

Formation of Preschool Child Personality through Physical Education

Formación de la Personalidad Infantil a través de la Educación Física

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Content

- [1. Introduction](#)
 - [2. Method](#)
 - [3. Data, Analysis, and Results](#)
 - [4. Discussion](#)
 - [5. Conclusions](#)
- [References](#)

ABSTRACT:

Various factors influence the formation of personality and development of intellectual abilities of preschool children. Physical activity is the key element of this process. To confirm this hypothesis, the article establishes the link between physical activity of children and the ability to think creatively, to know the world. Complementary research methods: analysis and synthesis of scientific and methodological literature, modern pedagogical practice contribute to achieving this goal. The article describes an experiment in which 80 children of the older group of the kindergarten took part. They completed a Wexler's test and performed a number of physical exercises that affect their personal and intellectual development. As a result, based on Pearson correlation, a significant link between physical activity and the level of the child's personal and intellectual characteristics was found. The conclusion is drawn that encouraging children to exercise increases the amounts of acquired knowledge and influences the formation of personality.

Keywords: pre-school childhood, mental development, motor activity, creative self-realization, child experimentation.

RESUMEN:

Varios factores influyen en la formación de la personalidad y el desarrollo de las capacidades intelectuales de los niños en edad preescolar. La actividad física es el elemento clave de este proceso. Para confirmar esta hipótesis, el artículo establece el vínculo entre la actividad física de los niños y la capacidad de pensar creativamente, de conocer el mundo. Los métodos de investigación complementarios: análisis y síntesis de la literatura científica y metodológica, la práctica pedagógica moderna contribuyen a lograr este objetivo. El artículo describe un experimento en el que participaron 80 niños del grupo de edad del jardín de infantes. Ellos pudieron realizar una prueba de Wexler y realizaron una serie de ejercicios físicos que afectan su desarrollo personal e intelectual. Como resultado, en base a la correlación de Pearson, se encontró una relación significativa entre la actividad física y el nivel de las características personales e intelectuales del niño. Se concluye que alentar a los niños a ejercer aumenta la cantidad de conocimientos adquiridos e influye en la formación de la personalidad.

Palabras clave: infancia preescolar, desarrollo mental, actividad motora, autorrealización creativa,

1. Introduction

Personality is viewed as a psychophysical unity, which includes the physical and the social environment; a lot of features, which are relatively stable characteristics, appear in the internal dialogue of a person with himself, in his behavior, statements, the attitude toward him on the part of other people; the personal meanings system (Asmolov, 1990, p. 367). The source which self-organizes the process of the personality development is a personal consciousness. It expresses unique features of the way of life of each individual, the upbringing peculiarities as well as different political and ideological influences. The phenomenon of "being a personality", i.e. the ability to express and manage one's own meanings by building them in accordance with the voluntarily accepted and independently realizable requirements is performed thanks to the activity of the personality structures of consciousness.

Scientists note that people surrounding a child, especially parents, play an important role in formation of his personality (Wolff, 2014; Lillard et al., 2013, p. 1; Hecht et al., 2014, pp. 805-815). The child tries to imitate them, to follow their manner of behavior. On the other hand, it is argued that formation of preschool child's thinking is influenced by his motivating sphere, in which the child develops motives that encourage him to satisfy human needs (Hamre et al., 2014, pp. 1257-1274). The emotional component is the main factor in formation of the personality of the child in preschool age (Poddiyakov, 2001, pp. 68-75; Evans, Li, & Whipple, 2013, pp. 1342; Lewis, & Sullivan, 2014). Physical activity is considered in the context of other factors. It does not allow to assess its complete influence on the development of children. However, the link between the intellectual and physical development of children is clearly visible in case of pathology. It is established that mentally retarded preschool children are 25-40 % behind the norm in terms of strength, speed and endurance (Reshetnyak, & Bannikova, 2002, p. 59). 5-6-year-old children with mental disorders have worse developed speed-strength and coordination abilities (Reshetnyak, & Bannikova, 2002, p. 59).

The physical education takes one of the important places among many factors that influence the development and the formation of the personality (social, cultural, sanitary factors and etc.). It performs the unique role of the integrated development of all aspects of the integral personality (mental, physical, intellectual, aesthetic and moral aspects), gradually preparing the person for the inclusion in all increasingly complex systems of social relations. According to L.I. Lubysheva (1997, pp. 11-15) physical education is the very first type of the culture of personality and society, which represents a basic fundamental layer as well as the integrating element of the general culture. Therefore, a developed society is objectively interested in a high level of the physical culture of the entire society and its citizens, i.e. in the targeted provision of real opportunities and real incentives for the comprehensive realization of a sufficiently high level of the physical culture. Against this background each subsystem of the physical culture (physical education, sport, physical recreation and motor rehabilitation) includes different spiritual principles related to the intellectual, social and psychological components, as well as related to a wide range of needs, abilities and attitudes. The use of the term "physical education" in modern conditions allows reflecting in the mind various processes of self-improvement of material and spiritual organization of an individual. Natural and physical characteristics of a human acquire personal characteristics during these processes.

Preschool childhood is a time of the personality birth. This age is characterized by the formation of basic personality mechanisms and structures thanks to which a child acquires the individual characteristics of mind and behavior, allowing him to be a unique personality. The start of the personality formation cannot be clearly marked with the boundary even such as 3-4 years according to some authors (Davydov, 1992, pp. 22-32; Wolff, 2014). Some personality demonstrations can be seen at the age of one year or even earlier. The fact is that the personality is "not clearly describable structure in relation to which it is possible to say precisely

about its presence or absence in each case. Probably, the personality is the form of a human existence, which initially takes barely noticeable place among the other more primitive forms of its existence, then it takes more and more place and finally becomes absolutely dominant" (Leontiev, 1997). At the same time the personality development does not represent any independent process. According to the psycho-pedagogical studies the process of the personality development is included in the overall mental development of a child and it is considered in the unity with it (Stutsman, 2007, p. 368; Brenneman, 2011). Based on this statement the main directions of the psyche development (the methods and mechanisms of activities implementation) interact with areas of the personal development (directivity, value orientations, level of aspiration, self-consciousness, and ways of interaction with the world). A common feature of the psyche and the personality development is their systematic, integrative and compensatory character. The source of mental development is a social experience due to which the child gets the material for the formation of mental qualities and personality peculiarities through an intermediary (adult). However, the personality development at the preschool age depends not only on the social conditions, but also on the internal position, i.e. the certain attitude formed by the child to the world of people, to the world of things and to himself. In particular, the inner attitude is the defining characteristic of the developing personality, which allows it to go beyond the accumulated experience. The inner attitude manifests itself by emotive images, situational orientations to the acquired standards, will, which is expressed in perseverance and other private psychiatric manifestations. The child acts in this process as a full personality and a creator of own activities, who sets goals and seeks the ways and the means of their achievement (Brenneman, 2011). The definitively organized activity acts as a forming beginning in the mental (personal) development of a preschool child. The lack of sufficient physical activity in this period leads to the fact that the child begins to form self-doubt, isolation (Davydov, 1992, pp. 22-32).

Thus, the aim of this study is to set the relationship between the physical activity and the level of thinking, creativity of preschool children.

To achieve this aim the following tasks were solved:

- The effect of physical activity on cognitive abilities, creativity of a child was considered.
 - The effect of physical activity on a child's ability to explore the world was considered.
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2. Method

To achieve the aim of the study a set of scientific methods was applied, including the analysis and generalization of scientific-methodical literature, program and regulatory documents and teaching practice, the methods of psychodiagnostics, pedagogical testing based on test D. Weschler, also methods of mathematical statistics, namely calculation of a correlation ratio of Pearson.

3. Data, Analysis, and Results

The motor activity forms a child as an integral personality in the unity of diversity of his physical, mental and social qualities (Irwin, 2007, pp. 299-303). The process of formation of the integral personality in the motor activity is carried out in two ways: firstly, regular physical exercises bring up conscious security behavior, create the perspective of free movement in space, help a child to correctly orient himself in the outside world and make it possible to climb the ladder of relations; secondly, during physical exercises the object of will and consciousness of a child is his own body, motor skills and the so-called physical "I"; regular physical activities require constant conations; performance of physical exercises is accompanied by the intense emotional experiences caused by the struggle for a better result; children become acquainted with a variety of motor abilities, skills, ideomotor images of physical exercises, perceive their "dark" muscular feelings and learn how to control their "living movements". This close relationship of physical and mental functions of a preschool child is explained by the fact that

the development of any motor act is related, on the one hand, to the improvement of mental activity (improvement of mental functions of attention, perception, memory, thinking, without which the practical activity is not possible, functional changes in the musculoskeletal system and etc.) and, on the other hand, it is related to the development of central nervous mechanisms, among which the maturation of the cortical area of the motor analyzer and the formation of its relations with other parts of a brain plays the main role. The general mechanism of this relationship is as follows. Each motor act is performed in space and time, so the actively movable child gets the opportunity to acquire greater amount of information per a unit of time that contributes to the accelerated formation of his psyche.

The creativity acts as the most meaningful form of mental activity, which ensures the successful implementation of various types of activity by the child (including motor activity). According to psychologists, the creative work is a universal property of consciousness and the original "cell" from which all richness of the child's subjective world develops. Different researchers have different definitions of the creative ability, but in general the concept is that the creative ability is seen in the creation of something new and original by the child. The creativity criterion in this case is not the result quality but the characteristics and processes, which actualize creative productivity (Burk, 2006, p. 123).

The striving for creative self-realization is considered by researchers as the readiness of children for the demonstration of their individual personal possibilities. According to L.S. Vygotskiy the creative activity in relation to a child is any activity the result of which is not a simple reproduction of previous impressions or actions of his experience, but the activity in which childish imagination appears, which is in direct proportion to the richness and the diversity of the previous experience of the child (Vygotskiy, 1997, p. 96). However, the isolated development of imagination is not enough for the development of the creative activity. Each education system, which is aimed at the creativity formation, involves the development of thinking (especially image thinking), perception (visual, tactile and kinesthetic perception), randomness, independence and freedom of behavior. A common characteristic of the creative activity development of the child is an intellectual activity, one of the most appropriate types of which is considered to be "child experimentation". The child experimentation is a special form of the search activity where the processes of the practicability, the emergence and the development of new personality motives which are fundamental for self-motion and self-development, are the most pronounced; own activity of a child, aimed at the acquisition of new information, new knowledge and creative products, manifests itself most powerfully in the child experimentation; the child experimentation is a core of any process of the creativity of a child; the experimentation activity in its entirety and versatility is a universal way of the psyche functioning (Poddiyakov, 2001, pp. 68-75).

The creativity of the child in the motor activity reflects the universal forms of creativity and it is characterized by the following features: cognitive (the ability to differentiate the whole into parts, integrate the whole from the parts); projective-constructive (the ability to create and transform motions, change their structure and make adjustments in the course of the motor action execution); imaginative and constructive (the ability to express emotions and states by means of motions, "to create" motor images); aesthetic (the ability to achieve the emotional lift and the aesthetic pleasure during the performance of motor actions).

The means of the motor creativity development of a preschool child include physical exercises, outdoor games, motor staging and problem-motor tasks.

Physical exercises are physical actions aimed at the goals achieving of the physical education. On the one hand, physical exercises are considered as a specific motor action, on the other hand - as a process of its multiple repetitions in order to affect physical and mental qualities of a man. N.A. Bernstein proved during the study of the biomechanics of movements that a simple motor action, even brought to the automatism, in its specific implementations is always unique. There are no identical and repeating lines in the motor field (set of trajectories of movements in space from start to target) - the movement has never done identically and it is rebuilt every

time. Therefore motor action is a repetition without the repetition (Bernstein, 1990). At preschool age a child needs to gain experience of various movements performing in order to improve sensory corrections of motor actions as well as to learn how to perform movements freely. A preschooler realizes a freedom of motor actions in outdoor games. The initial stage of the creativity formation in a game is the imitation. It is especially typical of preschool children. Repetition and imitation retain their value in older preschool age too, ensuring the entering into the role by a child and meaningful perception of the game situation. However, older preschoolers faster derive from their experience the set of methods of motor actions that provide the greatest effect in a game. At younger preschool age children also acquire the initial capacity to transfer an imaginative movement. At the age of five years old children transfer by movements not only different states of a character, but also their behavior in appropriate circumstances. The creative initiative of the child in a game is demonstrated at the creation of new rules, content variants and the performance of new (combined) types of physical exercises. Motor staging teaches a child "to feel" a movement and represent one of the forms of the motor image playing. The creativity manifests itself in a truthful image of a character.

Presentation of character temper is possible with the help of means of imaginative expression (mimics, gesture, postural pose, walking, etc.). Using these means for representing a motor image requires proper training, ability exercise to use them. In order to understand a hero it is necessary to learn to analyze his acts, to estimate them, to understand moral of a writing piece. It largely depends on personal experience of children: the more diverse impression of surrounding life is, the richer imagination, feelings, movements will be. Image creation with the help of movements makes a child to feel emotional attitude to motor activity, involves into mental process such qualities as intelligence, flexibility, ability to transfer the means of performing act to the next playing image. As a result of repeated use of the same ways of movement implementation in different situations children begin to generalize them and that makes a movement conscious. A child develops motor intention in two ways: in many cases – spontaneously, with understanding-guess; in other cases – with conscious analysis of possible ways of its accomplishment, when to realize intention – to create a playing image, children show its particular features. When an image is created the main ways of creative thinking are combining and analogizing, and the method of combining is the leading one. An associative component is a psychological peculiarity of the method of analogizing. The presence of this component is evident when a child uses generalized images. The main interconnection of a teacher and a child is to recall from the last one a correspondent emotional response, to help to "enter" an imaginary situation, to see and understand an image of others (a new "self-image"), to conduct a motor dialogue through the language of gestures, mimics, postural poses.

Problem - motor tasks are special condition of a person which requires acquisition of new knowledge about a subject, methods or conditions of act implementation. A problem situation takes place when previous knowledge, methods and means of activity implementation are not enough to solve a task, although a child feels an urgent need to do it. The key element of a problem task is something unknown, new, which should be opened for a right acting, right solving of a set task. In one and the same problem situation the various types of acts create enabling environment for realization of a preschool child creative potential, give him a possibility for constant improvement. The core of the problem - motor task is represented by an artificial combining of elements of a known movement which needs to be improved with different elements of other unintended movements. Children invent movements for a fairy situation; for a storyline offered by a teacher; make up as more analogues of a known movement as possible; create a new movement with the help of known elements. Fantasticality of movements strengthens with applying such widely known methods as agglutination (a dance image consisting of any movement elements when a fantasy image is created as a result). The main means to invent a new movement is an association of similarity. The sign on which base similarity stated characterizes personal individuality of a child.

Ability to project, create, transform a movement, change its structure shows necessity not to

“train” a child for performing a motor act in the variant taken from outside, but to form capacity for making his own method to solve a motor task based on conditions, peculiarities and possibilities of an organism.

In the conducted experiment there was used the test of D. Veskler which allocates three main functions of mental abilities: verbal, nonverbal, general intelligence. 80 children at the age of 5-6 years old (42 girls and 38 boys) attending the older groups of kindergartens of the city of Minsk were examined. It was established that intellectual indicators of children were in norm limits, at the same time the level of nonverbal intelligence was higher (fig. 1).

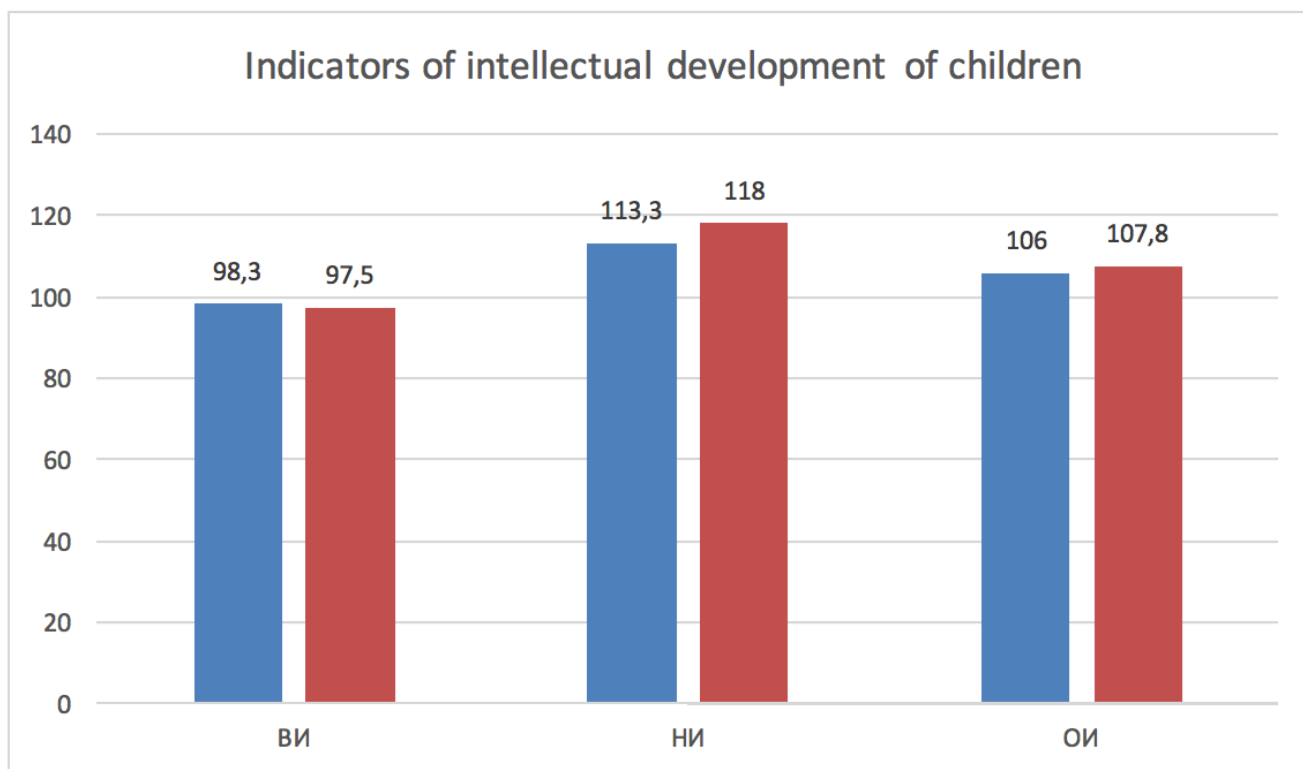


Figure 1. Indicators of intellectual development of children.

At the second stage, the indicators of intellectual development were compared with the results of implementation of physical tests: speed running for 30 m, endurance running for 300 m, a standing long jump (cm). We used the Pearson correlation ratio η , the coefficient of which enables us to characterize linear and non-linear correlation. The correlation relation describes communication between signs double sided, helping to define the leading sign (η_{YX} and η_{XY}) (fig. 2).

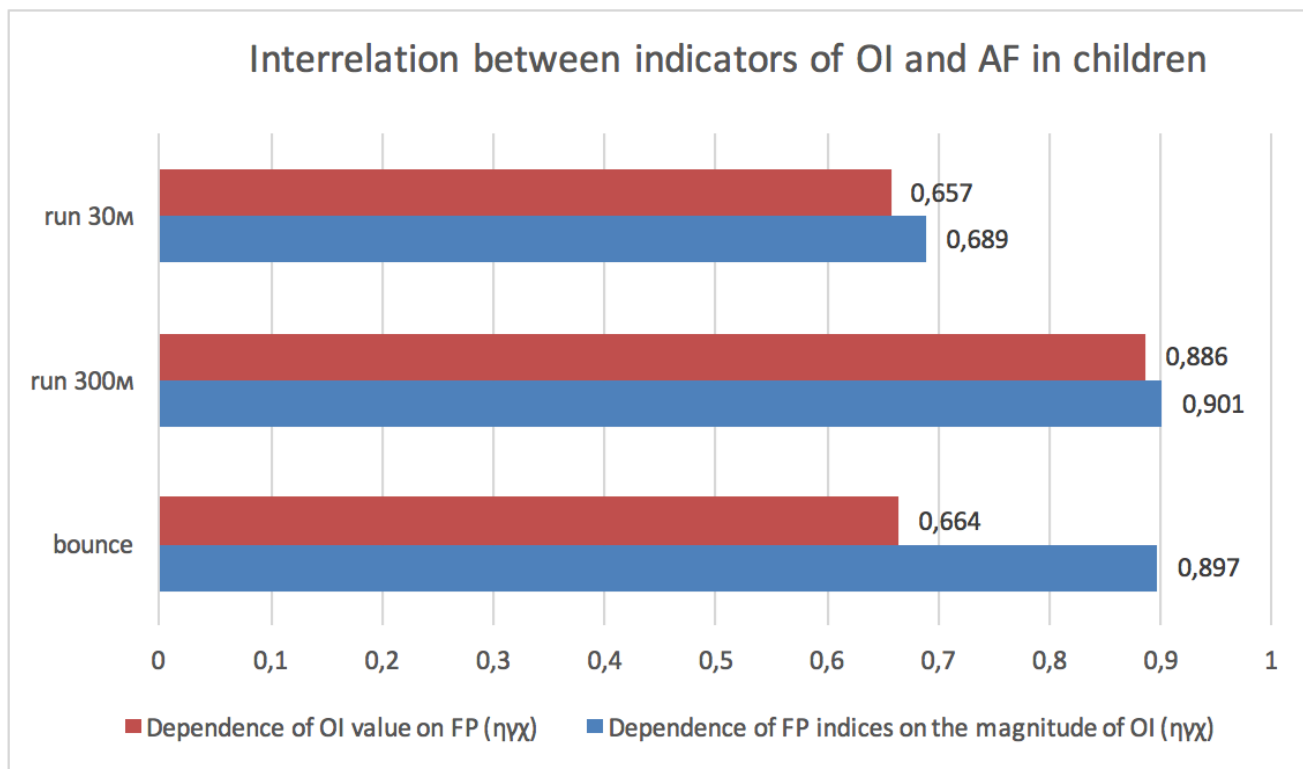


Figure 2. Interrelation between indicators of OI and AF in children.

Thus, we have found statistically significant interrelation between indicators of intellectual and physical development of the older preschool children which is defined thanks to the correlation ratio η .

4. Discussion

There is a direct link between a development level of child's thinking and his or her physical activity. This link is especially observed in the ability to coordinate movements. At an early stage a child actually examines his or her surrounding by establishing cognitive contacts. G. Doman has introduced such a concept as «physical intelligence» paying attention to perception and movement coordination. (Doman, Doman, & Hagy, 1988).

Physical activity influences:

- Development of separate functions of intelligence: sensation, perception, memory thinking, attention.
- Forms knowledge of ways of interaction with the surrounding world.
- Develops creative thinking, the child's creativity.

Most of all, physical activity influences intelligence development in preschool children during games (Lillard et al., 2013, p. 1). At this moment a child's behavior model, an attitude to the objects around him are formed and his imagination develops.

Physical activity is an important part of a person's development and intelligence of a preschool child. Cognitive contact makes it possible to receive basic knowledge of interrelation with the world around, helps to form behavior patterns.

5. Conclusions

Thus, physical activity influences general indexes and include: child ability to see a problem, fluency of thinking, characterized by wealth and diversity of ideas, rich fantasy, great imagination, ability to creative inspiration, curiosity.

Individual indexes are related to the specificity of the activity which forms creativity. In motor activity the indexes of child creativity can be represented by the ability to perform motor activity on one's own initiative; to match character of physical exercises performed in the particular situation; to transfer known methods of movement implementation into new conditions; to estimate one's own acts, to choose an appropriate form of motor behavior; to plan motor activity elementarily (to understand goals of motor acts, to foresee their results); to carry out elementary control of motor acts; to regulate motor activity.

These indexes allow to consider motor creativity as a factor of child self-realization and also as a main condition of his creative socialization.

As a result of the experiment there has been confirmed the correlation links between physical activity, development of mental abilities, creative thinking of children.

The results of the given article can be used as a theoretical source for further research on development of a person and thinking of pre-school children.

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[Índice]

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