Relation between physical activity of parents and their interest in physical culture of their children's in early school education

Aktywność fizyczna rodziców a ich zainteresowania kulturą fizyczną dzieci objętych nauczaniem wczesnoszkolnym

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Summary

Introduction: Active and systematic participation of parents in physical activity can directly affect the implementation of their own children into such behaviors. The purpose of the study was to assess physical activity of parents and their interest in the physical culture of their children in early school education.

Materials and methods: The study was carried out in the 2014/2015 school year. 374 families from the Mielec District representing the rural environment were randomly selected for the study. Out of all the questionnaires sent, 356 of them returned, which 54 of them were completed incorrectly. Eventually, 302 surveys were qualified for further analysis. The study used the diagnostic survey method, where questionnaire was the basic technique in the process.

Results: Detailed analysis of the study results showed that physical activity among most mothers and fathers was at a very low level. Both level of education and socioeconomic status have a significant impact on level of physical activity of parents. Empirical studies also revealed a very low level of interest among most parents (68.5%) in the physical culture of their children. **Conclusions:** Based on the results of the study, it can be concluded that the participation of children in physical culture depends on the physical activity of parents, their education and socioeconomic status.

Keywords: physical activity, parents, children, physical education

Introduction

The importance of physical activity for a human changes and evolves with age, but it always remains one of the main factors determining its health [1]. It is worth noting that the level of physical activity of a child, especially at a younger school age, is largely determined by the influence of the family environment, which can be positive or negative. Family physical activity creates a chance for its presence in the life of the next generation [2], and the active and systematic participation of parents in physical exercises can directly influence the gradual introduction of their own children to such behaviors.

Getting the child used to regular physical activity should take place from an early age. The educational influence of the family is the strongest during childhood, i.e. in the early stages of development of a given person [3]. It is during this period that children's habits of spending free time can be shaped. Family

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physical activity is particularly important. Therefore, preparing the child for present and future participation in physical culture is the basic responsibility of every parent. In addition to be followed by example, parents' activity can be expressed in their interest in the broadly understood physical culture of their children [4]. A manifestation of parents' interests in this area is also joint participation with their children in free time in various forms of unorganized physical activity.

In turn, interest in the child's progress in the area of physical education, which is part of physical culture after all, demonstrates the understanding of the child's needs and gives the opportunity to help it in difficult situations [4]. At the level of early school education, parents' interest in such an important area of education should be a permanent element of their cooperation with the school and the teacher.

The purpose of the study was to assess physical activity of parents and their interest in the physical culture of their children in early school education.

The study provided answers to the following specific questions:

- 1. What is the level of participation in physical activity of the parents surveyed?
- 2. Do the level of education, age and socioeconomic status of parents differentiate their level of physical activity of parents?
- 3. What is the level of parents' interest in the physical culture of their children?
- 4. Does the level of physical activity of parents correlate with their level of interest in their children's physical activity?

Materials and methods

The study was carried out in the 2014/2015 school year. 374 families from the Mielec District representing the rural environment were randomly selected for the study. Out of all the questionnaires sent, 356 of them returned, which 54 of them were completed incorrectly. Eventually, 302 surveys were qualified for further analysis.

The study used the diagnostic survey method, where questionnaire was the basic technique in the process. The tool that allowed the gathering of empirical material was the questionnaire *Family physical activity* prepared by E. Madejski [5].

tablished: low – below 5 points, average – 5–8 points and high – 9–12 points

At the end of the questionnaire in so-called particulars, parents were asked to provide data that allowed to determine their socioeconomic status. The socioeconomic status of the family included: level of education (primary school or uncompleted primary school – 1 point, vocational school – 2 points, secondary school – 3 points, higher vocational school – 4 points, degree level – 5 points), nature of the work performed (not working – 1 point, disability/old age pensioner – 2 points, blue-collar worker – 3 points, white-collar worker – 4 points, number of dependent children (three and more – 1 point, two – 2 points, one – 3 points). The maximum number of points that both parents could obtain (21 points) was used to determine five numerical ranges for the socioeconomic status of the family: very low – <4 points, low – 5–8 points, medium – 9–13 points, high – 14–17 points, very high – 18–21 points

Among the surveyed parents, the most numerous group were mothers with secondary school education (41.1%), while fathers were dominating vocational school education level (47.4%). In the population of parents surveyed, more mothers than fathers had higher education level (Table 1).

Table 1.Level of education of the parents surveyed

		Level of education											
Parents	Primar	y school	Vocational school		Secondary school		Higher vocational school		Degr	ee level	Total		
	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	
Mother	1	0.3	95	31.5	124	41.1	34	11.3	48	15.9	302	100	
Father	6	2	143	47.4	115	38.1	26	8.6	12	4.0	302	100	

The first part of the study involved physical activity of parents. The questionnaire mainly contained closed questions with ready-made answer scales, from which the surveyed parent could choose one or two suggestions. Some questions were supplemented by additional questions. Most of the questions were scored. Each of both parents could get from 0 to 24 points. On this basis, five numerical ranges were established: very low $-\!<\!5$ points, low $-\!5\!-\!9$ points, medium $-\!10\!-\!14$ points, high $-\!15\!-\!19$ points, very high $-\!20\!-\!24$ points. The sum of points obtained by the father and mother allowed to determine the level of physical activity of both parents.

Part of the survey on parents' interest in the physical culture of their children contained closed questions, which, as in the first part, were scored. The question regarding parents' expectations regarding physical education in grades I-III was open. In this part of the survey you could get from 0 to 12 points. The scope of variables examining the level of parents' interest in the physical culture of their own children (the gap between the minimum and maximum) was smaller, so three ranges were es-

Most parents, both mothers (69.9%) and fathers (58.3%) were between 31 and 40 years old. The smallest group were parents over 51 years old. Among the surveyed parents, who were in the 41 to 50 age range, fathers were by far the most numerous group (Table 2).

The study results were developed in the following programs: Microsoft Excel 2007 and IBM – SPSS Statistics 21. A schedule of quantity and percentage was used for the statistical description of qualitative data, and *chi*-square statistical significance tests were used to examine the relationship between qualitative data. The correlation and dependence strength of two features was determined using the Spearman *rho* coefficient.

Results

In determining the level of physical activity of the parents surveyed, the following issues were taken into account: physical activity in the past and now, all-year and seasonal sports activity, doing morning exercises, doing relaxation exercises af-

Table 2.
Age of parents surveyed

		Wiek										
Parents	Up to 30 yrs old		31–40 yrs old		41–50 yrs old		51 yrs old and more		Total			
	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%		
Mother	27	8.9	211	69.9	60	19.9	4	1.3	302	100		
Father	9	3.0	176	58.3	106	35.1	11	3.6	302	100		

ter mental or physical work, as well as in stressful situations. In addition, two indicators were used to determine the level of physical activity: volume (number of hours per week), frequency (number of days per week).

Detailed analysis of the study results showed that physical activity among both mothers and fathers was at a very low level. Low and very low levels concerned as many as 97.4% of respondents, including 95% fathers and 93.7% mothers. The high level of activity under study was recorded only among two fathers and one mother. Analysis of the results revealed that there were no significant statistical differences between the level of physical activity of the fathers and mothers in the study (Table 3).

The results of the study presented in Tables 4 and 5 showed that education differentiates the level of physical activity of both fathers and mothers. This diversity turned out to be statistically significant, which means that the higher the level of education, the higher the level of physical activity of the respondents was.

The data presented in Tables 6 and 7 show that the age of both mother and father is not a factor differentiating the level of participation in physical activity. A detailed analysis of Spearman's rank correlation showed no significant statistical differences.

The analysis of the study results showed that the socioeconomic status has a significant impact on the level of parents' participation in physical activity, which means that the higher the level of socioeconomic status, the higher the level of physical

Table 3.Level of participation in physical activity of the parents surveyed

Il -fbiltiit	Fat	ther	Мо	ther	Total		
Level of physical activity	Nr	%	Nr	%	Nr	%	
Very low	243	80.4	227	75.2	240	79.5	
Low	44	14.6	56	18.5	54	17.9	
Medium	13	4.3	18	6.0	8	2.6	
High	2	0.7	1	0.3	0	0.0	
Very high	0	0.0	0	0.0	0	0.0	
Total	302	100	302	100	302	100	

Statistical significance analysis: $\it{chi}^2(4) = 12.54; p = 0.250$

 Table 4.

 Level of participation of a father in physical activity depending on level of education

				1	Level of	education	1					
Level of physical activity	Primary school		Vocational school		Secondary school		Higher vocational school		Degree level		Total	
	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%
Very low	5	83.3	125	87.4	89	77.4	18	69.2	6	50	243	80.4
Low	1	16.7	15	10.5	17	14.7	7	27.0	4	33.3	44	14.6
Medium	0	0.0	2	1.4	8	7.0	1	3.8	2	16.7	13	4.3
High	0	0.0	1	0.7	1	0.9	0	0.0	0	0.0	2	0.7
Very high	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	6	100	143	100	115	100	26	100	12	100	302	100

Correlation and dependence: Spearman's rho: 0.19; p < 0.001

Table 5.Level of participation of a mother in physical activity depending on level of education

		Level of education											
Level of physical activity	Primary school		Vocational school		Secondary school		Higher vocational school		Degree level		Total		
	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	
Very low	1	100	80	84.2	93	75	23	67.6	30	62.5	227	75.2	
Low	0	0.0	12	12.6	21	16.9	7	20.6	16	33.3	56	18.5	
Medium	0	0.0	3	3.2	10	8.1	4	11.8	1	2.1	18	6.0	
High	0	0.0	0	0.0	0	0.0	0	0.0	1	2.1	1	0.3	
Very high	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total	1	100	95	100	124	100	34	100	48	100	302	100	

Correlation and dependence: Spearman's rho: 0.15; p < 0.007

Table 6.Level of participation of a father in physical activity depending on age

				A	ge					
Level of physical activity	Up to 30 yrs old		31–40 yrs old		41–50 yrs old		51 yrs old and more		Total	
	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%
Very low	7	77.8	141	80.1	86	81.1	9	81.8	243	80.5
Low	1	11.1	28	15.9	14	13.2	1	9.1	44	14.6
Medium	0	0.0	7	4.0	5	4.7	1	9.1	13	4.3
High	1	11.1	0	0.0	1	1.0	0	0.0	2	0.6
Very high	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	9	100	176	100	106	100	11	100	302	100

Correlation and dependence: Spearman's rho: 0.01; p < 0.752

Table 7.Level of participation of a mother in physical activity depending on age

				A	ge						
Level of physical activity	Up to 30 yrs old		31–40 yrs old		41–50 yrs old		51 yrs old and more		Total		
	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	
Very low	18	66.7	160	75.8	46	76.6	3	75	227	75.2	
Low	6	22.2	42	19.9	7	11.7	1	25	56	18.5	
Medium	3	11.1	9	4.3	6	10.0	0	0.0	18	6.0	
High	0	0.0	0	0.0	1	1.7	0	0.0	1	0.3	
Very high	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total	27	100	211	100	60	100	4	100	302	100	

Correlation and dependence: Spearman's rho: -0.02; p < 0.651

activity of the respondents (Table 8).

Empirical studies also revealed a very low level of interest among most parents (68.5%) in the physical culture of their children. Only 6.3% of respondents present a high level of interest in this area of parental activity (Fig. 1).

Based on the data collected, it was observed that the care of a child participating in organized physical activities (sports clubs, community centers, etc.) was most often exercised by mothers (41.7%), followed by fathers (26.8%). Other family members who looked after the child were: sisters, brothers and

Table 8.
The socioeconomic and social status of parents and their level of physical activity

Level				S	ocioecon	omic stat	us				– Total	
of physical	Very low		Low		Med	lium	Н	igh	Very high		Total	
activity	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%
Very low	0	0.0	3	100	151	87.3	74	70.5	12	57.1	240	79.5
Low	0	0.0	0	0.0	18	10.4	29	27.6	7	33.4	54	17.9
Medium	0	0.0	0	0.0	4	2.3	2	1.9	2	9.5	8	2.6
High	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Very high	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	0	100	3	100	173	100	105	100	21	100	302	100

Correlation and dependence: Spearman's rho: -0.17; p < 0.002

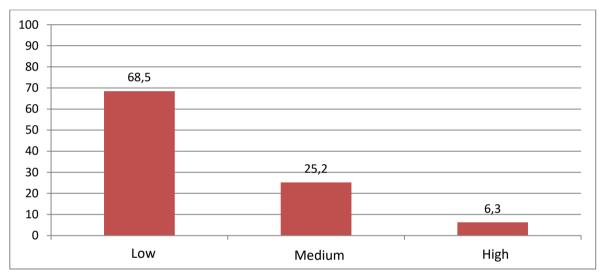


Figure 1. Level of parents' interest in the physical culture of their children

other family members, e.g. grandmothers, grandfathers, uncles and aunts (Fig. 2).

In unorganized physical activity, the child is most often accompanied by the mother (38.1%) and the father (30.5%). In addition to parents, sister (7%) and brother (2.7%) and other family members (18.6%) are involved in this activity, e.g. grandmother, grandfather, cousins, aunt, uncle, etc. (Fig. 3).

Talking to the teacher about child's physical education is also a part of parents' interest in the child's physical culture. Study shows that only 30.5% of parents conduct such conversations, which 18.9% of them do so at every opportunity. The remaining group of parents talk about this issue sporadically (Fig. 4).

More than half of parents are interested in the level of physical activities in junior classes. Unfortunately, the remaining group of parents either did not specify their views or showed a lack of interest in the quality of this area of education (Fig. 5).

Among parents interested in the quality of physical education in early school education, only every fifth requested the introduction of changes in the organization and implementation of physical activities. For the vast majority of parents, this does not matter much (Fig. 6).

The respondents predominantly proposed to introduce more extracurricular activities, organize classes in the swimming pool, and more often conduct corrective and compensatory classes for bad posture. They also requested that physical activities in early school teaching were conducted by qualified physical education teachers (Fig. 7).

Based on the analysis of the study results presented in Table 9, it was observed that parents, regardless of the level of participation in physical activity, were mostly interested in their child's physical culture at a low level. These relationships are not statistically significant.

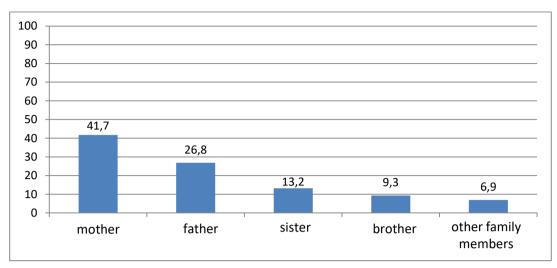


Figure 2. Person most often looking after a child participating in organized physical activity classes

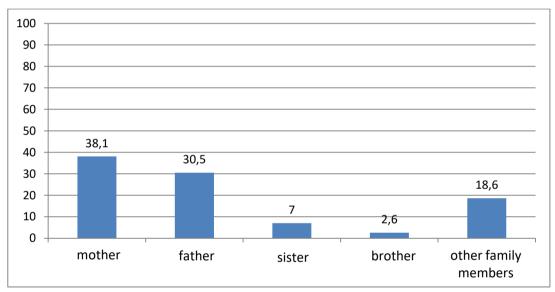
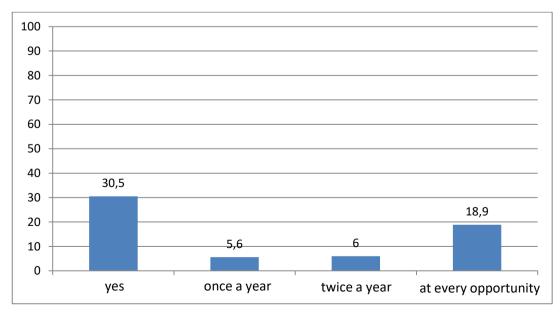


Figure 3. Person most often looking after a child participating in unorganized physical activity classes



 $\textbf{Figure 4.} \ \ \textbf{Frequency of conversations with the teacher about the child's physical education (\%)}$

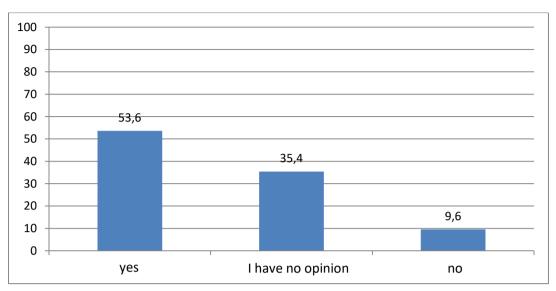


Figure 5. Parents' interest in the level of physical activities in junior classes

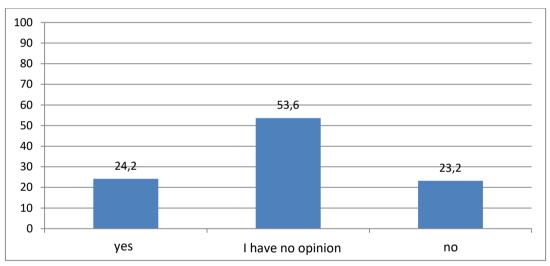


Figure 6. Calling for changes in the implementation of physical activities in junior classes

Discussion

Issues related to human physical activity at various levels of its development have been the subject of many scientific studies. Issues regarding the impact of socioeconomic status and parents' level of education on physical activity of children and adolescents have been studied by many authors [6–9, 5]. It turned out that both level of education and socioeconomic status of the family correlates with the level of physical activity of children and adolescents.

The analysis of own study shows that most parents present a very low level of physical activity in their free time. In the studies conducted by S. Gołąb et al. [10], 18% of fathers and 15% of mothers declared satisfactory leisure activity. Studies conducted by W. Drygas et al. [11], show that only 6–10% of adult men and women engage in systematic physical activity. However, a much lower percentage (4.2%) was recorded in the studies conducted by Żarów et al. [12].

The studies showed that the level of parents' interest in the physical culture of their own children is mostly very low (68.5%). However, in the studies conducted in a large city, as many as 45.6% of parents presented an medium level of interest in the children's physical culture [5]. This means that parents representing the urban environment are more interested in this area of the children's activity than parents from the countryside.

Own study shows that only 30.8% of parents talk to a teacher about their children's physical education. Similar percentages were obtained in other studies, where 33.8% of parents declared that they talked to teachers on this subject [5]. However, slightly more than half (53.6%) of parents are interested in implementation of physical activities in grades I-III. Studies conducted by S. Sulisz [13] present a much larger group of parents showing such interest (68%).

The questionnaire asked parents a question: Should changes be made to physical education in junior classes? Among the requests, the respondents mentioned, among others conducting

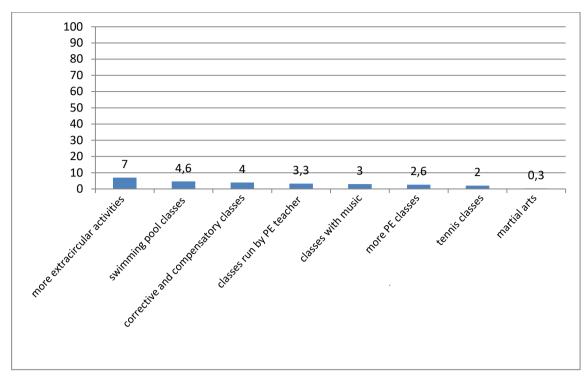


Figure 7. Parents' expectations towards physical education in junior classes

Table 9.Relation between physical activity of parents and level of their interest in their children's physical culture

Level of parents' interest in		Level of physical activity of parents										
the physical culture of their	Very low		Low		Medium		High		Very high		Total	
children	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%
Low	175	58,0	29	9,6	3	1,0	0	0,0	0	0,0	207	68,5
Medium	53	17,5	19	6,3	4	1,3	0	0,0	0	0,0	76	25,2
High	12	4,0	6	2,0	1	0,3	0	0,0	0	0,0	19	6,3
Total	240	79,5	54	17,9	8	2,6	0	0,0	0	0,0	302	100

Correlation and dependence: Spearman's rho 0.09; p < 0.45

physical activities by a qualified physical education teacher. This proposal also appeared in other studies [14, 5]. The parents' idea seems to be a very good solution, because graduates of physical education are better prepared to conduct a variety of physical activities than teachers of pre-school and early school education. Another expectation of the surveyed parents was to increase the hours of extracurricular activities. This is an important request because the participation of children in extracurricular activities would allow them to develop their interest in sports.

The progress of civilization has, among other things, caused that children spend their free time more often playing computer games or watching TV, while at the same time giving up outdoor games. Currently, the phenomenon of reluctance to move and giving up physical activity is observed with great concern. As mentioned earlier, children's parents have a great impact on their physical activity [15], who should be more involved in shaping their children's positive attitudes towards broadly understood physical culture.

Conclusions

The results of the conducted study allowed the formulation of the following conclusions:

- 1. The physical activity of the parents surveyed is at a very low level.
- 2. Both level of education and socioeconomic status have a significant impact on physical activity taken up by the respondents. The higher the level of education and better economic conditions, the higher the physical activity of parents.
- 3. There was no differentiation in the level of physical activity between fathers and mothers.
- 4. The level of parents' interest in the physical culture of their children is low and does not depend on the level of physical activity of the parents.

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Streszczenie

Wstęp: Czynny i systematyczny udział rodziców w aktywności fizycznej może bezpośrednio wpływać na wdrażanie własnych dzieci do takich zachowań. Celem badań była ocena aktywności fizycznej rodziców oraz ich zainteresowań kulturą fizyczną dzieci realizujących nauczanie wczesnoszkolne.

Materiał i metody: Badania przeprowadzono w roku szkolnym 2014/2015. Do badań wylosowano 374 rodziny z powiatu mieleckiego, reprezentujące środowisko wiejskie. Spośród wysłanych ankiet wróciło 356, z czego 54 były wypełnione nieprawidłowo. Ostatecznie do dalszej analizy zakwalifikowano 302 ankiety. W badaniach zastosowano metodę sondażu diagnostycznego, gdzie podstawową techniką było ankietowanie.

Wyniki: Szczegółowa analiza wyników badań wykazała, że aktywność fizyczna u większości matek i ojców była na bardzo niskim poziomie. Także wykształcenie i status socjoekonomiczny mają istotny wpływ na poziom aktywności fizycznej rodziców. Badania empiryczne ujawniły także bardzo niski poziom zainteresowań kulturą fizyczną swojego dziecka u większości rodziców (68,5%).

Wnioski: Na podstawie wyników badań można stwierdzić, że uczestnictwo dzieci w kulturze fizycznej zależne jest od aktywności fizycznej rodziców, ich wykształcenia i statusu socjoekonomicznego.

Słowa kluczowe: aktywność fizyczna, rodzice, dzieci, edukacja fizyczna