

Figure 2. Physical activity and its domains with regard to gender



\* significant variation at  $p < 0,05$

\*\* age groups among which significant statistical variation was found

Figure 3. Physical activity and its domains with regard to age

### ***Participation in PE classes***

The vast majority of students (92.2 %) declared that they participate in PE classes. 77.1 % of the respondents like these classes and nearly half would like to increase the number of hours in this subject (Fig. 4).

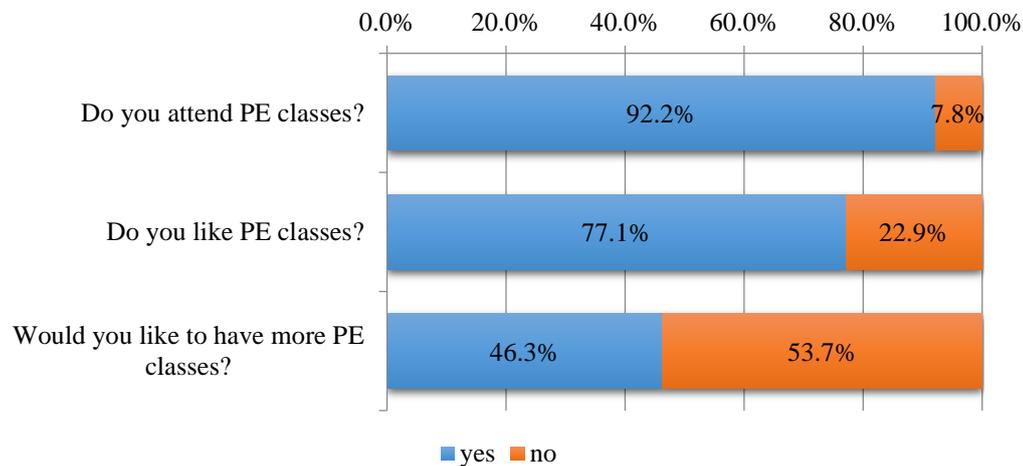


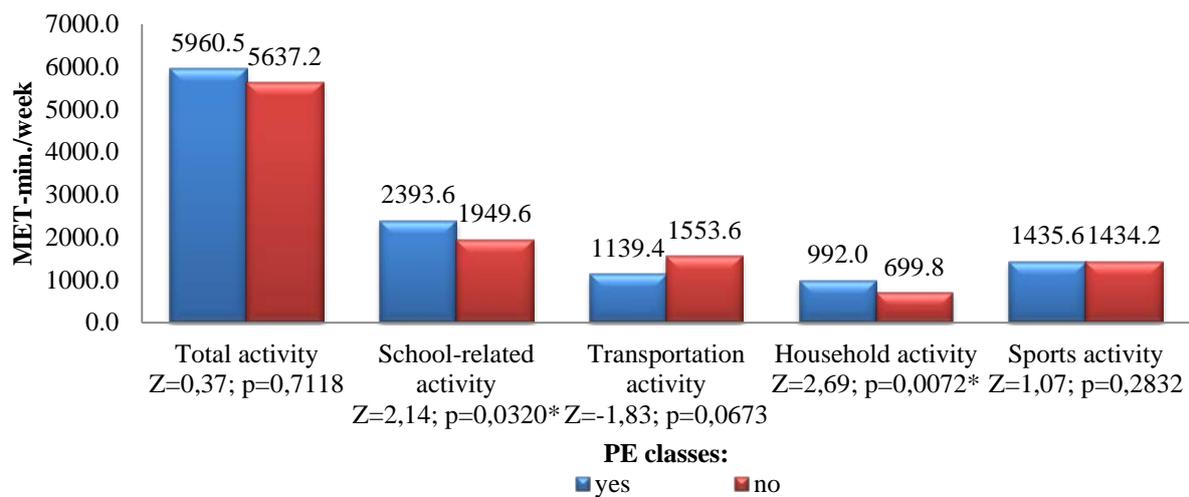
Figure 4. **Participation in PE classes**

The most frequently mentioned type of physical activities during the day turns out to be participating in PE lessons (82.8 %), getting to and from school – 80.2 %, doing sports (64.7 %), being involved in games and activities with peers (44, 6 %), walking the dog (31.4 %) as well as doing extracurricular activities at school (29.6 %).

The most common reasons for non-participating in PE classes given by the group of 63 students was a long-term sick leave (74.6 %), aversion to this type of activities (17.5 %) and other (7.9 %).

The most commonly practised sports disciplines in boys' sports clubs include football (23.2 %) and volleyball (15.5 %), as well as table tennis, swimming, martial arts, basketball, handball and winter sports – 13 indications (10 %). As for girls, the most popular were volleyball (14.7 %), football (12.6 %), swimming (9.4 %) and gymnastics (8.9 %).

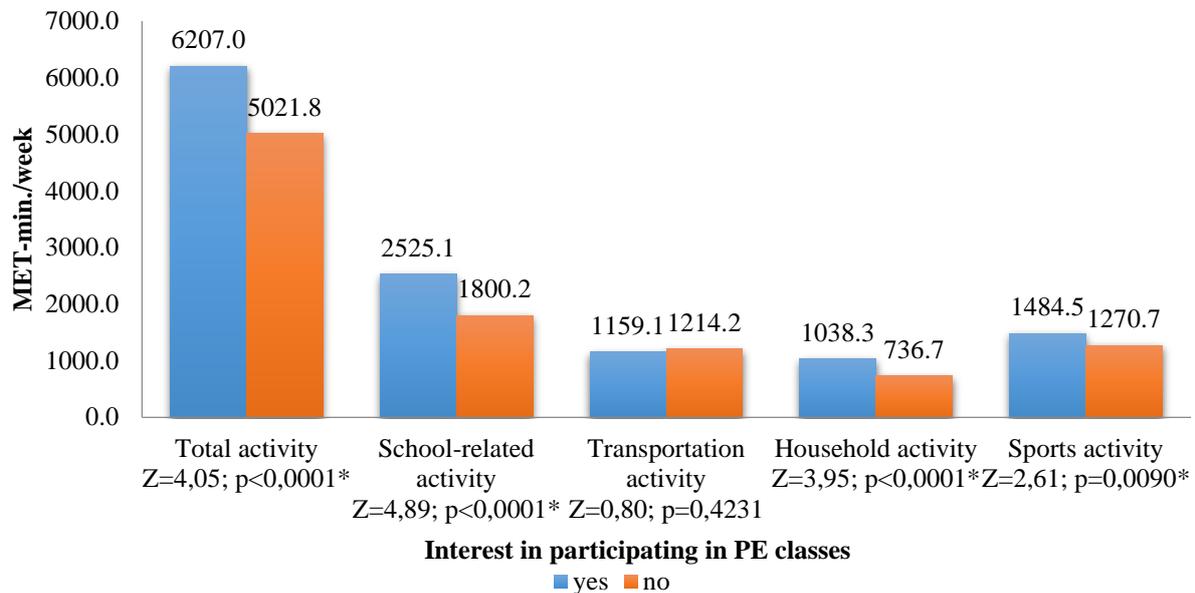
Students participating in PE classes demonstrate a higher level of total physical activity (5,960.5 MET) than those who do not take part in them (5,637,2 MET). Statistically significant differences were found, first of all, in the area of school- and home-related physical activities (Fig. 5).



\* significant variation at  $p < 0,05$

Figure 5. Physical activity and its domains with regard to participation in PE classes

A positive attitude to the PE lessons significantly impacts a higher overall physical activity and most of its domains, i.e. school and home-related activity as well as the one connected with doing sports (Fig. 6).



\* significant variation at  $p < 0,05$

Figure 6. Physical activity and its domains with regard to interest in participation in PE classes

## Discussion

Monitoring physical activity of young people, as a component of health behaviours, becomes a necessity in the current efforts to maintain people's good health now and in the future. The analysis of the presented research findings of the youth from Lublin Province in Poland leads to a positive assessment of the young peoples' condition. 77.4 % of those who completed the IPAQ questionnaire demonstrate a high level of physical activity, with a total amount of 5,935 MET, which is much higher than that presented by other authors from different countries (Küdlacek, 2013; Cocca et al., 2014; Bergier B., Bergier J., & Wojtyła, 2012; Jurakić, Pedisić, & Andrijasević, 2009) and similar to the one visible in the Visegrad countries (Ács et al., 2016).

The authors realize that IPAQ research results may have an overestimation, which is why they were compared to the results of other studies using the same questionnaire.

The study has confirmed a higher level of physical activity in boys than girls (Küdlacek, 2013; Bergier B., Bergier J., & Wojtyła, 2012; Biernat, 2011; Jurakić, Pedisić, & Andrijasević, 2009; Cocca et al., 2014; Groffik, 2015 ).

The unfavourable picture of girls' physical activity shows that boys may receive more encouragement from their parents and society (Pelegrini et al., 2014). Girls also express anxiety about their unattractive look in sports outfits (Slater & Tiggemann, 2010). It seems, however, that the main problem of lower physical activity of girls is the offer of available physical activities which do not meet their expectations, including PE classes. This conclusion is evidenced by the present research, which shows that, in addition to traditional team games chosen by girls and boys, girls are more interested in swimming and gymnastics.

The research into all domains of physical activity has shown that the highest values of activity were visible in the domain of school-related activity, which was true both of the boys (2,611,7 MET) and girls (2,199.0 MET). Moreover, it has been shown that the efforts made by students during the day concerned mostly PE lessons (82.8 %), which is confirmed by other studies (Ács et al., 2016; Vasickova et al., 2013; Bergier B., Bergier J., & Wojtyła, 2012; Vanhelst et al., 2010).

A significant correlation between the higher level of physical activity and the participation in PE activities was found in those students who attended the classes in contrast to those who do not. The presented research results unequivocally indicate that proper implementation of PE activities in school may guarantee a higher physical activity in students. The presented positive image of a healthy lifestyle of school youth in the field of physical activity may be the outcome of two programmes introduced in Poland by the Ministry of Sport and Tourism, i.e. "Prevent exemptions from physical education" implemented in 2012, and "Physical education in class" in 2013-2016. Thus, it is worth

considering the measures applied in Poland aiming at improving physical activity in school youth in other countries.

### Conclusions

The surveys conducted among school students in Poland aged 16-18 allow for formulating several conclusions and determining some recommendations.

1. Youth demonstrate a high level of total physical activity, most of which is school-related.
2. A vast majority of students (92 %) declare that they participate in PE classes and most of them like these classes.
3. The factors that significantly impact the level of physical activity are gender and age.
4. The differences in the physical activity in girls and their interests in other physical activities may indicate that greater diversity in the offer of what is done in PE classes and sports clubs is needed.

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