BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg

# ADAPTIVE PHYSICAL EXERCISES IN THE PROCESS OF EDUCATIONAL TRAINING SESSIONS

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**Annotation** This article covers the theoretical and practical aspects of using adaptive physical exercises in the process of educational training sessions. Adaptive physical education is an important tool in the physical, psychological, and social development of individuals with special educational needs. The article analyzes the main principles: individual approach, safety, adaptability, outcome orientation, interdisciplinary cooperation. According to the research results, the systematic use of adaptive exercises increased participants' motor activity by 28.6%, teamwork skills by 34.2%, and volitional qualities by 25.7%.

**Key words:** adaptive physical exercises, educational training sessions, inclusive education, adapted physical education, individual approach.

**Аннотация** В данной статье освещаются теоретические и практические аспекты использования адаптивных физических упражнений в процессе учебно-тренировочных занятий. Адаптивная физическая культура является важным средством физического, психического и социального развития лиц с особыми образовательными потребностями. В статье анализируются основные принципы: индивидуальный подход, безопасность, адаптируемость, ориентация на результат, междисциплинарное сотрудничество. Согласно результатам исследования, систематическое применение адаптивных упражнений повысило двигательную активность участников на 28,6%, навыки работы в команде – на 34,2%, волевые качества – на 25,7%.

**Ключевые слова:** адаптивные физические упражнения, учебно-тренировочные занятия, инклюзивное образование, адаптированная физическая культура, индивидуальный подход.

**Annotation** This article covers the theoretical and practical aspects of using adaptive physical exercises in the process of educational training sessions. Adaptive physical education is an important tool in the physical, psychological, and social development of individuals with special educational needs. The article analyzes the main principles: individual approach, safety, adaptability, outcome orientation, interdisciplinary cooperation. According to the research results, the systematic use of adaptive exercises increased participants' motor activity by 28.6%, teamwork skills by 34.2%, and volitional qualities by 25.7%.

**Key words:** adaptive physical exercises, educational training sessions, inclusive education, adapted physical education, individual approach.

**Introduction** The importance of physical education and sports in secondary schools, specialized boarding schools, and rehabilitation centers is steadily increasing. Involving children and adults with special educational needs in educational training sessions is a crucial factor for their adaptation to society, preparation for independent living, and the development of personal qualities.

However, many pedagogical staff face difficulties in integrating adaptive exercises into educational training sessions. The reasons are the insufficient implementation of clear criteria, limited material and technical resources, and a shortage of qualified personnel.

This article specifically addresses the role and methodology of adaptive physical exercises in educational training sessions.

**Chapter 1. Theoretical Foundations of Adaptive Physical Exercises**

**1.1. The Essence of Adaptive Physical Education**

Adaptive Physical Education (APE) is a pedagogical process aimed at restoring motor activity, facilitating social adaptation, and improving the quality of life for individuals with permanent health impairments. APE includes the following main directions: Adaptive physical education; Adaptive sports; Adaptive motor activity; Adaptive physical rehabilitation.

Within the framework of this article, the focus is on the integration of adaptive exercises into the general pedagogical process during educational training sessions.

**1.2. Adaptive Objectives of Educational Training Sessions** The educational direction of the sessions includes: Mastering social norms (discipline, rules of conduct); Formation of communication skills; Development of volitional qualities (perseverance, patience, goal orientation); Formation of self-management and independent decision-making skills.

Adaptive physical exercises are the most suitable tool for achieving the above educational tasks, as they directly influence the psycho-emotional sphere of a person through movement.

**Chapter 2. Main Principles of Adaptive Sessions**

**2.1. Individual Approach** The functional capabilities, somatic state, age, gender, and level of mental development of each participant are determined. For this purpose, the ICF (International Classification of Functioning) system is recommended. A "Functional Passport" must be completed for each participant before the start of the sessions.

**2.2. Safety** The place where the exercises are performed, the equipment, auxiliary aids, and the instructor's training must fully comply with safety requirements. A certified specialist in first aid must be present at every session; equipment must undergo regular technical inspections.

**2.3. Adaptability** The conditions for performing exercises (time, number of repetitions, load level, additional supports, visual or auditory signals) can be modified according to the participant's capabilities. At least 3 different adapted versions (simplified, basic, complicated) of each exercise must be prepared.

**2.4. Outcome Orientation** The effectiveness of sessions is assessed using specific, measurable indicators (educational, physical, psychological). An assessment session is conducted every 6 sessions; results are recorded in a "Physical-Educational Profile".

**2.5. Interdisciplinarity** A physical education teacher, psychologist, speech therapist, medical professional, and social pedagogue work collaboratively in educational training sessions. The session plan must be reviewed monthly by an interdisciplinary group.

**Chapter 3. Research Methodology**

**3.1. Research Objective** To practically substantiate the effectiveness of using adaptive physical exercises in the process of educational training sessions.

**3.2. Object and Subject** Object: 52 children with special educational needs (aged 6-15 years). Subject: A set of adaptive physical exercises and its educational impact.

**3.3. Research Groups** Experimental Group (EG) – 28 participants, sessions based on the above principles (4 months, 3 sessions per week). Control Group (CG) – 24 participants, sessions based on traditional methods.

**3.4. Methods Used in the Research** Pedagogical observation; Testing (educational qualities: L.V. Yankovsky scale, communication skills: "Inclusive Classroom" methodology); Questionnaire survey (for teachers and parents); Pedagogical experiment; Mathematical statistics (Student's t-test).

**Chapter 4. Practical Session Model and Results**

**4.1. Structure of a Practical Session in the Experimental Group** During the experiment, each session in the EG was planned according to the above principles. The session had the following structure:

**Table 4.1. Stages of the session and their description**

| Stage | Duration | Adaptation According to Participant Condition | Educational Task |
|---|---|---|---|
| **Warm-up** | 10 min | Low light, visual supports | Focusing attention |
| **Main part** | 25 min | 3 variants of each exercise (easy, medium, difficult) | Will, teamwork |
| **Cool-down** | 5 min | Self-massage, breathing exercises | Managing emotions |
| **Assessment** | 5 min | Communication using pictograms | Analysis skills |

**Examples of exercises used in the EG:**

1. "Jump to the sound signal" – For children with hearing impairments: the sound signal was replaced with a vibrating or light signal. Educational significance: adapting movement to a signal, teaching precision.

2. "Resistance band pull" (modification) – For children with cerebral palsy: the resistance level was selected individually. Purpose: fostering will, controlling movement.

3. "Cat and mouse" (inclusive version) – The area was divided into 3m x 3m sections, roles were rotated. Educational significance: waiting for a turn, communicating in a group, accepting defeat.

4. "Placement with eyes closed" – For children without visual impairments, but with audio cues placed for children with limited vision. Educational significance: trust, relying on another participant.

**4.2. Analysis of Results** Educational qualities were measured using tests in both groups before and after the experiment. The results are presented in the following table (average score, points):

**Table 4.2. Comparative analysis of indicators between experimental and control groups**

| Indicator | EG (before/after, N=28) | CG (before/after, N=24) | t-test | p-level |
|---|---|---|---|---|
| **Teamwork skills** | 4.2 → 5.7 (+1.5) | 4.0 → 4.4 (+0.4) | 3.18 | p<0.01 |
| **Volitional qualities** | 3.8 → 4.9 (+1.1) | 3.9 → 4.1 (+0.2) | 2.94 | p<0.01 |
| **Motor activity (hours/week)** | 2.1 → 3.6 (+1.5) | 2.2 → 2.6 (+0.4) | 3.42 | p<0.01 |
| **Self-** | 3.9 → 5.2 | 4.0 → 4.3 | 2.87 | p<0.05 |

| | | | | |
|---|---|---|---|---|
| **management (score)** | (+1.3) | (+0.3) | | |
| **Communicative activity** | 3.5 → 5.4 (+1.9) | 3.6 → 3.9 (+0.3) | 3.91 | p<0.001 |

As can be seen from the table, the EG showed reliable (p<0.05 – p<0.001) higher changes across all indicators. The highest increases were recorded for communicative activity (+54.3%) and teamwork skills (+35.7%).

Interdisciplinary group assessment: Parents of 25 participants (89.3%) in the EG noted that after the sessions, their children began to approach homework more responsibly and improved their skills in following daily routines.

**Chapter 5. Conclusion and Practical Recommendations**

**Conclusion**

1. Adaptive physical exercises have high effectiveness in forming teamwork, volitional, self-management, and communication skills within the system of educational training sessions.

2. Sessions organized based on individual approach, safety, adaptability, outcome orientation, and interdisciplinary cooperation provide 1.5–2 times higher educational outcomes compared to traditional methods.

3. According to the research results, the experimental group showed improvements of 35.7% in teamwork skills and 54.3% in communicative activity.

4. Implementing an interdisciplinary approach and the functional passport system improves the quality of the educational process.

**Practical Recommendations**

**For teachers and trainers:** Create a "Functional Passport" for each participant before sessions begin (personal characteristics, contraindications, adapted variants); Prepare at least 3 different adapted versions of each adaptive exercise (easy, medium, difficult); Create the opportunity to use sound, light, vibration, or tactile signals together during sessions; Analyze results in collaboration with an interdisciplinary group (psychologist, speech therapist, medical professional) every 6–8 sessions; Involve parents in observing the child's movements and communication after sessions.

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