

SWIMMING CLASSES IN JUNIOR HIGH SCHOOL STUDENTS' OPINION

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Annotation. The role of modern physical education is not only to develop motor abilities of the students, but most of all prevent them from epidemic youth diseases such as obesity or postural defects. Positive attitudes to swimming as a long-life physical activity, instilled in adolescence should be beneficial in adult life. The group of 130 boys and 116 girls of 7th grade junior high school (mean age 14.6) was asked in the survey to present their opinion of obligatory swimming lessons at school. Students of both sexes claimed that they liked swimming classes because they could improve their swimming skills (59% of answers) and because of health-related character of water exercises (38%). 33% of students regarded swimming lessons as boring and monotonous, and 25% of them complained about poor pool conditions like chlorine smell, crowded lanes, too low temperature. Majority of the surveyed students saw practical role of swimming in saving others life.

Key words: swimming, lesson, physical education, high school, adolescents

Introduction

Crum [1] describes physical education as a process of preparing students for independent, satisfying and life-long participation in the movement culture. In his opinion, the goal of physical education is to equip students with abilities necessary for qualified participation in the movement culture and to encourage them to engage in it systematically. This goal must be the aim of all actions, not only of PE teachers, but the whole school, which, next to the family, is the first institution that exerts a significant influence on creating the attitudes of future generations.

When scientific research proved there is a connection between everyday physical activity and developing health and psychomotor skills, physical education started being perceived as one of the basic links of the educational system. Little physical activity is one of the causes of hypokinesia in developed societies. Research conducted in the USA in 2003-2004 by the National Health and Nutrition Examination Survey (NHANES) shows that 17% of children and young people aged 2-19 suffer from excess weight. Among young people aged 12-19, the number of overweight children rose from 11% to 17% in the period between 1988-94 and 2003-2004 [2,3]. This problem was also the subject of research conducted in the USA, Brazil, China and Russia. The results of the research conducted in those countries among children aged 6-18 show that there was an increase of overweight children from 4.1% in 1974/1975 to 13.9% in 1996/1997 [4]. Similar trends were observed in Canada (www.statcan.ca/english/research/82-620-MMIE/2005001/articles/child/obesity), the United Kingdom (www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_4109245) and continental Europe [5]. This has been deemed as a world-wide trend.

Research on the attitudes towards physical activity conducted in the USA for the National Association for Sport and Physical Education – NASPE (www.aahperd.org/naspe/publications) consistently point to the importance of regular, qualified physical education and everyday physical activity programs for all students (including pre-schoolers) throughout all 12 grades. The numbers are alarming: only 25% of students attend physical education classes every day, take part in everyday physical activity, while the percentage of overweight and obese children has doubled during the last 30 years.

When conducting the research, NASPE wanted to reach adults and youngsters directly, to better understand their attitudes towards physical education, physical activity and nutrition. The organization also wanted to find out if schools provide adults and students with what they expect from physical education programs. The data gathered show that adults as well as teenagers have similar attitudes towards physical education. The vast majority of adults thinks that everyday physical education classes should be compulsory at school; 71% of children share the same view. Almost half (46%) of adults is convinced that taking part in physical education classes in their infancy helped them to be active and healthy in their adult life and their present physical activity allows them to maintain a healthy lifestyle (60%). In reality, a report by the U.S. Surgeon General Report on Physical Activity in 1996 (the most important public report on the US citizens' physical activity) states that the physical activity of 60% of the population is too low.

Students polled by NASPE were asked what they liked about physical education classes. The answers pointed mainly to the possibility of exercising (20%), being fit (18%) and an opportunity to play (16%). Only 5% of students stated that they do not like anything about PE classes. The main things that were disliked are running (13%), boring classes – lack of diversity (9%), changing clothes for class (7%). The authors of the report relate that children spend an average of 1.2 hours a day at physical activity outside school. The most frequent types of sports outside school are basketball (24%), baseball /softball (19%), cycling (11%), football (10%), American football (9%) and swimming (9%) According to Hardman [6], the most popular and the most commonly done sports during school PE classes are team sports. The most popular among those are football, basketball, volleyball and handball. A report by the EUPEA – European Physical Education Association – shows that team sports take up 25% percent of the time of the classes on

average. Gymnastics and athletics take up 15% each, while musical and motor exercises as well as swimming each take up 10%.

The 2008 Physical Activity Guidelines for Americans document (www.health.gov/paguidelines/pdf/paguide.pdf) by the US federal authorities contains developed and systematized guidelines on the types and amounts of physical activity, which might significantly improve the health of the American citizens aged 6 and more. The main assumption of the publication is that regular physical activity stretching over months and years will bring significant health benefits to society. Key Guidelines for Children and Adolescents contained in the document point to the necessity of doing at least 60 minutes of physical activity a day. The proposed activities increasing oxygen uptake include swimming. Because of their advantages for the health, swimming lessons take place as compulsory physical education classes in almost all European countries. It has been established that swimming lessons are marked by higher intensity compared to typical PE classes [7]. What is more, the physical properties of water are conducive to exercises correcting posture. Doing those exercises seems to be necessary during physical education at school, as increasing numbers of children and teenagers suffer from posture defects [8,9]. But due to the limited number of appropriate facilities, PE classes at the swimming pool cannot be as widespread and accessible as for example lessons at the gym or the school's sports field. That is why students attending lessons of this sort are privileged in a way, because apart from traditional PE classes containing elements of gymnastics, athletics and team sports, they are provided with the possibility of movement in water.

The purpose of this study was to find out high school students' opinions on obligatory swimming classes. Strong and weak points of swimming lessons were supposed to be discovered. The paper had also to reveal students' attitudes towards swimming as a life-long physical activity.

Method and research group

The research covered a group of 246 students (130 boys and 116 girls, mean age 14.6) from the second junior high school grade (grade 7) taking part in the school swimming lessons. The swimming lessons started at the beginning of the first junior high school grade (grade 6), and took place once a week for 45 minutes, so until the research was conducted, the surveyed teenagers had already participated in 40-43 lessons on average.

A questionnaire was prepared in order to get to know the students' opinions on the PE classes at the swimming pool. It included open and closed questions concerning the students' attitudes towards swimming as a form of physical activity and towards PE classes at the swimming pool. A test of the internal coherence of the psychometric test was conducted with the use of the α (alpha) coefficient, in order to assess the reliability of the questionnaire [10]. The result was $\alpha=0.68$, which indicated an average reliability of the test. A pilot study among junior high school students on a sample of 67 girls and boys from the second grade taking part in compulsory swimming lessons was conducted. After modifying some of the questions and discarding others, the Cronbach's alpha was calculated again. The $\alpha=0.81$ result indicates a satisfactory reliability of the questionnaire.

Statistical calculations (chi-square test, correlation coefficient) and graphs were prepared in Microsoft Excel 2007. Due to editorial requirements concerning the length of the text, this article presents only some opinions of the students.

Results

Figure no 1 shows the students' answers concerning the people that taught them to swim. The question was semi-open, with a possibility of multiple answers. Among girls, parents were mentioned the most, with primary school teachers in second place. The largest number of boys (over 25%) learned to swim outside school lessons and a similar percentage was taught by parents. Girls pointed to parents as their swimming teachers significantly more often than boys ($p=0.043$). Only a handful of students claimed they learned swimming during classes at the junior high school. It is understandable, as the majority of students attending the local junior high school with a swimming pool had the possibility to attend swimming lessons at the facility in primary school. Answers differing from the previously mentioned were grouped in the "other" category. Junior high school students most often wrote "by myself" and the answer "a coach" occurred in several instances, which suggests that the subjects belonged to a sports section (not necessarily swimming).

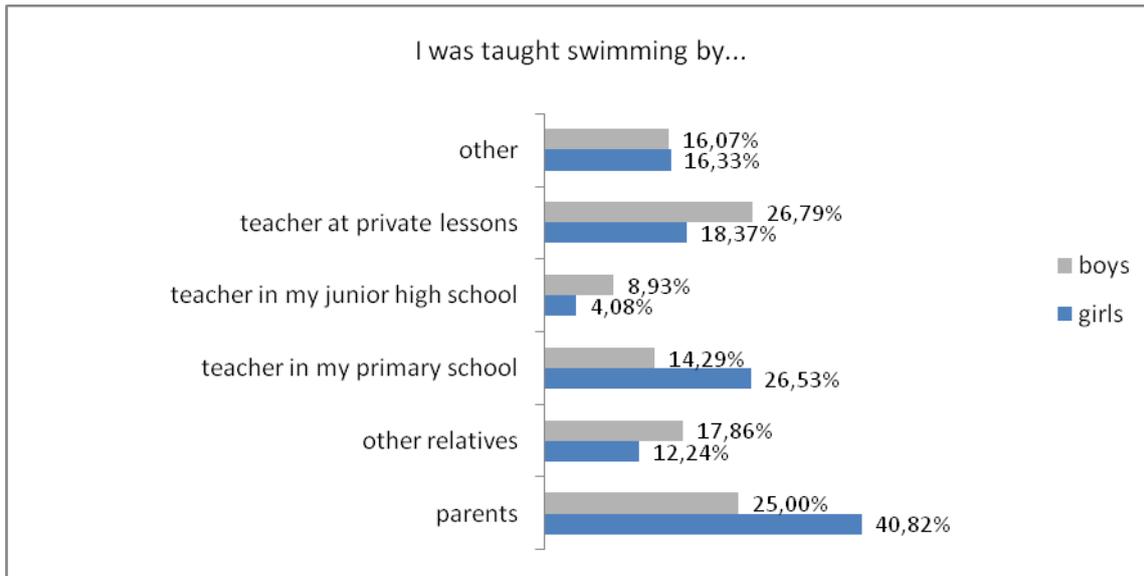


Fig. 1. Students' answers about people that taught them swimming

Figure 2 shows answers justifying the students' satisfaction with participating in swimming lessons. Students were asked to name 3 reasons why they like PE classes at the swimming pool. Girls mentioned the possibility to learn or practice swimming most often. This may suggest that participation in swimming classes is a way to self-improve, not only when it comes to skills, but also to their efficiency, appearance, etc. A large number of girls liked swimming in itself, but almost 25% of them claimed that swimming lessons are a form of relaxation. Those opinions were expressed by means of such answers as "I have a nice time with my girlfriends", "water allows you to relax", "I swim in nice company", "I can shape my body thanks to swimming". Some female students saw the compensatory role of swimming ("I can rest from normal lessons", "I rest and muster strength while swimming" or even "sometimes it is an opportunity to vent my anger"), but they constituted a small fraction of those surveyed. Similarly, a small number of girls liked swimming lessons because of the healthy properties of the water ("I straighten my spine", "I move and burn calories", "in my case, those lessons are corrective").

An even smaller percentage of the girls surveyed connected the pleasure of participating in the lesson with the teacher: „we have an interesting teacher who knows how to organize classes”, "the teacher is cool", "classes are conducted in an interesting way".

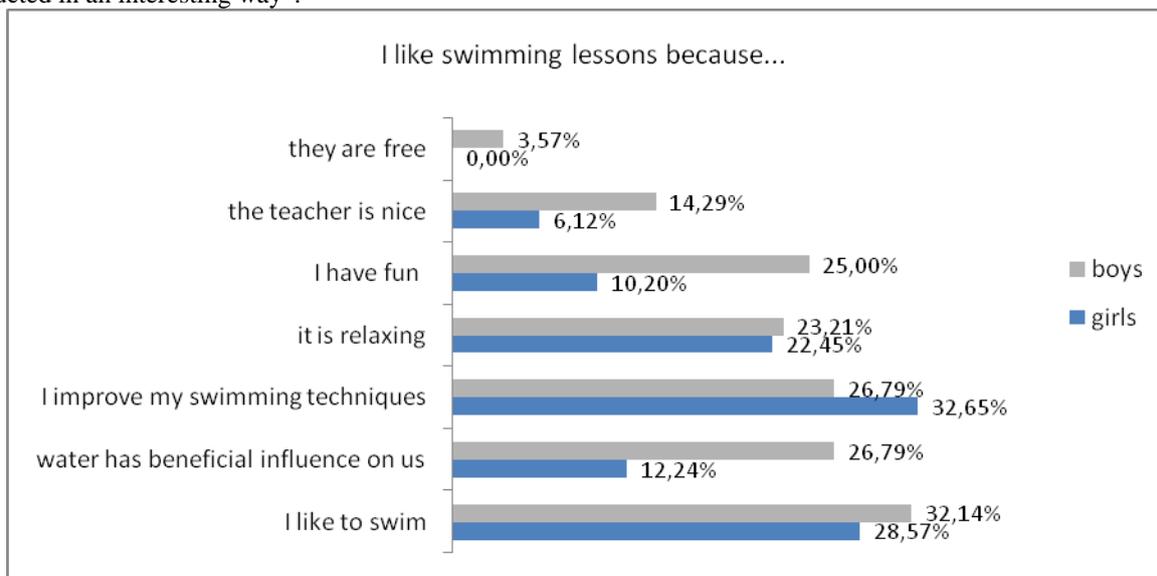


Fig. 2. Reasons for students' satisfaction with participating in PE classes at the swimming pool

Boys mentioned the pleasure of swimming in itself the most often. One in four surveyed boys claimed they liked to participate in swimming lessons because of the beneficial characteristics of water and the possibility to learn or practice swimming. The awareness of the advantages of moving in water shined through the answers given by junior high school students, but their knowledge seemed to be superficial: "swimming is very good for the body", "it's healthy for the body", "it's a good form of training". But there were also more concrete answers: "I know that swimming will

help me with my back problems”, “I can lose weight,” “I can toughen up”, “swimming makes the heart work better”. A similar percentage of boys (23-25%) saw swimming lessons as good fun and relaxation („it’s fun”, “we can blow off steam as much as we like”). Boys pointed to swimming lessons as a source of pleasure significantly more often than girls ($\chi^2=3.860$; $p=0.049$). What is more, boys mentioned self-control and self-evaluation (“I can test my swimming skills”, “I like to compete with my friends”) and the awareness of the benefits of classes organized by the school (“I don’t have much other opportunity to go to the swimming pool”, “the lessons are free and tickets are normally expensive”, “I prefer lessons at school, because going to the swimming pool anywhere else is too expensive”). Boys mentioned the teacher’s attitude more often as a source of satisfaction from participating in swimming lessons (“the teacher is cool”, “we have a cool teacher”, “I like the teacher”).

A significantly higher number of girls expressed their disapproval of school swimming lessons than boys ($\chi^2=5.256$; $p=0.019$). The categories of reasons for unwillingness to participate in PE classes at the swimming pool are shown in Figure 3. The most frequent charge against swimming lessons, levied by boys and girls alike, was boredom and monotony. Boys wrote that “the lessons are not interesting”, “we always have to swim”, “we just swim around”. In one of the atypical answers, the author expressed his dissatisfaction caused by the low intensity of the lesson (“It’s no effort at all”) and by the low skills of his friends (“they swim too slow”). Girls express themselves similarly on the subject: “always the same”, “lessons are boring”, but they also mention more concrete accusations, such as for example “the teacher doesn’t organize any games”. Boys and girls are unanimous in their negative assessment of the conditions at the swimming pool. They complain of cold water (without specifying whether it is the water in the pool itself or under the showers), dirty water, overcrowded swimming lanes. Some students are clearly reluctant to take part in swimming lessons because of the smell of chlorine and its effect on the skin and eyes. Girls talked about the levels of exertion during classes being too high significantly more often than boys ($\chi^2=4.934$; $p=0.026$). These feelings showed in the following answers: “the teacher gives us such tasks that I often feel dizzy afterwards”, “I’m tired after the lesson and afterwards it’s difficult to sit at school for long”, “swimming is exhausting”. Problems with organizing activity after finishing classes at the swimming pool were also characteristic of girls. Those problems were expressed in such answers as: “we have to take a shower naked in front of everybody”, “undressing under the showers is embarrassing” (shower rooms are not coeducational – author’s note), “there is too little time to change”, “we have to dry our hair”, “a lot of additional things to carry”, “the cleaning lady bawls at us”. The above mentioned answers were a significant difference between boys and girls ($\chi^2=7.051$; $p=0.007$). Some individual answers pointed to the authors’ (girls and boys) dissatisfaction with the lessons at the swimming pool because they were too short or too infrequent. Aversion towards the teacher as a reason for not liking swimming lessons occurred only in a few instances, more often with girls than with boys. It was established that students that expressed their dissatisfaction with swimming lessons because of the conditions at the swimming pool (cold, crowded, chlorine) and because of the necessity to change and dry hair, significantly more often pledged their more infrequent participation in the lesson ($\chi^2=16.379$; $p=0.00028$). Similar correlation was observed among those students who found swimming lessons too tiring ($\chi^2=6.315$; $p=0.042$).

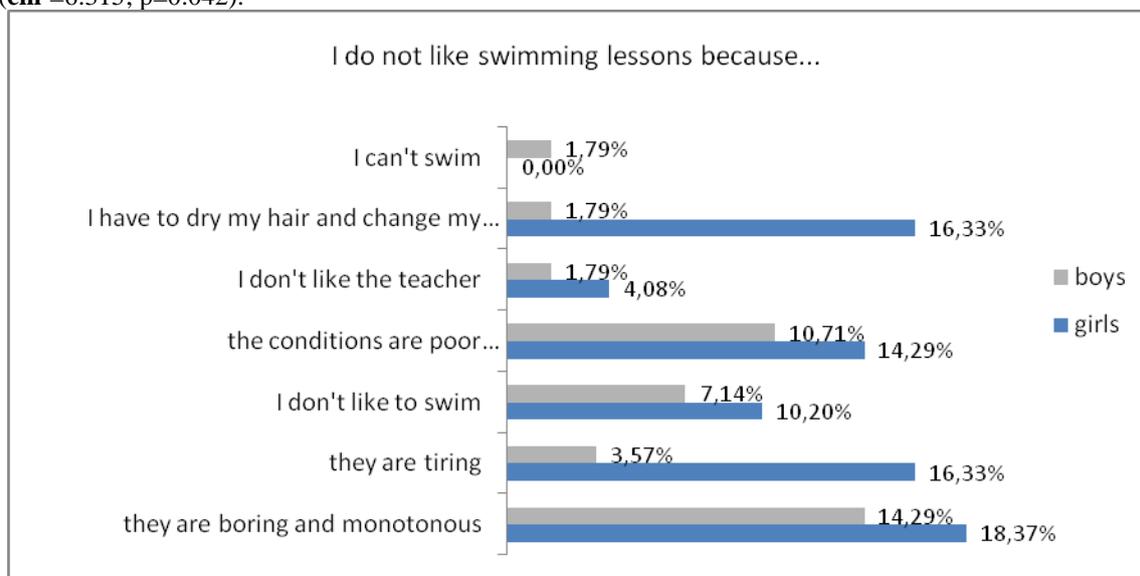


Fig. 3. The reasons behind students’ dissatisfaction with PE classes at the swimming pool

In the next question the students were asked to give arguments in favour of learning to swim. It was an open-ended question, therefore the answers were grouped into the categories presented in Figure 4.

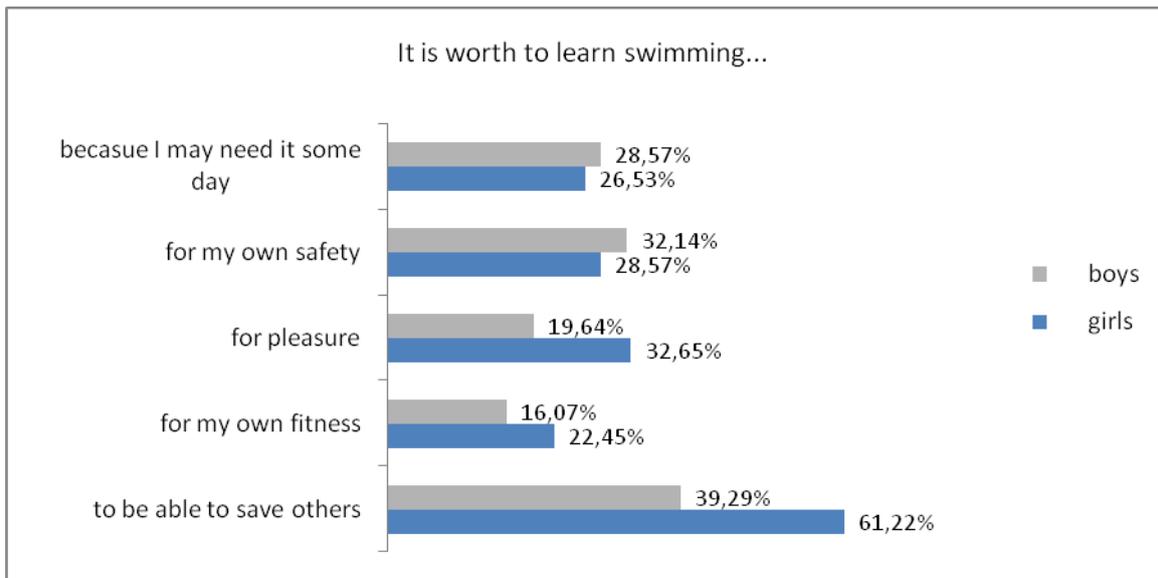


Fig. 4. The categories of junior high school students' answers to the question: "Why is it worth to learn to swim?"

The possibility of saving other people was mentioned by majority of boys and girls. These opinions were formulated in the following manner: "...when someone is drowning you can help them swim ashore", "we can help someone in case of danger", "if there's an emergency, we will be able to save someone". It seems that students identify the ability to swim with life-saving skills, e.g. methods of hauling a drowning person. Moreover, a group of junior high school students perceives the possibility of saving lives as useful only in the future: "one day I will be able to save a drowning person", "later in our lives we will be able to save someone's life", "it will be possible to help someone in the future". It can be assumed that those who express such opinions do not feel fully qualified to undertake rescue action, however, they believe that they will acquire these skills in the course of time. Life-saving procedures were not included in the teaching syllabus, however some simplified elements were employed by the teachers. In comparison with boys, girls significantly more often indicated the ability to help as the aim of swimming lessons ($\chi^2=5.031$, $p=0.024$).

Almost a third of girls and boys polled found self-rescue in the water as an advantage of swimming: "I won't drown in case of emergency", "if a ship sinks, I'll be able to save myself", "if you fall overboard, you have a chance to save yourself". Among other motives for swimming girls more often emphasized pleasure ("we can play in the water", "there is something to do at the beach", "swimming is enjoyable") as well as fitness and health ("it is a good way to burn calories", "it makes you look great and be healthier"). Boys stated that "it is >uncool< not to be able to swim when you are on summer holidays by the river" and that "you can swim in the sea with friends when it is warm". For many boys, in plain words, "it is fun". An opinion of one of the boys sounds very mature: "... one day I will be able to teach my children to swim".

The opinions of those students who declared negative attitude to participation in school swimming lessons seem interesting. 91% of them believe it is worth to be able to swim for several reasons, their own safety or helping others being the most common of them. 37% of the girls who were not satisfied with PE lessons at the swimming pool expressed very positive opinions concerning the advantages of swimming: "you can play in water", "it is fun", "your own enjoyment", "it makes you fit and relaxed", "it makes you sporty and strong", "it is nice to swim in the lake", "swimming is great fun", "if you can swim, you won't feel ashamed, for example at the beach."

An opinion of a boy who is "not fond of swimming" and finds swimming lessons "boring" seems meaningful. He admits training one of water sports and, thanks to the ability to swim, he "can feel secure during training and swim without a life-jacket." The opinions cited above clearly indicate that the students make a distinction between swimming as an important and enjoyable activity and the participation in compulsory lessons, perceived as boring, tiring and troublesome.

The students polled claimed that during school swimming lessons they most often do isolated exercises for the legs and arms with the use of a kick-board or practice swimming strokes. On the students' words, games and fun activities in water, water jumps or diving took place rarely. Girls, significantly more often than boys, claimed that they had never taken part in sports games during swimming classes ($\chi^2=8.857$; $p=0.0312$). Activities involving competition were also scarce. Although one out of four boys declared frequent participation in swimming races and relays during swimming classes, more than half of the boys stated that such form of exercise was rare. Even less frequent were the races and relays in girls' lessons. More than half of the respondents had never participated in them.

Discussion

The results of the research presented above indicate that majority of junior high school students had already learned to swim. However, this process was aided most significantly by the parents and private instructors. These findings meaningfully mirror the popularity of compulsory swimming lessons. The number of swimming pools with relation to the number of schools is still insufficient to provide children and adolescents with free access to swimming

lessons. Another issue is the financing of swimming lessons for schools – the amounts of subsidies from town or municipality councils also constitute a limitation to the accessibility of free organized swimming lessons. This issue does not concern only European countries. In Australia, in 2003 actions aimed at approving compulsory swimming lessons in secondary schools were undertaken. There was a great deal of deliberation over the introduction of a new program to schools which would, among others, define the optimal ratio of students per one swimming instructor and establish several levels of teaching in accordance with the students' abilities. The fact that more than 30% of Australian secondary school students cannot swim or swim poorly triggered off this initiative [11]. A similar situation can be observed in New Zealand, where among more than 2,000 secondary school students as many as 54% admitted in a questionnaire that they would not be able to swim a distance longer than 100 meters. 39% evaluated their swimming skills as sufficient only for a 50-meter distance [12].

The results of the survey indicate that girls are more reluctant towards participation in swimming lessons. Among other, it is caused by physiological and anthropological changes occurring in puberty and emotional instability connected to it. There may also appear the paradoxical shyness around boys combined with the desire to be attractive for them. This is one of the reasons why PE lessons in junior high schools are not coeducational. In an experiment conducted by Treanor and his research group [13] in American junior high schools, PE lessons in the winter term were carried out in a traditional way – not coeducational, and in the summer term the lessons were coeducational. A survey among the participants of the experiment revealed that the boys evaluated themselves as more skillful, stronger and more resistant than the girls, whereas the girls, in accordance with the results of other studies, perceived themselves as fatter than their colleagues. The attitude of the boys towards PE classes remained unchanged and positive, whereas the girls were becoming more and more reluctant towards PE classes from the first to the third grade of junior high school (6 to 8 in the USA). Reluctance to get involved and do well in physical activity and PE is typical for adolescent girls and this problem was repeatedly mentioned in various reports [14, 15].

James [16] carried out a research concerning the reasons behind avoiding swimming lessons by Australian teenagers. Interviews with several dozen female students aged 15-16 revealed some of their fears and hesitations. In their opinion, being in the area of swimming pools or in the water exposes them to criticism by their colleagues (male or female) or strangers. The decision to go swimming was based on an analysis of two main factors: the level of willingness to swim and the level of self-rating of appearance. Another factor limiting girls' participation in swimming lessons is the physical and emotional condition connected to the menstrual period [17].

On the basis of the junior high school students' opinions contained in this research, it can be concluded that the attractiveness of swimming lessons is critical for their success or failure. Especially girls are discouraged by boredom and monotony of the lessons. It is worth mentioning that those reluctant towards school swimming classes are at the same time enthusiastic about swimming as a healthy and useful form of sports activity. Positive attitude of teenagers towards swimming is mentioned also in another research [18, 19].

PE teachers play a great role in improving the attractiveness of the lessons. Time management is extremely important as very often each group has only one 45-minute lesson a week. That is why each lesson has to be planned in every detail – starting with preparing the tools, through the choice of content, methods appropriate for lesson goals, to activating the students who are not taking part in the lesson. In the light of the presented results, the differentiation of tasks for girls and for boys seems necessary. Typical swimming exercises should be supplemented with exercises suitable for girls, such as elements of aqua-aerobics and synchronized swimming. Lessons for boys could gain on attractiveness thanks to exercises connected to team sports (e.g. water-polo) and lifesaving. An interesting and varied lesson motivates students to participate in next lessons and reinforces the opinion about beneficial effects of such form of activity. However, planning a successful lesson is one of the most demanding tasks of a teacher because it is not easy to devise didactic tasks which will attract the talented students and at the same time motivate those less gifted. Therefore, in each lesson it is crucial to establish individual goals.

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