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## Ways of Improving Physical Activity of Primary School Children

### Abstract

The article is about problems in increasing motive activity for children of primary school age, the aim of which is improving their health. Thanks to a sufficient amount of physical activity children of all age groups have an optimum level of health, physical development and will acquire motor skills.

One of the important problems of our time is to improve the health of children. The study indicates a relatively low level of health in children of primary school age, which is associated with decreased levels of physical activity. Studies show that for children of 6 to 7 years of age the number of hours on average and high levels of motor activity tend to decrease. At the age of six 2 hours, 10 min (9,1%) are spent at the average level, 40 minutes (2.6 per cent) – at the high level, and at the age of seven – 1 hour, 7 min(7,35%) are spent at the average level, 20 min (1,05%) – at the high level. The greatest number of hours is spent at the basic level (44,5% at the age of 6, 39.4% – at the age of 7). At the age of six 88.3% of the time are given to the base and low level, at the age of seven – 91.6 %, 11.7 % and 8.4 % are given to the average and high levels accordingly, which indicates a sedentary lifestyle.

The solution to the problem of preservation of health and ensuring harmonious development of personality in educational institutions is of great practical importance. In this regard physical culture, as the basis of ensuring the strengthening of children's health, has new challenges that require the development and creation of physical education system in secondary schools which provides improvement of all components in health - mental, social, physical. One of the conditions of effectiveness in the system of organization of sports and recreation activities is the introduction of various forms of work, taking into account the interests and motives of the children.

**Keywords:** children of primary school age, physical activity, physical education, health.

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## Introduction

In recent decades, the world science took the issue of health in the broadest sense to a range of global problems, the solution of which determines not only the quantitative and qualitative characteristics of the future of humanity, but even the fact of its continued existence as a species [2].

According to modern concepts, health is no longer seen as a purely medical problem. Moreover, the complex of medical issues is only a small part of the phenomenon of health. Thus, the summarized results of research about health which depends on the various factors, suggest that the state of the health care system makes an average of only about 10 per cent of the complex of influences, other 90 per cent is the environment (20 per cent), heredity (20 per cent ) and most of all – the conditions and lifestyle (almost 50 per cent) [1].

Scientific studies show that among 6–18-year-old pupils 56 per cent have low level of physical health, 36 per cent – below average and only 7.5 per cent – high. There are changes in functioning of various body systems among the pupils: 26.6 per cent of pupils have deviations in the cardiovascular system; 27 per cent of children have respiratory diseases; 40 per cent of children have digestive diseases; 60 per cent of first-graders have psychomotor deviations; 40 per cent of preschoolers and 64 per cent of primary school children have different posture deviations [3].

These figures clearly show that the problem of strengthening children's health is relevant, especially of those children who are actively engaged in mental activities. One of the reasons in this situation is to reduce physical activity of children that is observed in the early school years.

Hygienists' studies show that up to 82–85 per cent of the daily time most students spend in a static position (sitting). Arbitrary physical activity (walking, physical games) occupy only 16–19 per cent of pupils' time in, only 1–3 per cent of 16–19 per cent fall on the form of physical education. Total physical activity of children after entering school is reduced to nearly 50 per cent, beginning from junior to senior school. It has been found that girls do fewer steps per day than boys; physical activity at weekends is higher than in the school days. Changes in the dimension of physical activity in different semesters are marked. Physical activity of pupils is especially low in winter, in spring and in autumn it rises [4].

Physical activity, systematic physical exercises are very effective powerful means of mobilization of the reserve of human's abilities, formation of various adaptive reactions (some of its parts of body, functions, systems), optimal physical activity fulfills the role of a regulator of growth and development of the young organism, is a prerequisite for the establishment and improvement of the child as biological creature and social individual [7].

The guarantee of a healthy young generation is the required amount of physical activity. According to numerous researches, due to a considerable amount of

physical activity, children of all ages achieve the optimum level of health, physical development and faster acquire physical skills and habits [6].

This is why studies focused on the problem of optimizing physical activity of children are important and solve an important task – they improve the health of the children.

**The objective** – to prove scientifically ways of increasing physical activity in improving the pupils' health.

**The aim** – analysis and improvement of scientific and technical literature, the timing of children's activity due to Framingham technique, methods of mathematical statistics.

## **Results. Discussion**

An important stage in a child's life begins from his or her first day at school. There is a new social position of an individual – pupil, namely a direct participant amount in one of the forms of generally significant activity – studying, which requires great exertion. During this period a child is faced with great requirements, new responsibilities and new relationships with adults which also need certain moral effort and experience.

Psychological stress, which occurs in the first grader, who first crossed the threshold of the school, is the result of reaction to the unusual situation that has changed. Physical and mental health of a child is stabilized after two weeks or two months stay in school, except when a small child is not ready, or systematic training becomes too hard and it does not lead to the violations of health.

From September 2004 the school began having children of 6 years of age, the educational activity of whom differs significantly from the educational activities of those who become first-graders when they are seven years old. Scientific studies have shown that preschoolers' "digestive diseases have increased by 46.4 per cent during the last three years; cardiovascular disease – 22.8 per cent; decreased visual acuity – for 15.4 per cent; almost 65 per cent of the six-year-old children are not ready for school because of their poor health, as well as their physical and mental development" [7].

Recently psychologists have conducted extensive research aimed at identifying personal potential of the children of 6–7 years of age. The results showed that six-year-old children have greater physical and cognitive capabilities and relatively higher sensitivity for education. However, they are characterized by high excitement, emotionality, attention instability, situational behavior and rather fast fatigue.

That is why an appropriate level of physical and mental development of children of 6 is particularly important for their adaptation to school.

Readiness for school is today's opinion, which includes not only indicators of educational, intellectual, motivational, emotional and volitional as well as

communication readiness, but also takes into account the state of physical health, and the level of child's physical fitness.

According to scientists, physical activity of primary school children acts as a determinant of academic success. Interest in the development of physical activity of children according to psychologists was due to the fact that this movement is one of the major forms of development of other forms of activity, including cognitive.

Particular interest in the formation of cognitive processes represents the physical activity, since the opportunities for development of psychological processes of perception, memory, thinking, ideas that determine the level of learning of children laid in it.

To determine the changes in the structure of physical activity, we conducted a comparative analysis of physical activity among children 6 and 7 years of age. Data are presented in table 1.

**Table 1.** Indicators of physical activity of children aged 6 and 7

Indexes	Level of physical activity									
	base		sitting		small		average		high	
	6	7	6	7	6	7	6	7	6	7
Format (min., h.)	9 h. 30 min.	9 h. 5 min.	4 h. 15 min.	4 h. 9 min.	6 h. 15 min.	7 h. 6 min.	2 h. 10 min.	1h. 7min.	40 min.	20 min.
Format (per cent)	44,5	39,4	17,7	20,54	26,1	31,7	9,1	7,35	2,6	1,05

Source: own research.

Studies show that from 6 to 7 the number of hours at medium and high levels of physical activity tend to decrease. 6-year-olds on average level spend 2 hours. 10 min (9.1 per cent), the highest – 40 min. (2.6 per cent) whereas 7-year-olds spend on average 1 hour. 7 min. (7.35 per cent), the highest – 20 min. (1.05 per cent). The greatest number of hours are spent at the base level (44.5 per cent – in 6-year-olds, 39.4 per cent – 7-year-olds).

The analysis of physical activity shows that the amount of time decreases in the case of organized sports and recreation activities from class 1 to class 4. A small number of children (28 per cent) are engaged in sports sections. Thus, one could confirm that examined pupils have sedentary lifestyle and this can be one of the reasons which cause deterioration of physical health. Therefore, the problem of increasing physical activity is necessary for creating a system of sports and recreation activities which will provide the optimum level of physical activity for all ages, health effect studies and adaptation for successful learning.

Increasing of physical activity is the task that must be performed in family and school interaction. Unfortunately, preparing children for school, parents pay

attention mainly to mastering reading and writing skills without considering the physical aspect of their child's development. As a result, a child goes to school physically weak and mentally immature.

An important condition for involving children in various forms of sports and recreation activities is the development of advanced health technologies with taking into account interests and motivations of children of different age groups.

Creating a rational system of sports and recreation activities in secondary schools should focus on improving all components of health – mental, physical, social that are to be provided by a system of modern work forms that contribute to an optimal level of physical activity.

Mental health is related to mental person's sphere which provides an adequate individual behavior, the formation of consciousness and development of thinking. Improving of mental health depends on "School Psychological Service", which includes psychologists, doctors, medical specialists in physical culture, teachers.

The purpose of psychological and educational services is supporting children in forming an individual ability of independent creative thinking, the ability to live in new social conditions, overcoming or compensating certain personal limitations.

Mental health is determined by parameters such as mental well-being, tranquility, concentration, attention, a good memory, active promotion of self-esteem and dignity, which are provided by the system of measures which facilitate the rational combination of mental and physical activities, the creation of "relaxed atmosphere" using a form of sports and recreation activities in the mode of the day (pauses, mobile breaks, dynamic time) and various modern technologies: "psycho-gymnastics, musical therapy, aromatherapy and dance therapy". High level of mental health affects the development of intellectual, emotional and spiritual health.

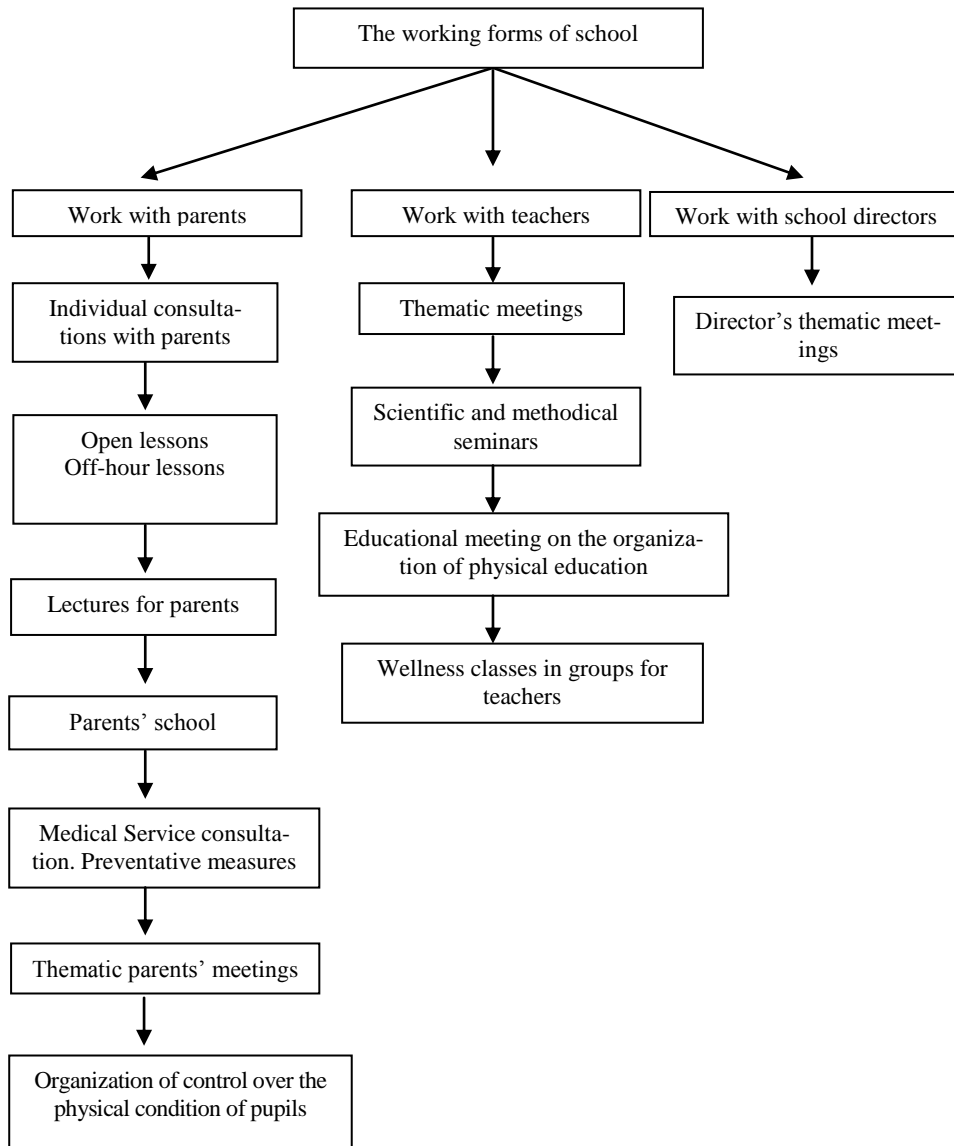
High level of mental health promotes spiritual health, which is regarded as a set of purposes in motivational and informative spheres of life, which were based on values, attitudes and motives of the individual in society.

The development of pupils' spiritual sphere is created in the process of sports and art festivals, presentations of books in which the humanistic idea of Olympism and the principles of fair play are popularized, attention is paid to the artistic display of sport, its humanistic thinking. Events are aimed at creating high socio-cultural and spiritual potential in children.

Close attention should be paid to the emotional state of the children, which is associated with the ability to overcome everyday stress and psychogenic factors.

Physical health is associated with human biological structure and functions that provide physical efficiency; physical health is provided with an integrated system, which includes implementation of daily fitness classes following the main program and additional training "to choose" (where children under the age

characteristics and interests, are engaged in various sports), athletic minutes of different directions, moving interruptions, sports groups in the day with extended time, self – study exercises, outdoor games with using the moving games, sport competitions, training in sports sections.



**Picture 1.** The school's working forms concerning common knowledge formation on the basics of healthy lifestyle

Source: own research.

The system is designed so that all children have the opportunity to exercise. Particular attention is paid to children with health deviations who attend classes in special medical groups. It should be noted that the implementation of various forms of fitness classes required development of new approaches in their realization.

The system of fitness classes should provide optimum moving mode, which is 16–18 hours per week for primary school children. In drawing up the physical regime a rational combination of different activities (mental and physical) should be considered to prevent fatigue process.

Physical health is also provided by the system of health care facilities aimed at diagnosing early forms of any disease, teaching psychic self-regulation, control system implementation for the pupils' physical condition.

Social health conditions are determined by the social environment, so there should be measures of all structures involved in the implementation of innovative program sports and recreation activities, focusing on the problem of improving health and promoting healthy lifestyles. The formation of social health is connected with solving problems to improve the parents', leaders', teachers' knowledge on the basics of improving health facilities (Picture 1).

The leading role in the formation of social health belongs to the family because the family's social status provide the motivation for healthy lifestyle and the possibility of physical training and sports.

You can achieve a high level if teachers, school officials in all forms of the educational process promote a positive mood and encourage the achievements, identify and appreciate the pupils' attention, support the formation of all health components in the system of sports and recreation activities.

## **Conclusions and recommendations for further research**

One of the major problems today is how to improve the health of children. Research indicates relatively poor health of primary school children, which is associated with decreased levels of physical activity. Children who are 6 years of age devote 88.3 per cent of their time to physical activity, whereas 7-year-olds 91.6 per cent; at the average level – 11.7 percent, at high level – 8.4 per cent. It indicates at a sedentary lifestyle.

Solving the problem of maintaining health and ensuring the harmonious development of personality in schools have a great practical importance. In connection with this pre-physical education, as the foundation of health promotion of children, new tasks are put forward that need to be developed and a creation of system of physical education in schools, which provide improvement of all components of health – mental, social and physical. One of the conditions of effectiveness of the organization of sports and recreation activities is introducing various forms of work and taking into account the interests and motivations of children.

Prospects for further research lie in the development of innovative and scientific substantiation of health programs for school children.

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## Metody poprawy aktywności fizycznej dzieci w szkołach podstawowych

### Streszczenie

W artykule omówiono problemy dotyczące poprawy motywacji aktywności dzieci uczęszczających do szkół podstawowych. Dzięki odpowiedniej ilości aktywności fizycznej, dzieci ze wszystkich grup wiekowych mogą osiągnąć optymalny poziom zdrowia i rozwoju fizycznego, nabędą też odpowiednie umiejętności ruchowe.

Ważnym problemem naszych czasów jest poprawa stanu zdrowia dzieci. Wyniki przedstawionych w artykule badań świadczą o stosunkowo niskim poziomie zdrowia dzieci w wieku szkolnym, co wiąże się z obniżonym poziomem ich aktywności fizycznej. Badania dowodzą, że u dzieci w wieku 6 i 7 lat liczba godzin, w trakcie których dzieci podejmują aktywność fizyczną na średnim i wysokim poziomie, wykazuje tendencję spadkową. Grupa wiekowa sześciolatków spędza średnio 2 godziny 10 minut (9,1%) na poziomie średnim, 40 minut (2,6%) na poziomie wysokim, a w przypadku siedmiolatków – 1 godzinę 7 minut (7,35%) na poziomie średnim i 20 min. (1,05%) na poziomie wysokim. Największą ilość czasu spędza się na poziomie podstawowym



(44,5% w wieku lat 6, i 39,4% w wieku lat 7). W przypadku sześciolatków 88,3% czasu przypada na poziomy podstawowy i niski, natomiast w przypadku siedmiolatków – 91,6%; 11,7% i 8,4% czasu przypisuje się odpowiednio poziomom średnim i wysokim, co wskazuje na siedzący styl życia.

Rozwiązanie problemu zachowania zdrowia i zapewnienia harmonijnego rozwoju osobowości w placówkach szkolnych ma ogromne znaczenie. W tym względzie kultura fizyczna, jako podstawa zapewnienia i wzmocnienia zdrowia dzieci, stoi w obliczu wyzwań, które wymagają rozwoju i utworzenia takiego systemu wychowania fizycznego w szkolnictwie podstawowym, który zapewni poprawę wszystkich elementów składowych zdrowia – umysłowego, społecznego i fizycznego. Jednym z warunków skuteczności w systemie organizacji ćwiczeń sportowych i rekreacyjnych jest wprowadzenie urozmaiconych form pracy, uwzględniających zainteresowania i motywacje dzieci.

**Słowa kluczowe:** dzieci w wieku szkolnym, aktywność fizyczna, wychowanie fizyczne, zdrowie.