CHOSEN INDIVIDUAL FACTORS OF ADOLESCENTS' PHYSICAL DEVELOPMENT IN THEIR LEISURE TIME

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Abstract. The aim of the research was to diagnose chosen individual factors of adolescents' physical development (motor skills, physical fitness, motor activity needs) and their influence on their actual level of physical activity in their leisure time. The subjects of the research were students of Cracow's junior high schools. The probability sample of 295 girls and 329 boys were examined. The method used was a survey. The results of the examinations showed that the chosen individual factors had an influence on the actual level of physical activity in their leisure time. The boys' motor skills (in contrast with the rest of the factors) correlated the least with the increase of the actual level of physical activity in leisure time, and in case of the girls, they did not correlate at all. Youngsters' individual predispositions to undertake physical activity in their free time were at a medium-high level. Nevertheless, their internalization did not take place because more than a half of the subjects undertook physical activities at a low level (51.0%) or not at all (7.4%).

Key words: motor skills, physical fitness, motor activity needs, physical activity, adolescents

Introduction

The way of spending leisure time influences human behaviour and, independently of our age, depends on individual needs, conditions and habits (Denek 2006). Motor skills, high level of physical fitness and the need of physical activity have been included, among other things, in the individual factors conditioning the development of physical activity in free time. Together with many individual human features, they influence the development of physical activity, making it the source of pleasure and enabling personal satisfaction (Winiarski 1995).

The measurement of individual factors (motor skills, physical fitness, motor activity needs) has been performed by means of a survey based on self-evaluation. Self-evaluation is one of the most important factors in evaluation of the body and in deciding upon somatic actions. It results from the fact that every individual perceives and understands their body in a different way, introducing their own criteria and ideas into its evaluation (Borecka-Biernat and Węgłowska--Rzepa 2000; Haggera et al. 2001). Positive self-evaluation, that is, self-acceptance, makes one make use of and realize their potential. In contrast, negative self-assessment makes one feel guilty and inferior, which hinders the fulfillment of one's potential. Such people do not appreciate their success and exaggerate their failures. The results of an adequate self-evaluation are: pertinence in taking actions, protection from the consequences of possible failure, facility in learning new skills, and coping easily with difficult situations (Hausenblas et al. 1997; Kulas 1986; Witkowski 2004).

It can be deduced from Winiarski's research that the strongest relation exists between the sport level and the preferred way of spending leisure time. Moreover, the adolescents with a higher sport level very rarely have any problems with new physical activities, and they are fitter. It has been also observed that adolescents rarely confess to having problems with learning new sport techniques and to low level of physical fitness. When evaluating their motor skills, 5.7% say that they have problems with learning new activities always or usually, 57.0% rarely, 24.2% never. During the self-evaluation, 9.0% claimed to be less fit than their peers, 57.3% claimed to be as fit and 20.7% fitter than their peers. While evaluating their need of motor activity, 21.3% said that they prefer a passive or not very active way of spending free time, 52.3% – a physically active way, and only 18.3% – a very active way of spending free time. The author of the research specified in the conclusion that the correlations do not have any causal connections. However, they show the problem of the vision of the own body (its fitness, needs, skills) in the process of the sport development. It is a unique research, therefore it seems reasonable to repeat it, since the subject of the research (in relation to the above example) is the physical activity in relation to active tourism. Furthermore, all inquiries concerning children's and adolescents' motor skills are widely considered worthwhile.

The aim of the research was to diagnose chosen individual factors of adolescents' physical development (motor skills, physical fitness, motor activity needs) and their influence on their actual level of physical activity[1] in their leisure time.

The indicator of the "actual level of the physical activity" were the adolescents' declarations about the frequency of undertaking various forms (sport, recreation, active tourism) of physical activity. The index value consisted of four levels of physical activity: high, medium, low, none. The subjects who undertake physical activity four times a week or more often were included in the high level, those who undertake physical activity twice or three times a week belong to the medium level, those who do it once a week or less are classified as the low level. The fourth category is "none", which are adolescents who do not undertake physical activity at all.

The indicator of the "level of motor skills, physical fitness and motor activity needs" was the self-evaluation expressed by the answer to three questions: 1. Do you have any problems with learning new activities during the P.E. classes? (never, rarely, often) – this question assesses the level of motor skills, 2. What is your physical fitness like in comparison with your peers? (better, the same, worse) – the question was the indicator of the level of physical fitness, 3. Which way of spending free time do you like the most? (physically passive, active, very active) – on the basis of this question the motor activity needs were evaluated.

[1] The term "physical activity" should be understood according to its common meaning, which is the way that adolescents understand it. Its meaning is therefore very broad, in this work it will involve: sport, recreation and tourism (Grabowski 1997).

The next indicator that resulted from the questions quoted above was "the level of individual predispositions." The indicator was the sum of the points (secondarily attributed) from the answers to the three questions. The indicator has a global character and is a comprehensive assessment of the level of physical fitness, motor skills, and motor activity needs. The value of the variable individual are the following categories: high (7–9 points), medium (4–6 points) and low (1–3 points).

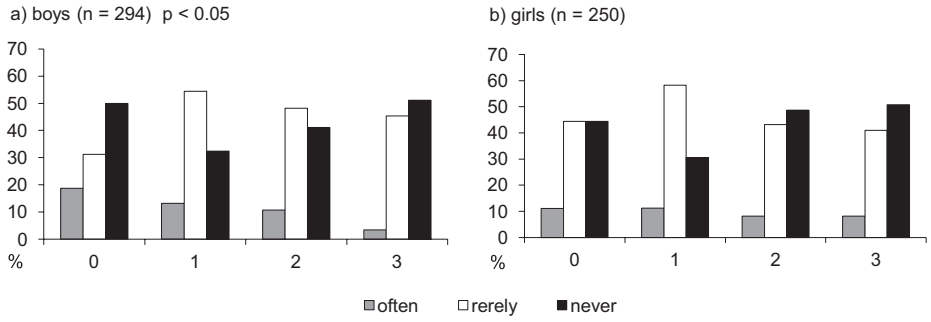
Materials and Methods

The subjects of the research were the students of Cracow's junior high schools. The sample of the adolescents was chosen by a drawing. Firstly, 18 subjects from Cracow's 62 public junior high school were chosen. Secondly, two classes from grade two were chosen from each school. Thus, 295 girls and 329 boys were qualified for the examination. The diagnostic poll method was used. A survey[2] was used to collect the data. Only three questions from the survey are presented in the research material, namely, the ones concerning the indicators of the motor skills, physical fitness and motor activity needs.

The Analysis of the Results

The actual level of motor activity of the Cracow's junior high school students is as following: 7.4% of the subjects is physically inactive, 51.0% are active at the low level, 16.5% at the medium level and 25.2% at the high level. In accordance with the aims of the thesis, it was attempted to determine whether the level of the motor skills, physical fitness and motor activity needs can influence, and to what extent, the change of the indicator of the actual level of physical activity.

The self-evaluation of the adolescents' motor skills demonstrates that almost half of them (49.32%) rarely have any problems with learning new activities and 39.89% of them claim that they never encounter such problems. Only 10.11% admit to having frequent problems with learning new exercises.



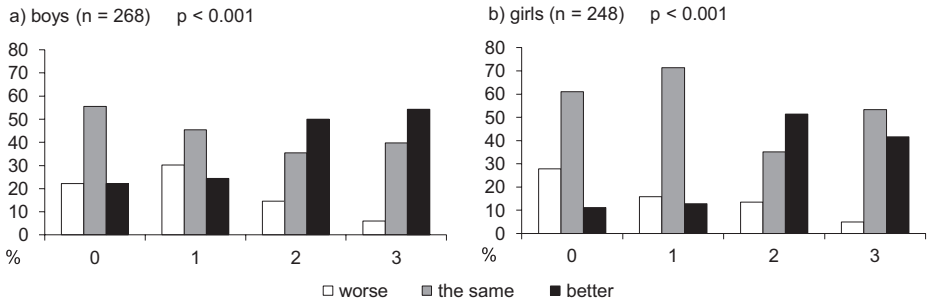
Symbols:
Often, rarely, never (question: do you have problems with learning new exercises during the P.E. class – the level of motor skills).
0 – none, 1 – low, 2 – medium, 3 – high (actual level of physical activity in free time).

Figure 1. The actual level of physical activity in free time in relation to the problems with learning new activities, that is, the level of the motor skills

[2] The survey from the publication (Winiarski 1995) was used in the research.

Figure 1a shows that the increase of the real level of physical activity in leisure time causes the "frequent" problems with learning new exercises decrease in case of the boys. The answer "never" is less obvious, although a tendency opposite to the former one can be observed. In spite of the fact that in case of the girls there was no correlation between the two variables, while observing the percentage values (Figure 1b), it can be noticed that the layout of the category "never" is similar to the boys'. In consequence, although there is a statistical relation only in boys' results, it can be assumed that the level of the actual physical activity in free time increases if the self-evaluation of one's own physical abilities becomes more positive. Furthermore, in boys' results there is a strong tendency for the "frequent" problems with learning new activities (low motor skills) to cause the decrease in the actual level of physical activity in free time.

The physical fitness of more than a half of the adolescents was "the same" as their peers', approximately 30.0% were fitter than their peers, and almost 17.0% admitted that their physical fitness is "worse" than their classmates'.

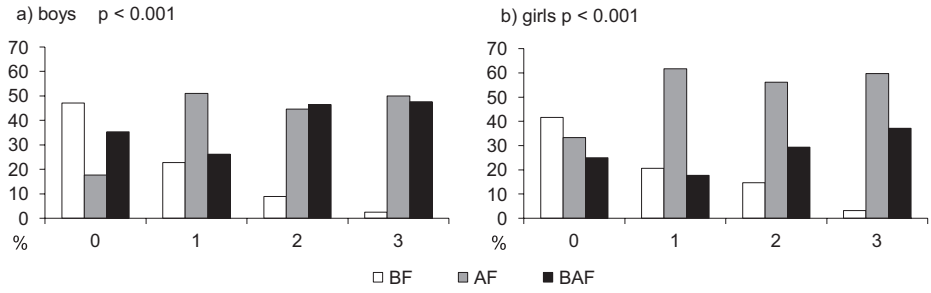


Symbols:
Worse, the same, better (question: what is your physical fitness like in comparison with your peers? – the level of physical fitness).
0 – none, 1 – low, 2 – medium, 3 – high (actual level of physical activity in leisure time).

Figure 2. The actual level of physical activity in free time depends on their physical fitness in comparison with their peers

The actual level of physical activity in free time depended on boys' and girls' level of physical fitness ($p < 0{,}001$). In case of both boys and girls (Figure 2), the feeling of "worse" physical fitness in comparison with their peers leads to decrease in level of actual physical activity in free time. On the other hand, in the category of "better" physical fitness, an opposite tendency can be observed. Physical fitness that is "the same" as the motor fitness of the peers did not cause such evident polarization of the results. The results lead to a conclusion that the adolescents who assess their physical fitness adequately, undertake physical activity on a higher level more often. Therefore, an adequate level of physical fitness among children and adolescents can lead to more frequent physical activity in free time, which will most probably cause a natural increase in physical fitness.

The physical activity needs have been established on the basis of answers to numerous questions concerning various ways of spending free time. Categorization of the answers showed that 52.46% of junior high school students prefer an active way of spending free time, 30.81% a very active way and only 16.73% declare that they like to spend their free time only in a passive way.



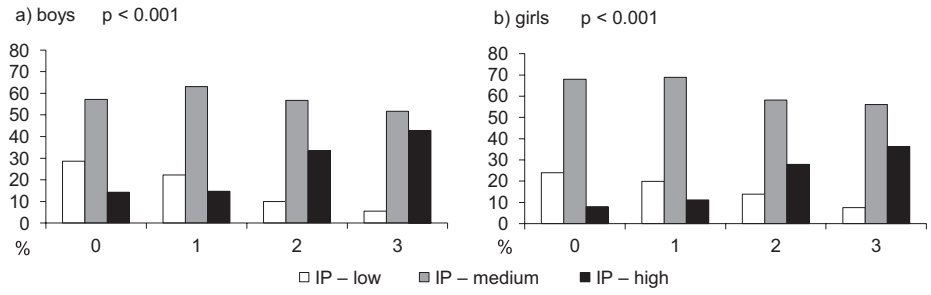
Symbols:
PP – physically passive, PA – physically active, VAP – very active physically (question: which way of spending free time do you like the most? – the level of physical activity needs).
0 – none, 1 – low, 2 – medium, 3 – high (the actual level of physical activity in free time).

Figure 3. The actual level of physical activity of the adolescents in their leisure time in relation to their favourite ways of spending free time, that is motor activity needs

The favourite way of spending free time correlates with adolescents' actual level of physical activity in leisure time (Figure 3) in case of boys and girls ($p < 0.001$). The amount of adolescents who like passive forms of spending free time decrease when the actual level of physical activity in free time increases. In contrast, those adolescents whose level of real physical activity was at a higher or medium level showed preferences towards physically active forms of spending free time, more than those adolescents whose level of real physical activity was at a medium or low level.

The reliability of the results and the analyses confirm a simple statement that the actual level of physical fitness depends on favourite ways of spending free time.

The global indicator of the examined adolescents' predispositions to undertaking physical activity was at the "medium" level in case of 61.2% of the subjects, and at the "high" level in case of 22.6% of the subjects. Only 16.2% of the subjects had low predispositions. Therefore, the predispositions towards undertaking physical activity were at a high or medium level among the two thirds of the subjects.



Symbols:
IP – low, IP – medium, IP – high (global indicator: the level of individual predisposition to undertaking physical activity).
0 – none, 1 – low, 2 – medium, 3 – high (the actual level of physical activity in free time).

Figure 4. The actual level of physical activity of the adolescents in their free time in relation to the global indicator of individual predisposition of the adolescents to undertaking physical activity

The combined approach towards the indicator of the level of chosen individual predisposition of the adolescents demonstrates that this indicator influences the actual level of physical activity in free time in case of both boys and girls ($p < 0.001$). Low and medium value of the indicator leads to decrease in the actual level of the physical activity, and inversely, high value was linked to the increase in the level of physical activity (Figure 4).

Discussion and Conclusion

Motor skills, physical fitness and motor activity needs of the adolescents should be highly evaluated. Also, in the case of other examinations, the adolescents have reluctantly admitted to low physical fitness and problems with acquiring new techniques, especially in the groups of low physical fitness and sport level (Winiarski 1995). It can be assumed that the analysed individual factors can predispose the adolescents to undertake physical activity. They can also provide some basis for future participation in sport culture. It can be deduced on the basis of the examinations that the adolescents whose confidence about their motor skills and physical activity needs is low tend to have lower level of actual physical activity in free time than their peers who evaluate themselves highly in those aspects. Curiously, an exception is the indicator of motor skills. Especially among girls, there are no statistical relations between the analysed variables. It can be assumed that physically active girls accept those cultural patters of somatic culture (agonistic, fitness-related) that they are more skilled at. However, the girls of low physical fitness and motor skills (they probably had not been undertaking physical activities or had been active at a low level) will not perceive physical activity as a way of fulfilling their ambitions. In their case, physical activity in company of their peers will be a source of stress, frustration, and even humiliation, rather than a way of spending leisure time pleasantly (Hausenblas et al. 1997; Winiarski 1995; Żiżka-Salamon and Winiarski 2002). Although boys' motor skills ($p < 0,05$) influence their actual level of physical activity in free time and girls' do not, it is obvious that this individual factor influences (in contrast to physical fitness and motor activity needs) the actual level of physical activity in free time the least. It seems that if one feels that he or she is physically able to undertake the activity and will believe that it is worthwhile, they will undertake physical activity more often. If this is the case, the essential part of education is developing physical fitness and influencing young people to be physically active, thus creating the needs for activity. This statement is incongruent with a belief of other authors, who claim that the most important aspect of children's and adolescents' physical education is teaching sport techniques, not developing physical fitness (Zuchora 1974).

The results presented demonstrate that the development of physical fitness and educational influence are more important than motor skills. It seems that the discussion about the results represents a wider dispute between didactic formalism (constant improvement of students' sport skills) and didactic materialism (the conception of adjusting the whole process of physical education to developing physical fitness). As is widely known, the result of the dispute is a compromise in the form of functional materialism, that is the key factor in the theory of multilateral education which assumes that "if teaching the motor activities and improving the fitness are accompanied by absorbing knowledge and positive emotional states, the developmental, didactic and educational functions of this process together fulfill the postulate of educational upbringing (Grabowski 1997)."

The global indicator of individual predisposition (the fusion of the motor skills, physical fitness and motor activity needs), which can also be called a person's potential to undertake physical activity, shows that the majority of the adolescents have a medium (62.1%) and high (22.6%) level of such predisposition. Nevertheless, it does not guarantee that they will undertake physical activity at a high level, as more than a half of the adolescents do it at a low level (51%) or not at all (7.4%) in spite of their high predisposition. What is the reason for them not to use their

potential or use it at a low level? The correlation of the global indicator of individual predisposition and the real level of physical activity has clearly demonstrated that the medium value does not show any strong tendencies, but the extreme values do. Therefore, the chosen individual predisposition influences the actual level of physical activity in free time, although this relation is not a causal connection, it demonstrates the role of self-evaluation of one's body in the development of the physical activity.

Conclusions

1. The chosen individual factors of development of physical activity in free time (motor skills, physical fitness, motor activity needs) are at a medium level in case of more than a half of the subjects, in case of one third of them are high, which, as a consequence, influences the actual level of physical activity in free time.

2. Boys' motor skills (in contrast with the rest of the factors) almost do not correlate with the increase in the actual level of motor activity in free time, and in case of the girls, not at all. It is therefore vital in children's education to give classes that are properly intensive and to influence their upbringing, which should cause the increase in the actual level of physical education in free time.

3. Despite the fact that the individual predisposition of the adolescents to undertake physical activity in free time are at medium-high level, they internalization does not happen because more than the half of the subjects undertake physical activity at a low level (51.0%) or not at all (7.4%).

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