

## THE CURRENT STATE AND THE PECULIARITIES OF PHYSICAL ACTIVITY OF TEENAGERS IN UKRAINE AND POLAND

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### Abstract

Thematic justification is determined by searching for ways to optimize the level of human physical activity. Studying the level of physical activity of residents of neighboring countries of Ukraine and Poland, which have differences in systems of education, culture, socio-economic structure, will assist in searching for ways to optimize the level of physical activity of the population of both countries. Special focus of the study will be on the problem of studying physical activity of children and youth, the proper level of which is a guarantee of nation's health. Research objective is to establish the current state and characteristics of physical activity of 13–15-year-old children living in Poland and Ukraine. *Research results.* The article provides a comparative analysis of the results of a survey of Polish and Ukrainian 13–15-year-old school students. A comparative analysis of indicators of physical activity of 13–15-year-old children living in Poland and Ukraine was also conducted. It has been established that children of both countries equally prefer sedentary activities in their spare time. Ukrainian school students give a higher evaluation to physical education classes and their own level of physical aptitude. At the same time, there is a tendency among Ukrainian school students towards the decrease of the level of physical activity from 13 to 15 years of age if compared to Polish school students. *Conclusions:* obtained pedometer indicators are below normal, which is indicative of a sedentary lifestyle of students of this age group (Ukrainian students – 7,9 thousand steps per day, Polish students – 9,7 thousand steps per day). Polish students have a tendency towards increasing the volume of physical activity (13 years old – 8,8 thousand steps per day, 15 years old – 11 thousand steps per day). Conversely, students in Ukraine tend to decrease the volume of physical activity (13 years – 9,9 thousand steps per day, 15 years – 6,7 thousand steps per day).

**Key words:** physical activity, children, school students, Ukraine, Poland

Алла Соловей, Ольга Римар, Марта Ярошик, Наталія Сороколіт. Сучасний стан та особливості рухової активності підлітків України й Польщі. Актуальність дослідження зумовлена пошуком способів оптимізації рівня рухової активності людини. Вивчення рівня рухової активності мешканців сусідніх держав України та Польщі, які мають відмінності в системах освіти, культури, соціально-економічного устрою, дасть змогу полегшити пошук шляхів оптимізації рівня рухової активності населення обох країн. У дослідженні особливу увагу приділено проблемі вивчення рухової активності дітей і молоді, належний рівень якої є гарантією здоров'я нації. *Мета дослідження* – установити сучасний стан та особливості рухової активності дітей 13–15 років, котрі проживають у Польщі й Україні. *Результати дослідження.* У статті представлено порівняльний аналіз результатів анкетування польських та українських школярів 13–15 років. Також проведено порівняльний аналіз показників рухової активності дітей 13–15 років України й Польщі. Установлено, що діти обох країн однаково надають перевагу малорухливим видам діяльності у вільний час. Українські школярі вище оцінюють урок фізичного виховання і власний рівень фізичної підготовленості. Водночас в українських учнів простежено тенденцію до зниження рівня рухової активності з 13 до 15 років, порівняно з польськими школярами. *Висновки.* Отримані показники крокометрії є нижчими за норму, що свідчить про малорухливий спосіб життя учнів цієї вікової групи (українські діти – 7, 9 тис. кроків на день; польські – 9,7 тис.). В учнів Польщі спостерігаємо тенденцію до збільшення обсягу рухової активності (13 років – 8,8 тис. кроків на день; 15 років – 11 тис.). І навпаки, у школярів України простежено тенденцію до зниження обсягу рухової активності (13 років – 9,9 тис. кроків на день; 15 років – 6,7 тис.).

**Ключові слова:** рухова активність, діти, школярі, Україна, Польща.

Алла Соловей, Ольга Римар, Марта Ярошик, Наталія Сороколіт. Современное состояние и особенности двигательной активности подростков Украины и Польши. Актуальность исследования обусловлена поиском путей оптимизации уровня двигательной активности человека. Изучение уровня двигательной активности жителей соседних государств Украины и Польши, которые имеют различия в системах образования, культуры, социально-экономического устройства, позволит облегчить поиск путей оптимизации уровня двигательной

активности населения обеих стран. В исследовании особое внимание уделяется проблеме изучения двигательной активности детей и молодежи, надлежащий уровень которой является гарантией здоровья нации. **Цель исследования** – установить современное состояние и особенности двигательной активности детей 13–15 лет, проживающих в Польше и Украине. **Результаты исследования.** В статье представлен сравнительный анализ результатов анкетирования польских и украинских школьников 13–15 лет. Также проведен сравнительный анализ показателей двигательной активности детей 13–15 лет Украины и Польши. Установлено, что дети обеих стран одинаково предпочитают малоподвижные виды деятельности в свободное время. Украинские школьники выше оценивают урок физического воспитания и собственный уровень физической подготовленности. Вместе с тем, в украинских школьников наблюдается тенденция к снижению уровня двигательной активности с 13 до 15 лет по сравнению с польскими школьниками. **Выводы.** полученные показатели шагометрии – ниже нормы, что свидетельствует о малоподвижном образе жизни учащихся данной возрастной группы (украинские ученики – 7, 9 тыс. шагов в день, польские – 9,7 тыс.). В детей Польши наблюдается тенденция к увеличению объема двигательной активности (13 лет – 8,8 тыс. шагов в день; 15 лет – 11 тыс.). И наоборот, в учеников Украины снижен объем двигательной активности (13 лет – 9,9 тыс. шагов в день, 15 лет – 6,7 тыс.).

**Ключевые слова:** двигательная активность, дети, школьники, Украина, Польша.

**Introduction.** Physical activity is an integral part of a person's life, which, of course, determines the quality of life of an individual. Numerous scientific studies prove that physical activity of the country's population depends on socio-economic and cultural factors. In the XXI century, due to a scientific and technological progress, daily physical activity of the world's population decreased to a critical level. According to global studies, at least 60 % of the world's population does not adhere to the necessary level of physical activity. Reduction of the level of physical activity is the fourth most important risk factor for mortality in the world. According to scientific studies, only 13 % of Ukrainians adhere to the necessary physiologically reasonable level of physical activity, while this indicator is higher in the European Union countries. Therefore, today, searching for ways to optimize the level of physical activity of the population is up to date. Studying the level of physical activity of residents of neighboring countries (Ukraine and Poland), which have differences in systems of education, culture, socio-economic structure, will assist in searching for ways to optimize the level of physical activity of the population of both countries. Special focus of the study will be on the problem of studying physical activity of children and youth, the proper level of which is a guarantee of nation's health.

A sufficient number of scientific studies is dedicated to the problem of studying the level of physical activity of various population groups. In his studies, A. Mandiuk considers the issue of physical activity in school students' leisure structure. Also, A. Mandiuk studied peculiarities of physical activity of school students in the USA. Comparative analysis of the attitude to various forms of physical activity of Ukrainian and Polish school students had been studied by I. Bodnar and A. Kindzer.

At the same time, today there is little research containing data on the peculiarities and problems of physical activity of children abroad, in Poland in particular, and their comparison with data obtained in Ukraine. With this taken into account, the **objective of our research** was to: establish the current state and peculiarities of physical activity of 13–15-year-old children living in Poland and Ukraine.

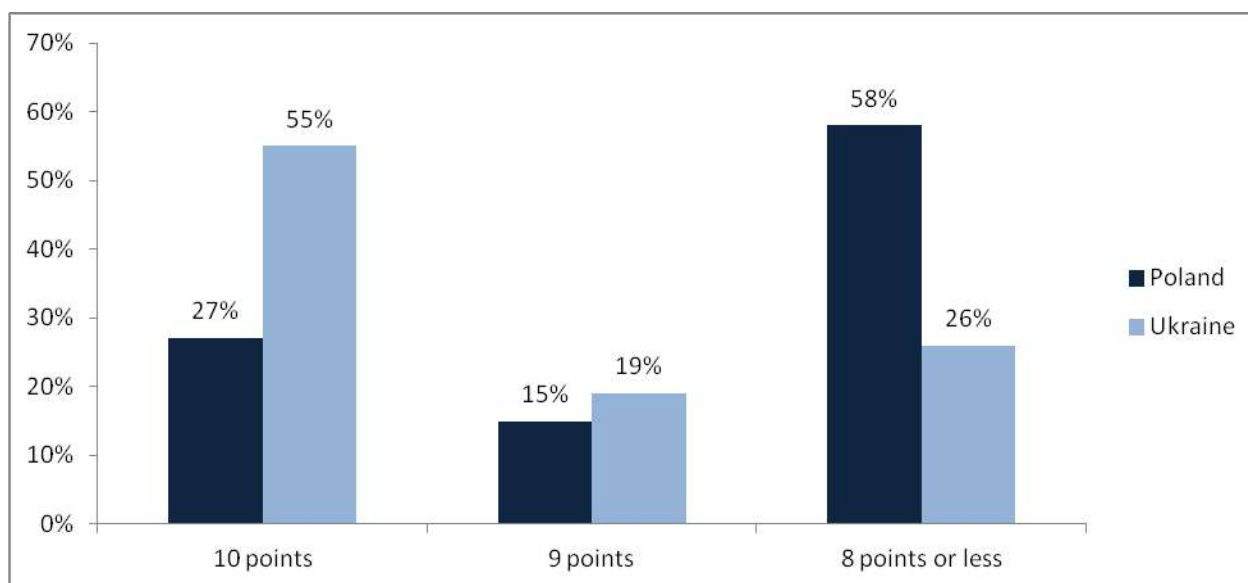
To achieve this objective, the following **tasks** were being accomplished: carrying out a comparative analysis of the attitude to various forms of physical activity of 13–15-year-old children living in Ukraine and Poland and also determining and comparing the volume of physical activity of 13–15-year-old children in both countries.

To reach the stated objectives, the following research **methods** were used: analysis of references, sociological methods of research (questioning), pedagogical observation (methods of time tracking and pace counting), methods of mathematical statistics.

**Discussion and the results of the study.** In order to determine the attitude to various forms of motor activity of 13–15-year-old students a questionnaire was conducted at general education schools in Ukraine and Poland. The survey involved 224 students from the city of Lviv and 226 students from the city of Wroclaw.

An analysis of the results of the held survey showed that answers of students in Ukraine and Poland have common and distinctive features.

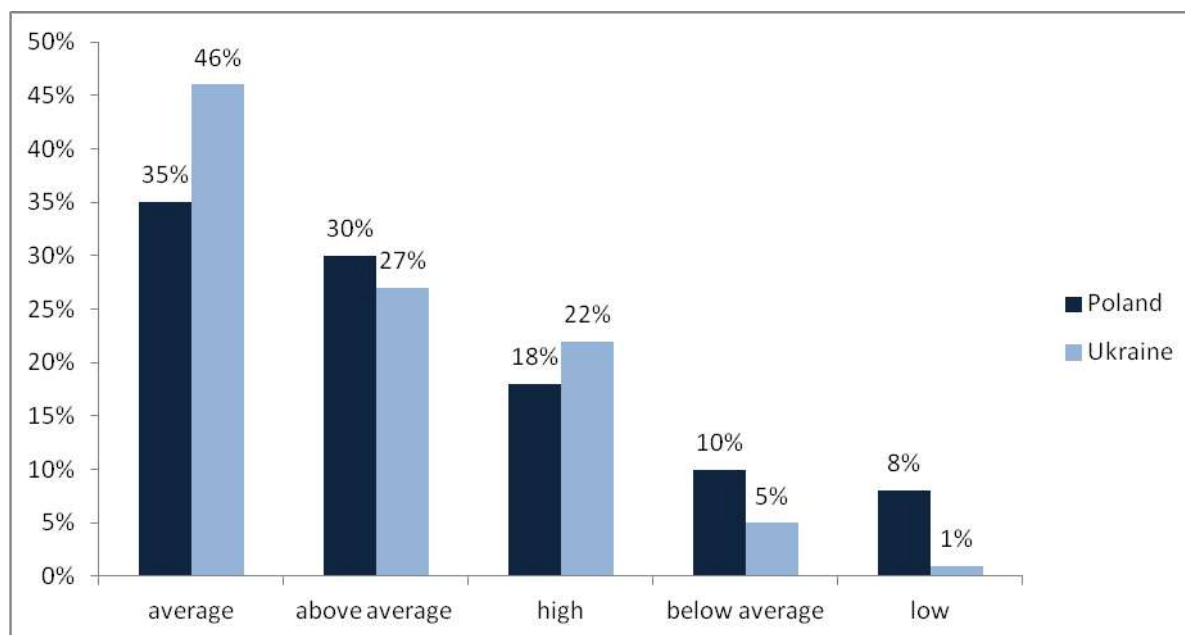
Differences can be observed in results of the evaluation given to physical education classes as the main form of physical activity. Comparison of students' evaluation to physical education classes showed that the majority of students in Ukraine highly appreciate the lesson (9–10 points: students in Ukraine – 72 %, students in Poland – 42 %). Polish schools' students evaluate physical education classes with a more critical mind (8 points or less: students in Ukraine – 26 %, students in Poland – 58 %). This may indicate a more positive or declarative attitude of Ukrainian school students to physical education classes (figure 1).



**Fig. 1.** *Physical Education Classes Evaluation*

Differences in responses are observed in students' assessment of their physical fitness. An analysis of the answers showed that Polish school students, in comparison with the Ukrainian ones, assess their physical fitness with a more critical mind (below average and low level of physical fitness: 6 % of students in Ukraine, 18 % of students in Poland), whereas the majority of Ukrainian school students assess their physical readiness as average – 46 % and above the average and high – 49 %, and as for the students of Poland, 35 % assess their physical fitness as average and 48 % – as above average and high (figure 2). The results obtained may indicate either better physical fitness of Ukrainian school students or a falsity of subjective assessment of their physical fitness by Ukrainian school students.

An analysis of the survey results of Ukrainian and Polish students revealed common, identical answers to questions.



**Fig. 2.** *Physical Fitness of Students*

Research results showed that motives driving students of Ukraine and Poland at the age of 13–15 years to attend education classes completely coincide. 62 % of students answered that they attend the class in order to improve their physical fitness; 20 % say that the class is beneficial; 13 % of students say that the class is

fun and interesting; 5 % – other answers. Results obtained indicate that the main motive that encourages students of both Ukraine and Poland to attend physical education classes is to improve physical fitness.

In their spare time, during weekends, students of Poland and Ukraine prefer the same sedentary activities. Thus, 28 % of Ukrainian students and 31 % of Polish students spend their free time playing computer games and communicating through social networks; 27 % of Ukrainian students and 32 % of Polish students are most willing to watch TV shows and listen to music. Only 30 % of students in Ukraine and 22 % of students in Poland prefer walks in their spare time.

Received indicators demonstrate that the majority of questioned students (Ukraine – 56 %, Poland – 71 %) are not involved in sports sections, which, in our opinion, can be due to many factors. Thus, in recent years, both in Poland and in Ukraine, the number of state institutions providing an opportunity to visit sports clubs free of charge has decreased significantly (figure 3).

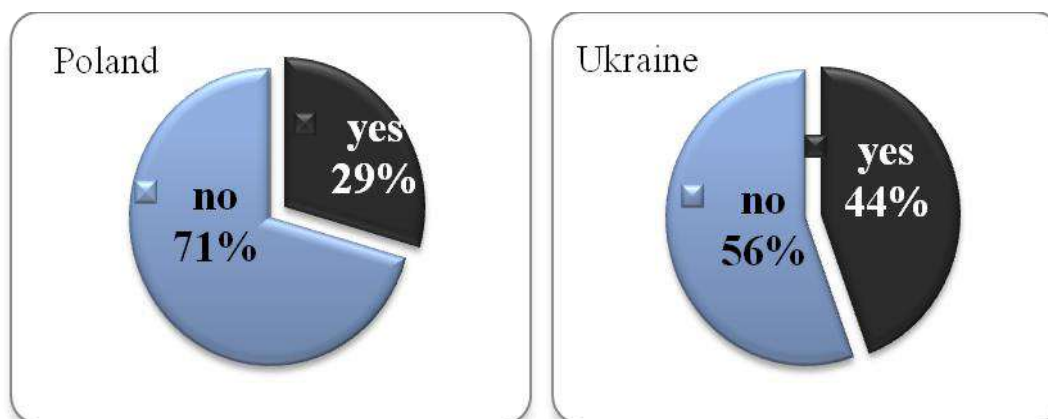


Fig. 3. Children's Involvement in Sports Sections and Clubs

Using a survey, we determined those types of physical activity that students find interesting. Ukrainian and Polish school students are most interested in such types of physical activity like sports games (Poland – 36 %, Ukraine – 31 %), riding a bike, a skateboard and roller skates (Poland – 28 %, Ukraine 42 %), as well as swimming and workouts at the gym.

For a detailed evaluation of the level of physical activity, we used methods of time tracking and pace counting and 60 students from Ukraine and 60 students from Poland participated in the research. The observation provided us with the opportunity to estimate the average daily physical activity of 13–15-year-old children living in such megapolises.

Research results showed that pupils in Poland at the age of 13 take an average of 8,8 thousand steps per day, at the age of 14–9,5 thousand steps and at the age of 15–11 thousand steps per day. Students of Ukrainian schools at the age of 13 take 9,1 thousand steps per day, at the age of 14–8,1 thousand steps and at the age of 15–6,7 thousand steps (figure 4). Research results showed that students of both countries do not complete the daily minimum rate of physical activity, which is 10 thousand steps per day. Obtained indicators are below the norm, which indicates a sedentary lifestyle of children of this age group in both countries.

When comparing the pace counting indicators of school students in Ukraine and Poland, a different trend can be observed. If physical activity of students in Poland grows with their age (13 years – 8, 8 thousand steps, 15 years – 11 thousand steps), then it's the contrary in case with the Ukrainian students – physical activity decreases with age (13 years – 9,9 thousand steps, 15 years – 6,7 thousand steps) (figure 4). What is curious, is that physical activity of thirteen-year-old Ukrainians and Poles is practically the same. However, with age, students in Poland tend to increase the level of physical activity from 9 to 11,000 steps per day. Conversely, students in Ukraine tend to decrease the level of physical activity from 9 to 7 thousand steps per day. As a result, fifteen-year-old Ukrainian school students are significantly behind the Poles (7 versus 11 thousand steps per day) in terms of daily physical activity (at  $P < 0.05$ ). Reasons for such a decrease in physical activity of Ukrainian school students are well known – intensification of the educational process, a decrease in students' interest in physical exercises, etc. However, reasons for the increase in physical activity of Polish school students undoubtedly requires further research.

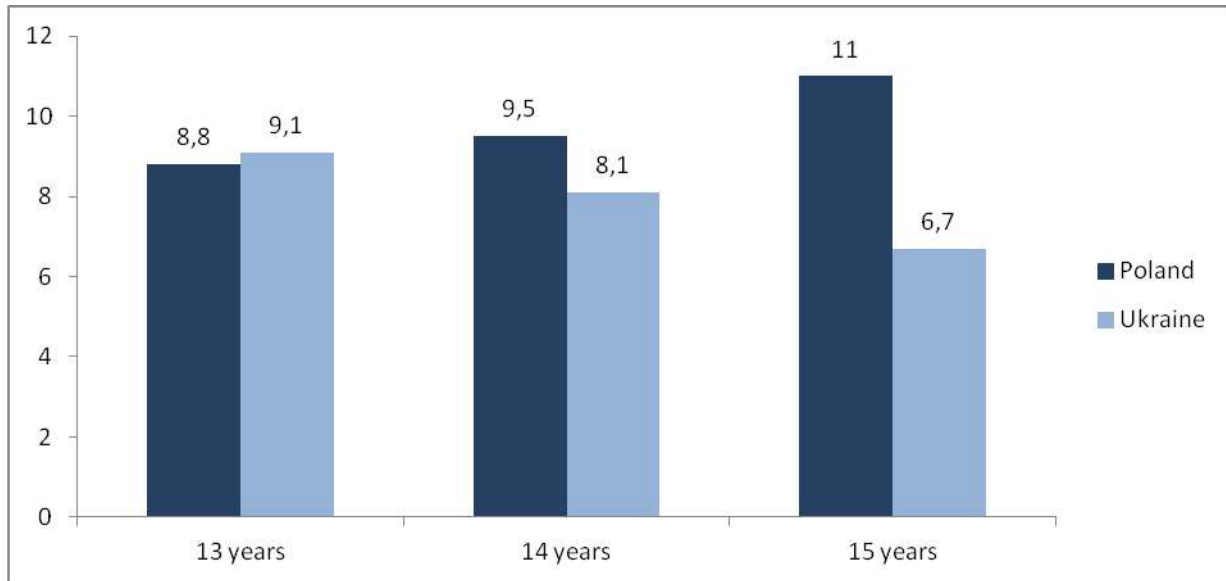


Fig. 4. Pace Counting Indicators for 13–15-year-old Children

**Conclusions and perspective for further research.** Thus, the analysis of the survey results showed that when it comes to various forms of physical activity, students in Ukraine and Poland have common and distinctive features.

Differences are observed in results of the evaluation of physical education classes as the main form of physical activity. Comparison of students' evaluation to education classes showed that the majority of students in Ukraine highly appreciate the lesson (9–10 points: students in Ukraine – 72 %, students in Poland – 42 %). Polish schools' students evaluate physical education classes with a more critical mind (8 points or less: students in Ukraine – 26 %, students in Poland – 58 %).

Differences in responses are observed in students' assessment of their physical fitness: Polish school students, in comparison with the Ukrainian ones, assess their physical fitness with a more critical mind (below average and low level of physical fitness: 6 % for pupils in Ukraine, 18 % for students in Poland), which may indicate either better physical fitness of Ukrainian school students or a falsity of subjective assessment of their physical fitness by Ukrainian school students.

An analysis of the survey results of Ukrainian and Polish students revealed common, identical answers to the questions. Motives driving students of Ukraine and Poland at the age of 13–15 years to attend education classes completely coincide. The main motive driving students of Ukraine and Poland to attend education classes is to improve their physical fitness (62 % of answers).

In their spare time students of Poland and Ukraine prefer the same sedentary activities (28 % of Ukrainian students and 31 % of Polish students spend their free time playing computer games and communicating through social networks; 27 % of Ukrainian students and 32 % of Polish students watch TV shows and listen to music). Received indicators demonstrate that the majority of questioned students (Ukraine – 56 %, Poland – 71 %) are not involved in sports sections, which, in our opinion, can be due to many factors. Ukrainian and Polish school students are most interested in such types of physical activity like sports games (Poland – 36%, Ukraine – 31 %), riding a bike, a skateboard and roller skates (Poland – 28 %, Ukraine 42 %), as well as swimming and workouts at the gym.

Pace counting results showed that students of both countries do not complete the daily minimum rate of physical activity, which is 10 thousand steps per day. Obtained indicators of average daily physical activity are below or near the norm. This indicates a sedentary lifestyle of children of this age group (Ukrainian students – 7,9 thousand steps per day; Polish students – 9,7 thousand steps per day).

There is a tendency for students of Poland to increase physical activity (13 years – 8,8 thousand steps, 15 years – 11 thousand steps). And, on the contrary, Ukrainian students decrease their physical activity with age (13 years – 9,9 thousand steps, 15 years – 6,7 thousand steps). Thus, daily physical activity of fifteen-year-old Ukrainian school students (at  $P < 0,05$ ) is behind the Poles (7 versus 11 thousand steps per day). Reasons for such a decrease in physical activity of Ukrainian school students are well known – intensification of the educational process, a decrease in students' interest in physical exercises, etc. However, reasons for the increase in physical activity of Polish school students undoubtedly requires further research.

Therefore, further research will be dedicated to studying the social and economic conditions of both countries and their impact on the level of physical activity of teenagers.

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