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TECHNOLOGIES FOR DEVELOPING GENERAL AND FINE MOTOR SKILLS IN PRESCHOOL CHILDREN WITH DELAYED MENTAL DEVELOPMENT

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Abstract

This article deeply analyzes modern technologies and methodologies aimed at developing gross and fine motor skills in preschool children with delayed psychological development (DSPD). The study explores the psychological and pedagogical characteristics of DSPD, including the specific features of their motor development. The article thoroughly covers approaches such as using physical exercises, active games, and sports elements for improving gross motor skills, as well as finger games, sensory tools for developing fine motor skills. The importance of collaboration between families and specialists in evaluating the effectiveness of developmental technologies, as well as the role of person-centered and integrated approaches, is emphasized. The article concludes with practical recommendations and directions for future research.

Keywords: Delayed psychological development, motor skills, gross motor skills, fine motor skills, preschool age, developmental technologies, special pedagogy, family collaboration

Introduction

Motor skills play an important role in the comprehensive development of preschool children, as they are closely related to the formation of cognitive, speech and social skills. In particular, children with mental retardation (RRS) often have delays in motor development, which negatively affects their ability to study the environment, acquire self-service skills and readiness for educational activities. This problem can have serious consequences for the child's future life and integration into society, therefore, the development and implementation of effective technologies aimed at developing motor skills in this category of children is an urgent task.

The purpose of this study is to systematize technologies and methodologies aimed at developing general and fine motor skills in preschool children with RRS, analyze their theoretical foundations and develop recommendations for practical application. The research objectives are: to study the theoretical foundations and characteristics of motor development in children with RRS; to identify modern technologies and tools for the development of general and fine motor skills; to establish criteria for assessing the effectiveness of these technologies; to show the importance of family and professional cooperation in the development process.

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Analysis of the literature on the topic

The theoretical foundations of motor development in children with mental retardation require a deep understanding of their psychophysiological characteristics. They may have difficulties in planning an action, maintaining a sequence, and completing an action. Fine motor skills, such as fine finger movements, are usually more poorly developed, which makes it difficult to master drawing, writing skills, and self-service skills. Initially, the problem of mental retardation was substantiated by clinicians in domestic research. The term "mental retardation" was proposed by G.E. Sukhareva. As he noted, the phenomenon under study is characterized, first of all, by a slowed pace of mental development, immaturity of the personality, mild disorders in cognitive activity, which differ from oligophrenia in structural and quantitative indicators, have a tendency to compensation and reverse development. Thus, the most important groups of causes that can cause RRS can be distinguished:

1) biological natural causes that prevent the normal and timely maturation of the brain;

2) lack of general communication with people around the child, which delays the child's assimilation of social experience;

3) lack of full-fledged age-appropriate activity, which allows the child to "master" social experience in accordance with his own strength, the timely formation of internal mental movements.

4) social restriction, which prevents timely psychological development. [3].

The significant lag in the development of children with RRS compared to their peers with normal development is noted in the analysis of their thinking processes by psychologists-researchers V. I. Lubovsky, L. I. Peresleni, I. Yu. Kulagina, T. D. Puskaeva and others. The lag is characterized by an insufficiently high level of formation of all basic thinking operations: analysis, generalization, abstraction, transfer (T. P. Artemyeva, T. A. Fotekova, L. V. Kuznetsova, L. I. Peresleni).

Delays in motor development in children with SEN are often associated with impaired sensorimotor integration, which makes it difficult for them to perceive, process, and respond to information from the environment with appropriate movements. This negatively affects their spatial perception, understanding of body contours, and overall coordination. Therefore, it is necessary to take these features into account when developing technologies for developing motor skills, that is, to help children through sensory stimulation and step-by-step instructions.

Research methodology

This study uses a systematic and comprehensive approach to analyze technologies for developing gross and fine motor skills in preschool children with SEN. Gross motor skills (or gross motor skills) include coordinated movements of the muscles of the whole body, such as walking, running, jumping, throwing, and catching a ball. In SEN, these skills are often poorly formed, which affects their social adaptation. The following technologies are recommended for the development of gross motor skills:

Movement games: Games with simple rules, involving repetitive movements (for example, "bunny and fox", "doll" games). Through these games, children develop coordination, speed and agility of movements.

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In preschool children with RRS, a delay in the development of general and especially fine motor skills is observed. Mainly, movement techniques and movement qualities (speed, agility, strength, accuracy, coordination) are impaired, psychomotor deficiencies are identified. [3]. Self-care skills, technical skills in creative activities, working with clay, illustration, construction are insufficient. Many children do not know how to hold a pencil correctly, cannot control the force of pressure, and have difficulty working with scissors.

Sports elements: Light sports such as ball games (rolling, throwing, catching), jumping rope, and cycling. These activities develop balance, hand-eye coordination, and strength.

Rhythmic gymnastics and dance: Movement to music develops children's sense of rhythm, plasticity, and expressiveness of movements. This is especially effective in improving sensory-motor integration in RRS.

Social activities: Outdoor games and activities (playing in the sand, splashing in the water, swinging on vibrating toys) develop not only motor skills, but also sensory perception.

Fine motor skills (or fine motor skills) involve precise, coordinated movements of the hands and fingers, which are directly related to speech development and cognitive processes. In RRS, insufficient development of fine motor skills is often observed.

Finger games and massage: Finger games such as "Proud fingers", "Little ones are running". Fingertip massage (using massage balls, brushes) improves blood circulation and stimulates nerve endings.

Sensory games and tools: Playing with materials such as rice, peas, sand (hide and find small objects), water games. These activities develop sensory perception, tactics and stimulate fine motor skills.

Special didactic games: Fastening buttons and loops, tying cords, stringing beads, sorting small objects. These help children master everyday life skills and strengthen finger muscles.

Digital technologies: Carefully selected developmental tablet applications and interactive games can also contribute to the development of fine motor skills, but they should complement traditional methods, not replace them.

Assessing the effectiveness of developmental technologies involves monitoring the individual dynamics of each child. This takes into account criteria such as the child's speed of movement, accuracy, coordination, level of independence, and ability to master new skills. With the help of periodic diagnostics (pedagogical observations, tests, special tasks), the child's level of motor development is regularly assessed, and development programs are adjusted in accordance with his needs. The high level of teachability of RRS and the ability to effectively use adult help [1] are important factors in this assessment process. It is important to involve family members in the development process. Parents are the closest environment for children, and they can conduct additional training at home, following the recommendations of specialists. Specialists should teach parents games and exercises appropriate to the child's age and capabilities, as well as give advice on developing motor skills in everyday life. Regular communication and information exchange between parents and educators allows for a better understanding of the child's developmental dynamics and makes the development program more effective.

Conclusion

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The development of gross and fine motor skills in preschool children with mental retardation is of fundamental importance not only for their physical health, but also for their cognitive, speech, and socio-emotional development. This study analyzed modern technologies and methodologies for the development of motor skills in them, based on the psychological and pedagogical characteristics of RRS. While movement games, physical exercises, sports elements, and rhythmic gymnastics are important for the development of gross motor skills, finger games, visual activities, constructors, sensory games, and didactic tools were shown to be effective for fine motor skills.

Individual approach: Developing individual development programs taking into account the individual developmental characteristics and needs of each RRS.

Integrated activities: Integrating motor development activities with speech, cognitive, and socio-emotional development activities.

Game-based activities: Organizing activities in an interesting and motivating game format, since RRS effectively uses visual examples and adult help [1].

Cooperation with parents: Actively involve parents in the development process, provide them with advice on games and exercises that can be performed at home.

Analysis of the characteristics of the mental development of the category of children under consideration allows us to draw the following conclusions:

1. In preschool children with ZPR, there is a delay in the development of general and especially fine motor skills. Mainly, movement techniques and movement skills (speed, agility, strength, accuracy, coordination) are impaired, psychomotor deficiencies are identified. Self-service skills, technical skills in painting, working with clay, illustration, construction are not sufficiently formed. Many children do not know how to hold a pen or brush correctly, cannot control the force of pressure, and have difficulty working with scissors. Children with ZPR do not have severe movement disorders, but the level of physical and motor development is lower than that of normally developing peers, and the formation of graphomotor skills is more difficult.

2. The difficulties in organizing the correctional and pedagogical process with the above-described category of children are that the category of children with ZPR is polymorphic and diverse in composition. In-depth diagnostic work is necessary to determine the educational needs and capabilities of each child. The education and upbringing of this category of children will be effective only if it is carried out taking into account the results of an in-depth psychological and pedagogical examination.

3. In my opinion, diagnostic work should be carried out based on the basic psychological and diagnostic principles recognized by the special psychology and correctional pedagogy of our country and revealed in the works of L.S. Vygotsky, A.R. Luria, V.I. Lubovsky, A.N. Leontyev, D.B. Elkonin. During the examination, it is necessary to use proven methods and diagnostic techniques designed to study children, including those with developmental disabilities. These are, for example, the methods and diagnostic kits of L.A. Wenger, S.D. Zabramnaya, I.Yu. Levchenko, E.A. Strebeleva, U.V. Ulyenkova, O.N. Usanova, L.S. Tsvetkova and other specialists, widely recognized. [4].

Long-term studies: To assess the long-term impact of various developmental technologies on the development of gross and fine motor skills of children with SEN.

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Technological innovations: To scientifically substantiate the effectiveness of specially designed digital games and interactive tools in developing motor skills.

Cultural adaptation: To adapt motor development technologies for children with SEN in different cultural and social environments and to study their effectiveness.

Neurophysiological foundations: To study the impact of motor development technologies on the brain activity of children with SEN using neurophysiological methods.

These measures and studies will contribute to the full development of children with SEN and their successful integration into society.

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