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Pro-health action environmental water infants and young children

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ABSTRACT

Objectives: Recent years show a gradual decline in health activities and physical activity related to them. People located in a constant rush of civilization, increasingly do not see the need to spend time in an active way. This leads to a lowering of physical fitness among children and the consequences of this are developmental disorders, posture or being overweight. The aim of the study is to determine the effect of regular physical activity of children while swimming on their health.

Material and methods: The study included 100 participants ranging in age from 3 months to 5 years. Children took part in swimming lessons regularly, at least once a week, for at least 6 months. Classes were held at the pool in Szczecin. In order to evaluate the health activities among participants, collected detailed information from parents children using a questionnaire consisting of 15 questions. The answers are summarized by adults.

Results: Compiled results show that physical activity in an aqueous environment, a positive effect on the development of physical, mental, intellectual and social development among children and noticeable effect on their behaviour. Test analysis revealed a statistical significant differences ($p < 0.001$). It demonstrated that age, frequency and duration of the course have an impact on the obtained results.

Conclusions: swimming classes support the normal development of motor, intellectual and social development among children, because health-promoting actions aimed at actively spending time in swimming pools, should be better promoted and financially more accessible for parents and their children

Keywords: physical activity, children swimming, sports, health behaviour, physical therapy

Introduction

Regular physical activity is still a small percentage of the participation of society [1]. Adverse health effects, which are caused by a decrease in physical activity, more and more children to apply their mind. Adversely influence the progress of civilization on the health and motor skills youngest, was observed at the end of the last century. This is evidenced by numerous studies conducted to the physical condition of young people, which show that successive generations are becoming less resourceful motorized [2]. Water becoming the most popular forms of physical activity, which a person can enjoy regardless of age, sex, motor abilities and physical fitness. Such activity involves value, rehabilitation, recreation, cognitive and aesthetic corrective - compensation [3]. Water, thanks to his property is used for medicinal purposes, for the prevention, diagnosis and therapy [4]. This allows the hydrostatic pressure, which causes breathing under water improves the mobility of the chest. Muscles affecting the proper ventilation of the lungs and respiratory system functioning are much more efficient, and the depth and efficiency of breathing increases after a few lessons [5]. Historically, physical activity conditioned the survival of the human person. As an expanding civilization, people began to notice that physical strength can replace mental abilities, which led to a significant reduction of physical activity [6]. Water is a primary human environment, because for 9 months of pregnancy the baby develops in the womb, constantly staying in the amniotic fluid, in which the sense of peace and security, and performs the first motor function. After birth, the newborn has the skills acquired in utero, which include the swimming reflex, lasting for several weeks [7]. Organized activities in swimming pools, are becoming more popular and are a major pastime among many families [8]. This is evidenced by the increasing numbers of swimming pools, which is 54 in West Pomerania province, while in Szczecin is the 7th alarming, however, it is the fact that approx. 80% of the pools are big sports aren’t adapted to the needs of infants. This fact is reflected in the high prices of swimming lessons for children. The average cost of

which must be bear by parents as one 30-minute classes varies from 40 to 70 zloty. Special pools for the youngest charge semester, which are for many parents is a barrier and prevents save the child. Today, while learning while teaching swimming the youngest, classes are aimed at developing skills for independent movement in the water and preventing of drawing [9]. By early adopters of stimulation in the classroom with children they are not only provided incentives for the development of the physical, but also mental. The youngest learn new skills, drift failures and the joy of success. Infants experience of contact with peers and enhance your emotional bond with their parents. Thanks to an unusual experience, comes to the child's adaptation to new situations, it causes the development of the youngest self-confidence and personality [10]. Today we are confronted with a big problem of overweight among children [11]. It has been proven that swimming slimming treatment may be harmonically expanding the entire body, because the water activity activates many muscle groups, thus delaying the aging process [12]. Another problem is posture, which constitute a serious problem, both medical and social. The reason mentioned problems is a lifestyle of modern people, and a variety of related health risks. Detection and prevention of these diseases and eliminating their negative effects requires specific preventive and therapeutic effects. This is necessary for the proper involvement of parents [13].

Aim of the study

The aim of this study is to determine the effect of regular physical activity of children while swimming for their health.

Material and method

This study was conducted in 2013. In a specialized pool for children and infants in Szczecin. The study included 100 students taking part in activities at the swimming pool dimensions 6x10m. The children were divided into three age groups. The first of them were infants aged 3 to 12 months. The second, was a group of children aged from 13 months to 3 years, while the last group accounted for 4 and 5 year old. 55 among the youngest participants are girls, and 45 participants were boys. Semester lasts 6 months and 18 counts of classes. Lessons are held once a week. The parents of the child while saving the pool have a choice of classes ,, Parent and child ", which are intended for children aged 3 months to 3 years and last 30 minutes. The second possibility is individual lessons or double group which, depend on the child's age and ability can last from 30 to 45 minutes. The research approach was used for the interview, which was prepared for form of its own survey. This method involved gathering marked correctly

answers the question every time. The survey consisted of 15 questions, the first of them were aimed at getting information on the age and sex of the child and the type, length and frequency of classes. The next questions relate to the direct and tangible effect on the body of swimming lessons exercisers. Parents were asked whether lessons in the swimming pool have an impact on the development of physical, intellectual, social and psychological, among their children. The survey allows the presentation of the advantages of the water environment and its impact resistance and physical strength of vessels. Test results were analyzed by the test chi-square, which enables precise and comparison of results. The study involved 12 infants, 35 children aged 1-3 and 53 students in the age group 3-5 years. Based on the survey examined time to participate in the classes. Display these parameters enabled to compare the relationship between the length attend classes and the benefits of being in an aquatic environment. 36 people participate in swimming lessons less than for 6 months. Another group has 23 children, who swim from 6 to 12 months. The subjects were attending from 12 to 24 months was 19, a little less - 16 children who go over 24 months, while the smallest group having 6 people create floating over 36 months. Among the participants, the largest group of 40 people, are the youngest participating in the classes "Parent and child". Swimming solo was 36, while 24 children, was in a group of two person. Among the 86 children attending the course of 30 minutes, while 14 children at the same time swims 45 minutes.

Results

The study shows that the main advantage of the aquatic environment, improve the openness to contacts with other people - 34%. The second benefit, which was chosen by a quarter of carers was noticeable increased frequency of smiling among respondents. Adults noticed that the children taking part in activities, learn faster - 17%, better tolerate stress - 16% and -8% less crying. Analysis of the data revealed in the research group statistical significance
($p = 0.001$).

Of the respondents 80% ($p < 0.001$) was observed that swimming lessons have a positive impact on the improvement of physical development. Classes are held at the swimming pool surrounded by many people, both adults and children, because the respondents were asked about the development of the intellectual, social and psychological participants. Parents of 94% ($p < 0.001$), reported that a schedule water on the above mentioned characteristics. High variation in response was observed in the question on the impact on the aquatic environment resistance. Most respondents - 35%, noted the positive impact activities and answered that the child is suffering less, which can be concluded that its resistance is strengthened. The youngest

of 29% no change, 22% of adults could not answer this question, while 14% of parents said that the water has no effect on improving the resilience of their children. Such a large variation in response, contributed to the score ($p = 0.020$). The largest part of parents - 40% observed that the youngest class in the aquatic environment are relaxed, 32% of adults marked answer that their children are relaxed. Subsequent responses were as follows: 18% - muted, 6% - did not notice changes in behaviour, while 4% of respondents, noticed an improvement in concentration and focus. Statistical significance of the behaviour of respondents to the lesson is completed ($p <0.001$). Analysing the study, it was observed that the age of the children is important. Participants who accepted in infancy and regularly attended classes at the pool had a greater and more noticeable results than older children, that have been saved to the pool later in the century. Parents who participating in classes, into water with the child, more closely observed the positive impact of activities in a group of peers on emotional and social development.

Discussion

In terms of children, relatives play a key role. The family education is the main environment for recreation and physical activity. More active parents are more active children who have a pattern to follow. [14] According to Hurlock, patterns that take the youngest in the family, remain there forever, even though they may be subject to modification and change [15]. The largest study ever conducted of the children swimming, took place in the Australian Griffith Institute for Educational Research, where for three years systematically interviewed parents of seven thousand children from Australia, the US and New Zealand. The results showed that children who participate in learning swimming from an early age to master many skills much earlier than their not swimming peers. It has also been shown that physical activity in an aquatic environment contribute towards improving the hand-eye coordination. Among infants observed floating, faster progress in development. Children have better results in the work of manual and mathematical tasks. All these skills contribute to a small swimmers start in school and school education. [16] Similar results were presented Sigmundsson and Hipkins, who conducted their research among infants aged 3 to 7 months. After four years, the children were asked to swim and those in the control group to perform the same set of exercises. It has been observed that infants who attended classes in the water, achieved significantly better results when tasks require equivalent and reaching for objects [17]. Currently, a large health and social problem is overweight and obesity, which occur in younger and younger age groups [18,19]. This problem is one of the diseases of civilization and is a further argument for the necessity of the implementation of health activities from an early age [20]. Over the past 20 years, the rates of

obesity of children and adolescents in the US have risen sharply. Studies have shown that 15.8% of children aged 6 to 11 years are overweight, while 31.2% of respondents are at risk [21]. There is scientific evidence that children with low physical activity and high levels of body fat are more prone to cardiovascular disease [22,23]. Next available studies also suggest that some degree of positive relationship can exist between physical activity and various indicators of mental health [24]. The relationship to weight loss exercises in the aquatic environment examined among 38 overweight young women, whose average BMI of 29.7. After a period of 13 weeks training in the swimming pool, which took four times a week, after 40 minutes, there was a significant weight reduction after 8 weeks in the group of 13 women [25]. Tests conducted at the University of Physical Education and Sport in Gdansk, by Gregory Bielec showed that students regularly attend classes at the swimming pool have a lower body weight, unlike their peers who do not participate in swimming lessons [26]. In our study, it has been shown that physical activity in an aquatic environment has a positive effect on the physical development of children. This helps to maintain a healthy body weight among infants and young children [27]. The participation children in organized activities at the pool depends on the parents because state institutions such as crèches, nurseries or do not take place in Poland conducting swimming lessons. With the diagnostic survey, which involved 111 caregivers of preschoolers, it appears that the swimming attend 3.2% of children in order to actively spend your free time, while 13.5% of children declare that this is their favourite pastime activity [28]. So small percentage of trainees, while more than four times the number of preschoolers who want to swim, can be caused, still a low percentage of specialized swimming pool for children, which can be found mainly in large cities. The reason for this phenomenon is also very high cost activities for infants and young children, which can be as high as 60-70zł for one 30-minute individual lesson. Problems associated with high costs, which make it impossible to take special swimming lessons presented in their studies Is Mrs Kownacka, who put their questionnaires to 200 parents. Over 80 respondents answered that they did not attend with the child on activities because of the bad financial situation [29]. Comparing these results to the research carried out by Mr Soltysik, which showed that 14%, 15 and 16 year old boys spend their free time at the pool, you can say that in Poland is more of a large swimming pool, adapted for young people and adults, which costs swimming are much smaller. These factors influence the swimming greater interest among the older age groups [30]. Disturbing are also the results presented by the World Health Organization, which informs that after research in 1990 among 4643 children and in 1994 at 4527, physical activity among students is too small with a negative disproportion between spending time on physical exercises and time immobilization, while watching TV or

using a computer [31, 32]. Pro-health action in an aquatic environment, they also prevent contractures and faulty posture in children. Proper posture is the basis for the proper development of the individual's [33]. Faulty postures, which are often caused by a sedentary lifestyle and cause impairment of physical fitness among children [34]. Mrs Dolata-Łubkowska, who used the method in 1992 Mr Iwanowski student training in swimming, the results obtained evidence that physical activity in the water to ensure proper development of the curvatures of the spine and is useful for the purposes of correction [35]. Similar studies presented Mr Dziedziczak, whose research group accounted for 91 swimmers. In determining motility and efficiency, it has proved that the water exercises a favorable effect on the physical development [36]. Analysis of the results of research conducted by the Mr Waad of 184 seven years old and the same group after 3 years of training in swimming pools confirmed that these classes are corrective and compensatory effect on body posture in children [37]. Comparing the results of the above authors of their own, you can see the relationship between physical activity in the aquatic environment and its positive impact on physical development, improve the capacity and strength of health-related subjects and activities which are preventing the posture defects [38]. Based on studies conducted in 2008, in which participated 148 preschoolers, it shows that children who have frequent contact with their peers, have a richer vocabulary and use more new words. It was also shown that the youngest, who ask a lot of questions to adults and receive answers, verbs, nouns and adjectives [39]. The development of correct speech, also affects fun together with their peers, which according to Mr Lasota, is closely linked with the development of language in early childhood [40]. The obtained results of the study were carried out in a large research group. They enabled to check the influence of physical activity in the water and its health-promoting effects on the body of children. The surveyed parents see significant beneficial effect on motor development, mental, intellectual and social development of children, thanks to their attending swimming classes, therefore, pro-health action aimed at actively spending time in swimming pools, should be better promoted and financially more accessible for parents and their children.

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