STATE UNIVERSITY OF MOLDOVA
INSTITUTE OF PHYSICAL EDUCATION AND SPORT

As a manuscript
UDC: 796.853.23:376.1(043.2)=111

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METHODOLOGICAL SUPPORT FOR THE PROCESS OF PSYCHOSOCIAL ADAPTATION OF PERSONS WITH SPECIAL NEEDS WITHIN A SYSTEM OF EASTERN MARTIAL ARTS TRAINING

Specialty 533.04. Physical education, sport, kinetotherapy and recreation

Summary of the Doctor Habilitatus thesis in pedagogical sciences

CHISINAU, 2026

The thesis was elaborated at the Department of Combat Sports and Gymnastics of the Institute of Physical Education and Sport of the State University of Moldova within the Postdoctoral Programme funded by ANCD, project No. 23.00208.0807.07/PD I.

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The thesis and the summary are available at the Central Library of USM (60 Alexei Mateevici Street, building I), the National Library of the Republic of Moldova (78A 31 August 1989 Street), the Institutional Repository of IEFS USM and on the ANACEC website (www.anacec.md).

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LIST OF ABBREVIATIONS

ADHD – Attention-deficit/hyperactivity disorder
ANACEC – Agenția Națională de Asigurare a Calității în Educație și Cercetare (National Agency for Quality Assurance in Education and Research)
ANCD – Agenția Națională pentru Cercetare și Dezvoltare (National Agency for Research and Development)
ASD – Autism spectrum disorder
CNS – Central nervous system
CVMR – Complex visual-motor reaction
DPL – Dosed physical load
FCL – Functional capacity level
FLS – Functional level of the system
FR – Fluctuation range of SVMR latency values
IEFS – Institute of Physical Education and Sport
IEFS USM – Institute of Physical Education and Sport of the State University of Moldova
MI – Mean index of the latency period
MR – Muscular rest
RS – Reaction stability
SVMR – Simple visual-motor reaction
SVV – Successive-value variability of SVMR latency
USM – State University of Moldova
LF, HF – Low-frequency and high-frequency components of the heart rate variability spectrum
M – Arithmetic mean
m – Standard error of the mean
Me – Median
Q1, Q3 – Lower and upper quartiles
R – Range of variation (difference between the maximum and minimum values)
SD, σ – Standard deviation
CV – Coefficient of variation
n – Sample size (number of observations)
p – Level of statistical significance
Z – Wilcoxon test statistic

CONCEPTUAL FRAMEWORK OF THE RESEARCH

Relevance, motivation for the choice of topic and the extent to which the problem has been studied. The problem of the psychosocial adaptation of persons with special needs is acquiring particular importance in the contemporary scientific and social context, which is characterised by a shift from a predominantly medical-rehabilitative understanding of activity limitations to a biopsychosocial understanding of human functioning and adaptation. From this perspective, the state and adaptive capacities of the individual are considered in the interrelation of biological, psychological, social and functional characteristics [32; 48]. In the present research, the tenets of the biopsychosocial approach are considered in a pedagogical context, since psychosocial adaptation is determined by the state of health, the nature of activity, the conditions of learning, motor experience and the specific features of the individual's social interaction. This methodological shift is consistent with the inclusive paradigm, which is oriented towards creating conditions for a person's full participation in educational, motor, social and public activity. Under these conditions, special needs are associated with the need to create special or adapted conditions for the development, learning, motor activity and social integration of persons with impairments or specific features of physical, sensory, intellectual, mental, neuropsychological and social-communicative development [40]. The scale of the problem is confirmed by current international statistics. According to World Health Organization estimates, about 1.3 billion people, or 16% of the world's population – approximately one in six people – live with a disability [65]. Disability is considered in relation to the conditions of human functioning: limitations of activity and social participation result from the interaction of the health condition, individual characteristics and environmental factors [61; 64]. This understanding implies assessing the accessibility of education, motor activity, social support and the possibilities for a person's full participation in society.

At the same time, the relevance of the problem is also determined by the persisting gap between the expansion of normative guarantees of inclusion and the possibilities for their full practical implementation. In the Republic of Moldova, the normative and institutional framework for inclusive education and social integration is being consistently developed: the Education Development Strategy “Educația 2030” and the Programme for the Development of Inclusive Education for 2024–2027 have been approved, the mechanisms of psychological and pedagogical

assistance are being improved, the range of support specialists is being expanded, and professional development programmes for teaching staff are being implemented [8; 9; 16]. However, the development of the normative framework and of individual institutional mechanisms does not yet ensure equal access to comprehensive support for all persons with special needs.

The practical implementation of inclusion principles is still limited by an insufficient supply of qualified staff, methodological materials, infrastructure and the necessary resources, as well as by the territorially uneven accessibility of specialised services [8; 24]. This problem is particularly evident in physical education and sport, where the effective inclusion of persons with special needs depends on the accessibility of the physical education and sports environment and on the professional training of physical education teachers, sports coaches and other specialists in this field. When assessing the significance of these limitations, it should be borne in mind that special conditions for organising motor, educational and social activity are required by a wider range of persons than is covered by official disability statistics. As noted in the scientific literature, the term "persons with special needs" covers various categories of people with impairments and developmental features that are heterogeneous in structure and severity and may hinder independent activity, learning and communication [20; 22; 53; 58]. In adaptive physical education, this category also includes persons with health deviations, including persons with disabilities, who need adaptation of motor activity and special conditions for rehabilitation and social integration [30; 33].

Despite the differences between individual categories, the common task remains to create conditions for the development of functional independence, self-regulation, communication and social inclusion. Accomplishing it requires teachers and coaches to be prepared to dose physical load individually, adapt teaching methods, monitor the functional state of participants and ensure the safety of interaction.

Official data on particular categories of developmental disorders in the Republic of Moldova are presented unevenly. According to the National Bureau of Statistics of the Republic of Moldova, in 2024 medical institutions had 524 persons with Down syndrome on record, including 220 children aged 0–17 [2]. Open statistical publications of the Republic of Moldova do not present separate national figures on the number of persons with attention-deficit/hyperactivity disorder. With regard to autism spectrum disorder (ASD), the available administrative

data are compiled by the National Agency for Public Health and mental health centres on the basis of detected cases under medical supervision. At the same time, these data do not constitute a complete population register and may not reflect the actual prevalence of ASD [4; 11; 13; 23]. The fragmentary nature of statistical records makes it difficult to compare the scale of individual developmental disorders and confirms the need to study them in a differentiated manner. Within this heterogeneous group of persons with special needs, the present research focuses on persons with ASD.

The relevance of addressing this category of persons is confirmed by current international statistics. According to updated data of the World Health Organization published in 2025, global estimates for 2021 indicate that autism occurs in approximately 1 in 127 people [62]. The figures recorded by national monitoring systems may vary depending on the diagnostic criteria used, the organisation of early detection, the availability of specialised services and the specifics of statistical recording. According to the Ministry of Health of the Republic of Moldova, at the end of 2024, 1,817 persons with autism spectrum disorder were under specialist supervision, 1,684 of them children. The establishment in 2024 of the first state specialised centre for the diagnosis of and intervention in ASD, as well as the development of diagnostic and rehabilitation programmes, testify to the growing state and social importance of this field [12; 13]. Considering persons with ASD as one of the categories studied requires distinguishing between general and specific aspects of psychosocial adaptation. The development of self-regulation, communication and social interaction is important for various categories of persons with special needs, whereas the content of pedagogical influence, teaching methods and motor load parameters should be determined with regard to the structure of impairments and individual functional capacities. The need for a differentiated approach is consistent with the results of the research by V. Cojocaru [6], which revealed the specific features of the psychosocial adaptation of adolescents with physical disabilities and developed a model for increasing the effectiveness of this process under conditions of educational and social inclusion. The broader national context of the problem is represented by research in special psychopedagogy, educational and social inclusion, the socio-professional integration of persons with disabilities and the creation of an accessible educational environment [19; 20; 21; 22]. The sociological and institutional aspects of the inclusion of persons with disabilities in society, including access to

education, social services, employment and full social participation, are discussed in the works of P. Munteanu and L. Malcoci [11]. The principles of organising the inclusive educational process, pedagogical support for children with special educational needs and the training of specialists are systematised in the studies of G. Bulat, V. Balan and other Moldovan authors [1; 3]. These works form the psychological and pedagogical basis for the study of inclusion and psychosocial adaptation. In building the theoretical basis of the research, the tenets on inclusion and psychosocial adaptation were supplemented by the results of work in adaptive physical education and sport. International and national studies reveal the possibilities of systematic motor activity for physical development, functional rehabilitation, the maintenance of psychological well-being, social integration and the improvement of the quality of life of persons with disabilities and special needs [31; 36; 44; 45; 46; 59; 60].

The use of Eastern martial arts makes it possible to combine motor training with regulated interaction with a partner, self-control and compliance with the rules of joint activity. International and national experience testifies to their potential for developing motor skills, behavioural regulation and social interaction in children with special needs [49; 52]. At the same time, programmes differ in their aims, content, duration and frequency of sessions, composition of participants and the assessment indicators used [47; 51; 52; 54]. The heterogeneity of programmes and diagnostic approaches makes it difficult to compare results and to determine the conditions for using martial arts in the process of psychosocial adaptation [47]. Adaptive judo was chosen for the practical implementation and experimental verification of the developed methodological support. The pedagogical rationale for this choice is the possibility of combining sensorimotor and social-communicative tasks in direct interaction with a partner. Judo requires the coordination of movements and effort when performing exercises in pairs. Mastering grips and other technical actions requires supporting and safeguarding the partner, accepting and giving help, and observing the rules of joint activity. The degree of contact, the complexity of tasks and the amount of support are adjusted to the individual sensory and motor characteristics of children with ASD. Other Eastern martial arts are considered from a comparative and complementary perspective.

The scientific prerequisites for developing the methodological support were formed in the research of the author and her research team. These studies covered a comparative analysis of the involvement of the population of the Republic of Moldova in various martial arts [26; 39], the

study of the functional, motor and psychological characteristics of judokas with visual impairments [7; 29; 37; 56], the potential of Eastern martial arts for the development and socialisation of children with ASD [17; 57], the readiness of specialists to organise motor activity for persons with special needs [57], and the educational, cognitive and psychophysiological aspects of judo training [38; 55].

The results obtained made it possible to specify certain conditions for the use of Eastern martial arts in the process of psychosocial adaptation. What still needs to be developed is their integration into a coherent theoretical and methodological system linking the aims, principles, pedagogical conditions, means, methods, assessment criteria and implementation mechanisms of this process.

Accordingly, **the problem of the present research** arises from the contradiction between the accumulated scientific evidence on the considerable adaptive, developmental and socially integrative potential of physical activity and Eastern martial arts, on the one hand, and the insufficient development of comprehensive methodological support for the process of psychosocial adaptation of persons with special needs within a system of Eastern martial arts training, on the other. This contradiction made it necessary to provide a theoretical and methodological substantiation for, and to develop, a concept of comprehensive support for the psychosocial adaptation of persons with special needs within a system of Eastern martial arts training, which determined the aim of the research.

The aim of the research is to provide a theoretical and methodological substantiation for, and to develop, a concept of methodological support for the process of psychosocial adaptation of persons with special needs within a system of Eastern martial arts training, and to evaluate experimentally the effectiveness of its implementation.

In accordance with the aim and hypothesis, the following research objectives were set:

1. To conduct a theoretical and methodological analysis of current scientific approaches to the problem of psychosocial adaptation of persons with special needs, including persons with ADHD, Down syndrome and ASD, and to determine the potential of motor activity, physical education, sport and Eastern martial arts in supporting this process.

2. To identify and substantiate the theoretical and methodological approaches, principles, factors, mechanisms and pedagogical conditions

of the psychosocial adaptation of persons with special needs through Eastern martial arts and, on the basis of a comparative analysis, to justify the choice of a priority martial art for the practical implementation of the process under study.

3. To identify the motor, psychomotor, psychophysiological, cognitive, emotional-volitional and social-communicative characteristics of the categories of persons with special needs under study and to determine criteria, indicators and diagnostic tools for assessing their psychosocial adaptation, with an in-depth study of children with ASD.

4. To develop and theoretically substantiate a concept of comprehensive methodological support for the psychosocial adaptation of persons with special needs within a system of Eastern martial arts training and a structural-functional model for its implementation.

5. To develop and implement differentiated instructional support for adaptive judo sessions aimed at developing motor and psychomotor functions, cognitive processes, emotional self-regulation, communication skills and social inclusion of persons with special needs, taking into account the nature of their functional characteristics.

6. To verify experimentally the effectiveness of the developed methodological support through adaptive judo in children with ASD: to assess the dynamics of motor, psychomotor, psychophysiological and cognitive indicators, independence, self-regulation and social interaction, and to study the interrelationships between the functional indicators under study.

Research hypothesis. It is assumed that the effectiveness of the psychosocial adaptation of persons with special needs within a system of Eastern martial arts training can be increased by implementing a concept of methodological support that organises this process as a coherent multilevel pedagogical system integrating psychomotor, psychophysiological, cognitive, emotional-volitional, social-communicative and cultural-value components.

The tenets of the systemic, activity-based, person-centred, biopsychosocial, inclusive and axiological approaches determine the choice of session content, teaching methods and pedagogical assistance, taking into account the individual capacities and needs of participants. The implementation of the concept through adaptive judo in children with autism spectrum disorder will be accompanied by positive dynamics of motor and psychomotor indicators, increased independence, improved self-regulation and social interaction, the mastering of judo norms and values, and changes in cognitive and psychophysiological indicators.

Synthesis of the research methodology and justification of the methods chosen. The research methodology is determined by the complex and multilevel nature of the psychosocial adaptation of persons with special needs and is based on the systemic, activity-based, person-centred, biopsychosocial, inclusive and sociocultural approaches. Their integration stems from the understanding of psychosocial adaptation as a coherent pedagogical process combining interrelated motor, psychomotor, cognitive, psychophysiological, emotional-volitional, social-communicative and cultural-value components.

A set of complementary methods was applied: theoretical (analysis, synthesis, comparison, generalisation, classification, systematisation); sociological (questionnaires and surveys of parents, teachers, coaches and specialists); pedagogical observation; a longitudinal pedagogical experiment with a quasi-experimental design (September 2022 – May 2025); pedagogical, psychomotor, psychological and psychophysiological testing (motor tests, the computer system "Multipsychometer-05", the Lüscher colour test, reflexometry using the "AVR-BOSH-1" device, heart rate variability using the "Phasagraph" cardiograph); mathematical and statistical methods (descriptive statistics, the Mann–Whitney U test, the Wilcoxon test, the exact sign test with Holm correction, principal component analysis with varimax rotation). The choice of non-parametric tests was determined by the small sample sizes and the ordinal nature of part of the data.

The research was conducted in 2011–2025 at the Institute of Physical Education and Sport of the State University of Moldova (IEFS USM), in cooperation with the "ANGELUS" sports club and the Oleg Crețul Specialised Judo Sports School. A total of 383 persons took part in the research: 326 respondents in four sociological studies and 57 participants in the pedagogical part (40 children with special needs and 17 neurotypical young judokas). The main analytical group consisted of 10 children with ASD aged 7–16 from among the 40 children with special needs. The research protocol was approved by the Biomedical Ethics Committee of the National University of Physical Education and Sport of Ukraine (minutes No. 3, 2022); informed consent was obtained from the legal representatives of all participants.

Validation of the main ideas and results of the research. Validation of the main ideas and results of the research. The research and practical testing of the developed methodological support were carried out at the Institute of Physical Education and Sport of the State University of Moldova (IEFS USM), Comrat State University and the "ANGELUS"

sports club, in cooperation with the Romanian Judo Federation, the clubs "Asociația Clubul Sportiv Judo Master Satu Mare", "Asociația Clubul Sportiv SHINZO RAN SUCEAVA" and "Asociația Clubul Sportiv JUDOSPORT București" (Romania), the public organisation "JUDO-KYOTO Sports Club" (Ukraine), the "NEIROIMPULS" Recovery and Rehabilitation Centre for Children and the Oleg Crețul Specialised Sports School (Republic of Moldova).

Implementation of research results. The experimental programme, methodological recommendations, the curriculum "Educația fizică și Judo" for pupils in grades I–IV and the interactive manual "Agenda judoka" have been implemented in the activities of the Judo Federation of the Republic of Moldova. The curriculum is applied in general education schools of the Republic of Moldova. The materials are used to individualise motor tasks, provide pedagogical support and organise interaction between the child, the coach and the family. The curriculum and the course book "Didactica dezvoltării și pregătirii fizice a copiilor cu autism prin activități motrice cu caracter sportiv-aplicativ" have been implemented in the continuing professional education of physical education teachers and coaches at the Continuing Education Resource Centre of IEFS USM, as confirmed by the corresponding implementation acts.

The main tenets and results of the author's research were presented in papers and publications in the proceedings of international and national scientific events: "Актуальные проблемы теории и методики физической культуры, спорта и туризма" (Minsk, 2011, 2014); "Университетский спорт в современном образовательном социуме" (Minsk, 2015); "Trends and Perspectives in Physical Culture and Sports" (Suceava, 2016); "Personalitate și sport: teorie, metodică, practică" (Chisinau, 2017, 2019); "Applicable Research in Judo" (Poreč, 2019, 2024); "Formarea continuă a specialistului de cultură fizică în conceptul acmeologic modern" (Chisinau, 2021); the 3rd Satellite Symposium of the UWW Scientific Commission "Challenge and Perspectives in Wrestling" (Cherkasy, 2021); the 2nd International Conference "AUTJUDO" within the Erasmus+ project (Verona, 2022); a conference dedicated to the Paralympic judo champion Oleg Crețul (Chisinau, 2022); the International Scientific Congress "Sports, Olympism, Health" (SOH 2023) – plenary paper (Chisinau, 2023); "Probleme actuale ale teoriei și practicii culturii fizice" and "Economic Security in the Context of Systemic Transformations" (Chisinau, 2023); "Youth in the Perspective of the Olympic Movement" (Brașov, 2024); "Competitivitatea și inovarea

în economia cunoașterii" (Chisinau, 2024); "Научно-образовательное пространство: реалии и перспективы повышения качества образования" (Comrat, 2024); "Роль образования в подготовке конкурентоспособных специалистов. Студенческие исследования" (Comrat, 2024–2026); "Știință. Educație. Cultură" (Comrat, 2025, 2026); "Підвищення фізичної працездатності різних груп населення в процесі занять фізичною культурою і спортом" (Irpin, 2024 – plenary paper, 2025, 2026). The methodological solutions of the programme were also discussed at the Special Olympics Europe/Eurasia international seminar "Judo – Unified Kata" (Uster, Switzerland, 2022), following which the author obtained the Unified Kata coach certificate.

The empirical basis of the research comprised the materials of pedagogical observations, questionnaires, expert assessments, pedagogical, psychomotor, psychological and psychophysiological testing, as well as the results of pedagogical experiments at the ascertaining, formative and control stages. The experimental and comparison samples included persons with special needs (children with autism spectrum disorder) and participants with neurotypical development; the groups were formed in accordance with the objectives of each stage, which made it possible to compare the initial state and the dynamics of psychosocial adaptation under conditions of systematic motor and sports activity.

The data collected covered indicators of physical and psychomotor development, sensorimotor reactions, cognitive processes, psycho-emotional state and social-communicative characteristics, as well as the functional state of the autonomic nervous system (including heart rate variability). This made it possible to consider psychosocial adaptation at several levels – motor, psychomotor, cognitive, psychophysiological, emotional-volitional and social.

The scientific novelty of the research is represented by the following:

– a concept of methodological support for the process of psychosocial adaptation of persons with special needs within a system of Eastern martial arts training has been developed and theoretically substantiated. The concept presents this process as a coherent multilevel pedagogical phenomenon and is based on the integration of the systemic, activity-based, person-centred, biopsychosocial, inclusive, sociocultural and axiological approaches;

– a structural-functional model for implementing the concept of methodological support for psychosocial adaptation has been developed,

establishing the interrelationship between the target, theoretical-methodological, content-procedural, criterion-diagnostic and outcome components, as well as the principles, levels of implementation, mechanisms and organisational-pedagogical conditions of the process under study;

– the proposition on the psychosocial-adaptive function of a system of Eastern martial arts training has been theoretically substantiated; this function stems from its interrelated influence on the motor, psychomotor, psychophysiological, cognitive, emotional-regulatory, social-communicative and value-normative spheres of personality;

– the pedagogical, psychomotor, psychophysiological, cognitive-regulatory, social-communicative and sociocultural mechanisms of psychosocial adaptation have been identified and systematised; they are implemented through the structuring of motor activity, sensorimotor integration, functional and emotional self-regulation, pedagogical feedback, pair and group interaction, and the mastering of the value-normative foundations of Eastern martial arts;

– the principles and organisational-pedagogical conditions for implementing the methodological support have been determined and scientifically substantiated; they provide for the individualisation and differentiation of the training process and the adaptation of content, means, methods, volume and intensity of load, taking into account the structure and severity of special needs, functional capacities and the individual dynamics of participants;

– a criterion-diagnostic system for assessing the components and dynamics of psychosocial adaptation has been developed, combining motor, psychomotor, cognitive, psychophysiological, emotional-regulatory and social-communicative criteria, indicators and diagnostic methods; the assessment of the functional state of the central and autonomic (vegetative) nervous system by indicators of sensorimotor reactions and heart rate variability has been integrated into the system of pedagogical control;

– the specific features of the structure, dynamics and interrelationships of motor, psychomotor, cognitive, psychophysiological, emotional-regulatory and social-communicative indicators of psychosocial adaptation of the participants of the groups studied, including children with autism spectrum disorder, under conditions of systematic adaptive judo training have been established;

– differentiated ways of implementing the developed concept on the material of adaptive judo have been scientifically substantiated; they

provide for adapting the structure of sessions, motor tasks, ways of pedagogical interaction and control, taking into account the functional capacities and the nature of the special needs of participants;

– differentiated programmes and training methods based on adapted judo have been developed, implemented and experimentally substantiated; they are aimed at developing motor and psychomotor functions, cognitive activity, emotional self-regulation, communication skills and social inclusion of persons with special needs;

– instructional support for judo sessions has been developed and experimentally substantiated, including a programme and the author's interactive didactic manual "Judoka's Diary", intended for all participants, including children with special needs; the manual ensures the individualisation of learning, visual structuring of activity, planning and recording of individual dynamics, pedagogical feedback, the development of self-assessment and interaction between the child, the coach and the family.

The body of theoretical and experimental results obtained constitutes a new scientific direction in sports pedagogy and adapted physical education – methodological support for the psychosocial adaptation of persons with special needs through Eastern martial arts, based on the integration of motor, psychomotor, psychophysiological, cognitive, emotional-volitional, social-communicative and cultural-value mechanisms of pedagogical influence.

Theoretical significance: the understanding of the psychosocial adaptation of persons with special needs as a pedagogically supported process of developing independence, self-regulation and participation in joint activities has been substantiated; the psychomotor organisation of motor activity has been described through its sensorimotor, cognitive-regulatory and social-communicative components; an individual adaptive-regulatory profile has been proposed that links the child's characteristics to the choice of tasks and the conditions for performing them.

Applied value: differentiated instructional support for adaptive judo, an experimental programme, the curriculum "Educație fizică și judo" and the author's interactive manual "Judoka's Diary" have been developed; based on factor analysis, a differential scale of functional preparedness of young judokas has been proposed.

Structure and volume of the thesis. The thesis comprises an introduction, six chapters, general conclusions and recommendations, a bibliography and six appendices. The main text runs to 244 pages. The

thesis contains 22 figures and 18 tables in the main text and 8 calculation tables in the appendices. The bibliography includes 357 sources. The appendices contain additional materials that confirm and supplement the research results.

Publications. The research results have been published in 35 scientific articles.

Summary of the thesis chapters.

The first chapter, "Theoretical and methodological analysis of the problem of supporting the process of psychosocial adaptation of persons with special needs within the system of motor activity development", is devoted to a fundamental study of the theoretical and applied aspects of the problem. The chapter systematises the main scientific approaches to understanding psychosocial adaptation in the context of the biopsychosocial model and reveals the content of the concept "persons with special needs". The emergence and development of ideas about adaptation in the works of L. S. Vygotsky, N. A. Bernstein, J. Piaget, R. Lazarus and other researchers are examined. The importance of motor activity as a system-forming factor of adaptive processes is substantiated. Eastern martial arts are considered as a coherent cultural and pedagogical system integrating motor learning, self-regulation and social and moral education. The analysis of the legal, regulatory and social context of the Republic of Moldova revealed a shortage of systematic, scientifically grounded methods of adaptation through physical education, which confirms the relevance of the problem.

The second chapter, "Classification and psychophysical characteristics of persons with special needs as the basis for methodological support of psychosocial adaptation within the system of Eastern martial arts", examines the main groups of impairments and conditions and their influence on the methodological support of psychosocial adaptation within the system of Eastern martial arts. The main focus is on motor, psychomotor, sensory, cognitive and emotional-volitional characteristics, which must be taken into account for the differentiation and individualisation of physical education and sports activity.

The third chapter, "Methodology for researching the process of psychosocial adaptation of persons with special needs within the system of Eastern martial arts: the case of judo", presents the methodology and organisation of the work: it describes the stages, the research base and the composition of the groups examined. The diagnostic set is presented,

including pedagogical, psychomotor, psychological, psychophysiological and mathematical-statistical methods.

The fourth chapter, “The influence of motor activity on the process of psychosocial adaptation of persons with special needs”, examines motor activity as a factor of adaptive processes. Based on an analysis of the psychophysiological mechanisms of adaptation, the results of long-term monitoring and a comparative assessment of various Eastern martial arts, the choice of adaptive judo as the priority area of work is justified.

The fifth chapter, “Theoretical and methodological foundations for organising the training process of persons with special needs within the system of Eastern martial arts aimed at their psychosocial adaptation”, reveals the pedagogical and adaptive potential of Eastern martial arts. It defines the specific features of organising the training process and the algorithms for its individualisation, and systematises the methodological means of forming the psychomotor, cognitive, emotional-volitional and social-communicative components of adaptation.

The sixth chapter, “The concept of methodological support for the process of psychosocial adaptation of persons with special needs within the system of Eastern martial arts: the case of judo”, sets out the author's concept and the structural-functional model of methodological support for the psychosocial adaptation of persons with special needs. It describes the system of interrelations between methodological approaches, organisational-pedagogical conditions and the criteria for evaluating the effectiveness of the model using adaptive judo as an example.

Keywords: psychosocial adaptation, special needs, methodological support, Eastern martial arts, adaptive judo, autism spectrum disorder, motor activity, pedagogical monitoring.

CONTENT OF THE THESIS

The introduction substantiates the relevance of the topic and the scientific problem, formulates the aim, objectives and hypothesis, presents the methodology, scientific novelty, theoretical significance and applied value of the work, and provides information on the implementation and validation of the results.

1. THEORETICAL AND METHODOLOGICAL ANALYSIS OF THE PROBLEM OF SUPPORTING THE PROCESS OF PSYCHOSOCIAL ADAPTATION OF PERSONS WITH SPECIAL NEEDS WITHIN THE SYSTEM OF MOTOR ACTIVITY

The first chapter addresses the first research objective and lays the theoretical groundwork for the second: it analyses scientific approaches to psychosocial adaptation, refines the conceptual framework and determines the potential of motor activity, sport and Eastern martial arts in supporting this process.

The concepts “persons with disabilities”, “persons with limited health capacities”, “persons with special educational needs” and “persons with special needs” are distinguished. With regard to motor and sports activity, the use of the generalising category “persons with special needs” is justified; it covers persons with physical, sensory, intellectual, mental, neurodevelopmental and combined characteristics who need adapted conditions for motor development and social participation. The concept is used as a working interdisciplinary generalisation rather than as a diagnostic classification.

Psychosocial adaptation is considered as a dynamic interaction between the individual and the environment, in the course of which independence, self-regulation, social ties and readiness to participate in social life are formed. The development of ideas about adaptation is analysed in the works of L. S. Vygotsky, N. A. Bernstein, J. Piaget, R. Lazarus and other researchers. The cognitive, emotional, motivational and social components of psychosocial adaptation are identified; their interrelation is shown in Figure 1.1.

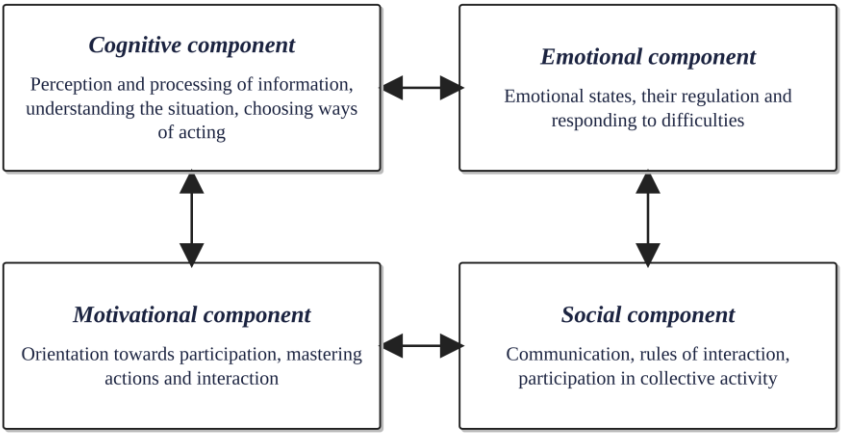

Fig. 1.1. Components of psychosocial adaptation

The cognitive side of adaptation is related to understanding the situation, retaining instructions and choosing an action; the emotional side to experiencing the task as manageable, responding to difficulty and being able to continue the activity; the motivational side to accepting the task and readiness to engage in it; the social side to coordinating actions, following common rules and participating in the group.

The distinction between the following concepts is substantiated: *methodological support* defines the conceptual foundations for designing the adaptation process (theoretical approaches, pedagogical principles and technologies, assessment methods and ways of adapting sessions), whereas *scientific and methodological guidance* relates to the development, application, monitoring and correction of specific pedagogical means. Methodological support is based on the integration of the biopsychosocial, systemic, activity-based, person-centred and axiological approaches with the principles of Universal Design for Learning.

Sport is considered as a socio-pedagogical environment in which motor activity is linked to mastering rules and social roles, interacting with a partner, responsibility and participation in a group. Its adaptive potential is realised through individualisation of load, ensuring the accessibility and safety of sessions, adaptation of equipment and interdisciplinary support for participants. Among Eastern martial arts, judo stands out: direct contact with a partner, regulated interaction, learning breakfalls and observing rituals and ethical norms create

prerequisites for the development of motor skills, trust, self-control, communication and social inclusion.

The **factors and mechanisms** of psychosocial adaptation are systematised (Fig. 1.2). Biological factors characterise the neurophysiological and sensorimotor prerequisites of adaptation; psychological factors are associated with motivation, cognitive appraisal, coping strategies and self-regulation; social factors include family support, pedagogical interaction, group norms, accessibility of infrastructure and societal attitudes. Their influence is exerted through neurophysiological, cognitive-regulatory and sociocultural mechanisms, and motor activity is regarded as the link between these levels.

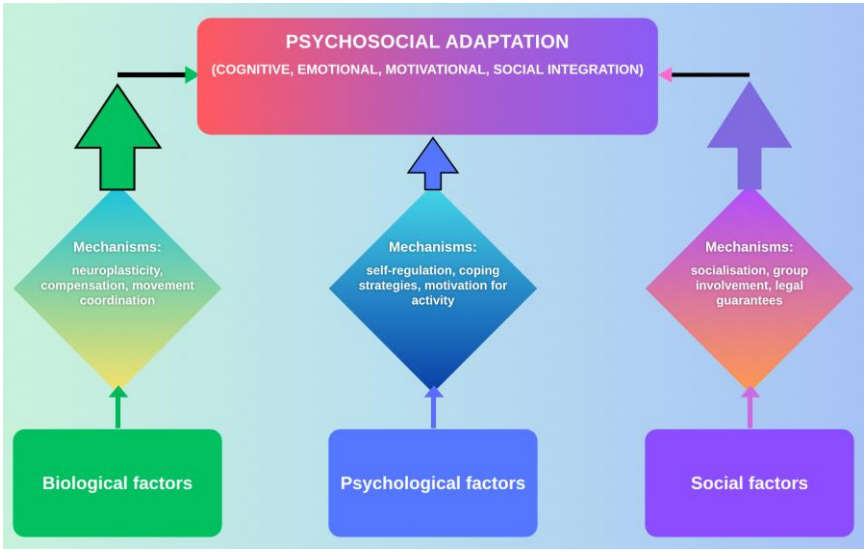

Fig. 1.2. Systemic interrelation of factors and mechanisms of psychosocial adaptation of persons with special needs

The **principles** of organising psychosocial adaptation within the system of motor activity are defined: systematic and consistent approach; individualisation and differentiation; accessibility and inclusiveness of the environment; motivational support; scientific validity of the means used; integration of motor, cognitive, emotional-volitional and communicative tasks; interaction between the coach, specialists and the family. The **pedagogical conditions** for their implementation are a combination of individual and group forms of work, gradual increase in task complexity, adaptation of instructions and ways of demonstration,

regular monitoring of dynamics, correction of session content, and ensuring the physical and psychological safety of participants.

The analysis showed that the pedagogical mechanisms and criteria for assessing psychosocial adaptation in relation to Eastern martial arts training for persons with special needs are insufficiently systematised in the literature. The diversity of existing approaches justifies integrating them into a concept of methodological support that links aims, principles, mechanisms, pedagogical conditions, content and criteria for the separate assessment of motor and psychosocial outcomes.

2. CLASSIFICATION AND PSYCHOPHYSICAL CHARACTERISTICS OF PERSONS WITH SPECIAL NEEDS AS THE BASIS FOR METHODOLOGICAL SUPPORT OF PSYCHOSOCIAL ADAPTATION WITHIN THE SYSTEM OF EASTERN MARTIAL ARTS

The second chapter addresses the third research objective as regards identifying the characteristics of the categories of persons with special needs under study, and specifies the social and organisational conditions for their inclusion in physical education and sports activity.

A comparison of classification approaches justified the need to integrate medical, psychological-pedagogical and social criteria in determining the conditions of psychosocial adaptation. Clinical and diagnostic information makes it possible to take safety requirements into account, functional assessment to identify opportunities for learning and interaction, and environmental analysis to determine the resources and constraints of participation. The generalising category “persons with special needs”, the status of a learner with special educational needs and a clinical diagnosis are not interchangeable concepts.

Down syndrome, ADHD and ASD differ in origin and in the structure of their manifestations, but may be accompanied by partly similar functional needs in the motor, cognitive and communicative spheres. Their comparison according to functional and pedagogical criteria is presented in Table 2.2.

Table 2.2. Comparative characteristics of Down syndrome, ADHD and ASD in the context of organising motor activity and psychosocial adaptation

Parameter	Down syndrome	ADHD	ASD	Significance for motor activity
Motor sphere	Possible muscular hypotonia, ligamentous laxity, difficulties with postural control, balance and coordination	Increased motor activity, difficulties in regulating pace and inhibiting motor responses	Possible specific features of motor planning, coordination, postural control and sensorimotor integration	Individual selection of load, gradual increase in exercise complexity, development of motor control
Attention and executive functions	Possible difficulties with working memory, attention and sequential organisation of actions	Difficulties with sustained attention, inhibitory control, working memory and self-regulation	Possible difficulties with cognitive flexibility, planning and executive regulation	Short instructions, repetition, tasks on a signal, fixed sequence
Communication	Possible delay in speech development with relatively better preserved speech comprehension	Difficulties are associated with impulsivity, inattention and failure to take turns	Persistent features of social communication are among the core manifestations	Demonstration, visual cues, simple instructions, pair exercises
Social interaction	Social orientation may be a relative strength	Possible difficulties in following rules, taking turns and controlling behaviour	Difficulties with social reciprocity and adapting behaviour to context	Pair and group work to develop cooperation and rule-following
Behavioural self-regulation	Depends on the individual cognitive and adaptive profile	Impairments of self-regulation and impulse control are particularly significant	Difficulties in flexibly changing behaviour and adapting to a new situation	Structure, rituals, repetition and predictability of the session
Significance of Eastern martial arts	Development of balance, coordination, motor skills and social participation	Development of attention, inhibitory control, working memory and self-regulation	Development of motor skills, executive functions and social interaction	Combination of motor, cognitive and social demands within a structured system of rules

In Down syndrome, muscular hypotonia, difficulties with postural control and slow acquisition of motor actions require step-by-step teaching and individual dosing of load; adapted Eastern martial arts

sessions make it possible to combine the development of motor control with the formation of cooperation skills. The evolution of views on ADHD emphasises the importance of executive regulation: the regulated exercises of martial arts make it possible to include tasks for controlling responses, pace and the order of actions in the acquisition of motor skills. The heterogeneity of ASD manifestations makes it necessary to align motor tasks with communicative capacities, sensory reactivity and the specifics of behavioural regulation: a predictable session structure facilitates engagement in the activity, while gradual changes in tasks and conditions of interaction create prerequisites for the development of behavioural flexibility.

The socio-demographic analysis showed that the decline in the child population of the Republic of Moldova is accompanied by an increase in the registered number of children with ASD and a growing need for specialised support. Registration dynamics depend on the availability of diagnosis and the organisation of record-keeping, but they indicate the importance of developing accessible motor programmes for children with ASD and ensuring continuity of medical, pedagogical and social support.

A survey of parents (n = 36) and coaches (n = 26) revealed limited participation of children with special needs in sport: 56% of parents indicated that their child had not previously engaged in sport. The reasons cited were a lack of qualified specialists and conditions (45%), time and financial constraints (42%), and medical contraindications (13%). 76.9% of coaches had experience of working with persons with special needs, but only 34.6% had worked with them for more than a year; the most frequent difficulties were coordination impairments (55.6%), medical contraindications (40%) and reduced stability of attention and interest (37%). Parents considered the development of balance (77.8%) and spatial orientation (75%) to be priorities, while coaches prioritised coordination (80.8%) and psychomotor (57.7%) abilities, which justifies the inclusion of coordination and psychomotor tasks in the content of adapted sessions.

A survey of 27 teachers revealed differences in practical experience (about 40% had no experience of working with children with special educational needs; about 25% rated their knowledge as high, about 50% as average and about 25% as low), as well as difficulties related to methodological support and interaction with families. It was concluded that the professional training of specialists and the development of parental competence need to be coordinated on the basis of jointly

defining tasks, sharing observations and assessing the child's individual dynamics.

3. METHODOLOGY FOR RESEARCHING THE PROCESS OF PSYCHOSOCIAL ADAPTATION OF PERSONS WITH SPECIAL NEEDS WITHIN THE SYSTEM OF EASTERN MARTIAL ARTS: THE CASE OF JUDO

The third chapter addresses the third research objective as regards determining criteria, indicators and diagnostic tools for assessing psychosocial adaptation, and presents the organisation of the research and the instructional support of the formative experiment (fifth objective).

The research included three stages. **The theoretical-analytical stage** (2011–2022) covered the study of the participation of the population of the Republic of Moldova in martial arts, scientific views on psychosocial adaptation and the formulation of the initial tenets of the concept. **The experimental-practical stage** (September 2022 – May 2025) included a longitudinal pedagogical experiment with three sub-stages: adaptation-preparatory (September–November 2022), main formative (December 2022 – February 2025; sessions three times a week, 60 minutes each) and final intensive-control (March–May 2025; three times a week, 90 minutes each). The sociological studies of 2022–2024 linked the theoretical-analytical and experimental parts of the work. **The analytical stage** (2025) was devoted to completing the diagnostic procedures and to systematising and generalising the results. The composition of participants is presented in Table 3.1.

Table 3.1. Composition of research participants

Research area	Category of participants	Number of persons
Sociological part	Participants in four sociological studies	326
Pedagogical part	Children with special needs	40
	Neurotypical young judokas – comparison group	17
Total in the pedagogical part		57
Total number of research participants		383

Note. The main analytical group included 10 children from among the 40 children with special needs; these participants are not counted twice.

The sociological part included four independent studies: 62 respondents (36 parents of children with special needs and 26 coaches and specialists from the Republic of Moldova, Romania and Ireland); 93

respondents (66 parents of preschool children and 27 teachers); 58 respondents (39 parents and 19 teaching staff); 113 representatives of physical education, sports training and support for children with special needs. Differences in the aims, composition of participants and content of the questionnaires determined the separate analysis of the results of each study.

The pedagogical part covered 40 children with special needs (Down syndrome, ADHD, ASD and other persistent developmental difficulties). For in-depth analysis, **the main group** – 10 children with ASD (8 boys and 2 girls aged 7–16) – and **the comparison group** – 17 neurotypical young judokas of comparable age – were formed. The criteria for inclusion in the main group were a documented diagnosis of ASD and/or a specialist's report on persistent developmental difficulties; marked difficulties in social interaction, communication, motor activity or self-regulation; the absence of medical contraindications; and written informed consent of the parents. For children with somatic limitations, pronounced aggressive behaviour or motivational difficulties, an individual or subgroup format of support was provided: reduced volume and intensity of load, a longer adaptation period, involvement of a specialist and gradual inclusion in pair and group forms of work. The neurotypical group was used as a comparison group rather than a control group; therefore, between-group differences were interpreted taking into account the non-equivalence of the groups and were supplemented by an analysis of individual dynamics.

The diagnostic set combined the following areas of assessment:

– motor: 3×10 m shuttle run, standing long jump, tapping test, hand dynamometry;

– psychomotor and cognitive: the computer system “Multipsychometer-05” (reaction time, search for and comparison of numbers, spatial perception, decision-making: latency, efficiency, accuracy, stability);

– psycho-emotional: the Lüscher colour test (working capacity, fatigue, anxiety, autonomy, vegetative coefficient, etc.);

– functional state of the CNS: reflexometry of simple and complex visual-motor reactions using the “AVR-BOSH-1” device at rest and after the Martinet–Kushelevsky test (20 squats in 30 s), with calculation of the functional level of the system (FLS), reaction stability (RS) and functional capacity level (FCL);

– vegetative regulation: heart rate variability using the “Phasagraph” computer cardiograph (R–R intervals, LF, HF, LF/HF);

– pedagogical and socio-behavioural: observation in the natural training environment and a questionnaire for parents (nine behavioural indicators, five-point ordinal scale).

Mathematical and statistical processing included descriptive statistics (M, Me, SD, quartiles, standard error), the Mann–Whitney U test for between-group comparisons, the Wilcoxon test for within-group dynamics, the exact sign test with Holm correction for ordinal parental ratings and principal component analysis with varimax rotation. The research protocol was approved by the Biomedical Ethics Committee of the National University of Physical Education and Sport of Ukraine (minutes No. 3, 2022).

The instructional support of the formative experiment included the author's programme and the interactive manual "Judoka's Diary". A **five-stage teaching algorithm** using the manual was developed (Table 3.2), coordinating the diagnostic, corrective and educational components of the pedagogical process.

Table 3.2. Teaching algorithm using the interactive manual "Judoka's Diary" for children with special educational needs

Stage of the algorithm	Aim and pedagogical focus	Tasks of the stage:	Forms and methods of work:	Expected results:
1. Adaptation and motivation	Ensuring emotional safety, forming initial motivation and acceptance of the session structure.	- reducing anxiety; - developing trust in the coach; - forming a positive attitude towards sessions.	- visual structure of the session; playful warm-ups; - introducing rules through pictograms; - first entries in the diary.	- increased engagement; - fewer maladaptive reactions; - readiness to follow rules.
2. Stage of forming basic motor and behavioural skills	Mastering fundamental motor actions and norms of behaviour on the tatami.	- development of gross and fine motor skills; - formation of basic coordination; - learning judo rituals (bow, order, distance).	- sensorimotor exercises; - coordination tasks; - working with the visual schemes of the diary.	- improved coordination; - resilience when switching attention; - mastering basic norms of behaviour.
3. Stage of developing self-control and reflection	Forming self-regulation and the ability to control behaviour and assess one's own progress.	- development of voluntary control; - formation of self-assessment skills;	- self-control tasks; - breathing practices; - self-assessment scales;	- reduced impulsivity; - development of responsibility;

		- recording achievements in the diary.	- recording "progress stars".	- stabilisation of learning behaviour.
4. Stage of socialisation and team interaction	Developing communication skills, cooperation skills and social behaviour.	- improving skills of interaction in pairs and groups; - forming tolerant behaviour; - learning constructive communication.	- pair exercises; - team games; - joint completion of diary sections; - mini-competitions.	- higher level of communication; - improved quality of interaction; - reduced conflict.
5. Control-evaluation and consolidation stage	Assessing developmental dynamics, consolidating achievements and reinforcing judo values.	- final diagnosis; - analysis of progress using the diary; - consolidation of stable skills.	- final tests; - individual conversations; - analysis of the diary; demonstration performances.	- confirmation of the changes achieved; - increased self-esteem; - transfer of sports skills into everyday behaviour.

4. THE INFLUENCE OF MOTOR ACTIVITY ON THE PROCESS OF PSYCHOSOCIAL ADAPTATION OF PERSONS WITH SPECIAL NEEDS

The fourth chapter justifies the choice of judo as the priority martial art (second objective), reveals the psychomotor organisation of motor activity as the basis of the concept (fourth objective) and contains the results of assessing the functional state of the CNS in children with ASD (sixth objective).

The theoretical analysis made it possible to determine the main conditions for using motor activity in the process of psychosocial adaptation: tasks matching the functional capacities of participants, accessibility of learning and the organisation of joint actions. Motor development creates prerequisites for expanding the child's participation in joint activity, which is manifested in independence, behavioural regulation and interaction with others.

A comparison of Eastern martial arts and health-improving movement systems showed that controlled movements, breathing exercises and concentration of attention are used to develop functional capacities and self-regulation, while partner exercises in martial arts are used to form the skills of coordinating actions, following rules and controlling the force applied. An analysis of the organisational forms of

sessions showed that a combination of individual work and group tasks makes it possible to take into account the pace of mastering movements and the child's readiness for cooperation. The main constraints on the development of adaptive motor activity in the Republic of Moldova relate to insufficient staff training, methodological support and accessibility of the sports environment.

A **model of the psychomotor organisation of motor activity** was developed (Fig. 4.1). Psychomotor organisation is understood as the coordinated functioning of the processes of perceiving the task, processing significant sensory information, programming and executing the movement, monitoring the result and subsequent correction. Its components and manifestations in judo are presented in Table 4.1.

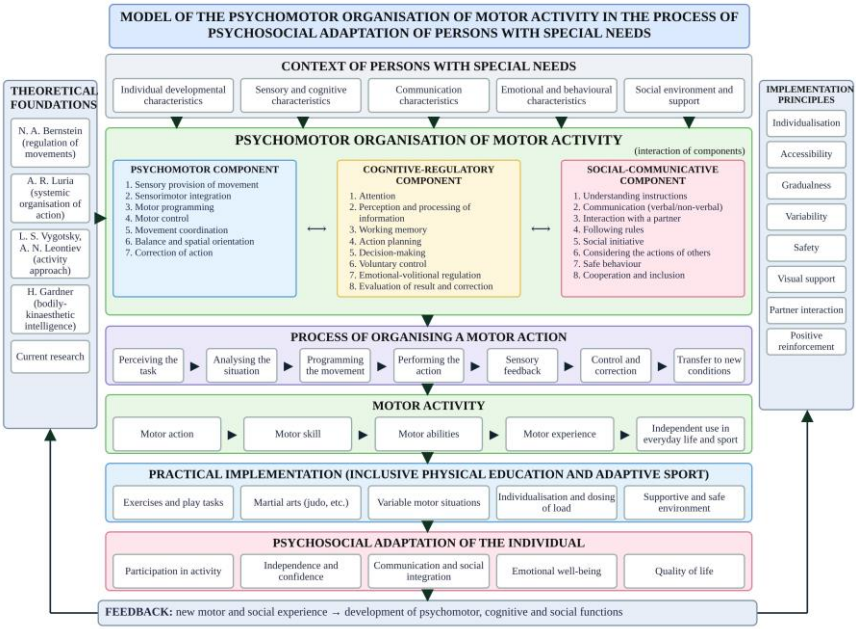

Fig. 4.1. Model of the psychomotor organisation of motor activity in the process of psychosocial adaptation of persons with special needs

Table 4.1. Psychomotor, cognitive-regulatory and social-communicative components of motor activity and their manifestations in judo practice

Component	Content	Manifestations in judo
Psychomotor	Sensory provision, sensorimotor integration, motor programming, motor control, coordination and correction of movement	Motor response to a change in the partner's position; maintaining balance; ukemi; movement on the mat; gripping; coordination of arm, leg and trunk movements; correction of movement when the situation changes
Cognitive-regulatory	Attention, working memory, understanding instructions, planning, anticipation, decision-making, voluntary and emotional-volitional control	Memorising the sequence of a technique; choosing an action according to the task; changing the motor programme; voluntary control of the force applied; continuing after a mistake
Social-communicative	Understanding common rules, communication, cooperation, taking on a role, coordinating actions with the partner, responsibility for the partner's safety	Taking on and changing the roles of tori and uke; following the rules of safe interaction; waiting one's turn; giving and accepting help; performing a common task

Distinguishing the components makes it possible to determine whether the child's difficulties relate to perceiving the task, programming and controlling the movement, or coordinating actions with a partner. This serves as the basis for choosing teaching methods, the sequence of tasks and the amount of pedagogical assistance. Judo pair exercises combine the mastery of movements with the development of cooperation, self-regulation and communication.

The dynamics of the functional state of the CNS were studied in the final three-month cycle (March–May 2025) using reflexometry according to the method of T. D. Loskutova [35] at rest and after a dosed load. The analysis was carried out from the standpoint of P. K. Anokhin's theory of functional systems [25]: the simple visual-motor reaction (SVMR) mainly reflects the speed of response to a signal, while the complex one (CVMR) reflects the specifics of signal discrimination and the balance of excitation and inhibition.

Table 4.2. Dynamics of indicators of the general functional state of the central nervous system in children with ASD at the initial and repeated examinations, conventional units (M ± m)

Indicator	March, before load	March, after load	May, before load	May, after load
Reaction stability (RS), c. u.	1,15±0,20	0,81±0,38	0,77±0,24	0,97±0,31

Indicator	March, before load	March, after load	May, before load	May, after load
Functional level of the system (FLS), c. u.	4,05±0,16	3,80±0,22	3,97±0,18	4,09±0,32
Functional capacity level (FCL), c. u.	2,26±0,20	1,95±0,37	2,02±0,29	2,16±0,36

At the initial examination, no children with a high level of CNS activation were identified in the sample; markedly reduced reaction stability was observed in half of those examined, and changes in indicators after the Martinet–Kushelevsky test exceeded ±75%, indicating an atypical CNS response to load. Based on mean values, at the initial examination all three indicators decreased after load, whereas at the repeated examination they increased relative to resting values (Table 4.2). At the repeated examination, high and average levels of CNS functional state were recorded in 20% of the children. Reflexometry data are presented in Tables 4.3 and 4.4.

Table 4.3. Results of the study of SVMR and CVMR at muscular rest and after dosed physical load at the initial testing of the final cycle (March 2025)

Indicators		R	M	σ	m	CV, %
MI SVMR, ms	MR	832,67	591,69	291,14	102,93	49,21
	DPL	755,40	677,30	264,13	93,38	39,00
FR MI SVMR, ms	MR	1034,00	526,00	361,54	127,82	68,73
	DPL	1158,00	597,63	404,90	143,15	67,75
SVV SVMR, ms	MR	506,36	217,34	177,05	62,60	81,46
	DPL	634,68	260,34	221,92	78,46	85,24
MI CVMR, ms	MR	531,80	590,65	185,94	65,74	31,48
	DPL	800,60	679,20	279,93	98,97	41,21
Errors, %	MR	50,00	25,00	17,48	6,18	69,93
	DPL	16,67	35,42	5,83	2,06	16,45
Aftereffect, ms	MR	622,00	645,54	217,48	76,89	33,69
	DPL	757,33	655,25	264,80	93,62	40,41

Note. The differences "MR – DPL" are not statistically significant.

Table 4.4. Characteristics of the adaptive capacities of the CNS of children with special needs at the final stage of the pedagogical experiment (May 2025)

Indicators		R	M	σ	m	CV, %
MI SVMR, ms	MR	908,83	473,79	278,78	80,48	58,84
	DPL	552,17	499,15	169,38	48,89	33,93
FR MI SVMR, ms	MR	951,00	471,50	291,72	84,21	61,87
	DPL	823,00	406,08	252,45	72,88	62,17
SVV SVMR, ms	MR	202,20	162,35	62,02	17,90	38,20
	DPL	416,40	202,82	127,73	36,87	62,98
	MR	425,00	523,80	130,37	37,63	24,89

MI CVMR, ms	DPL	514,20	584,48	157,73	45,53	26,99
Errors, %	MR	50,00	15,28	15,34	4,43	100,39
	DPL	33,33	11,11	10,22	2,95	92,02
Aftereffect, ms	MR	765,00	522,39	234,66	67,74	44,92
	DPL	540,33	439,86	165,75	47,85	37,68

At rest, simple reaction time decreased by 19.9% (from 591.69 to 473.79 ms), complex reaction time by 11.3% (from 590.65 to 523.80 ms) and the proportion of errors by 9.72 percentage points. Whereas in March the load was accompanied by an increase in errors from 25.00 to 35.42%, in May their proportion after load (11.11%) was lower than at rest (15.28%). The post-load increase in simple reaction latency decreased by 60.25 ms and in complex reaction latency by 27.87 ms; the change in the post-load increase in errors was −14.59 percentage points.

Owing to the high variability of the indicators and the small size of the group, the statistical significance of between-stage changes in the group data was not established; individual responses differed in direction and magnitude. The data obtained justify the need for a combined assessment of response speed and accuracy, individual dosing of load and long-term monitoring of the functional state of the CNS in children with ASD.

5. THEORETICAL AND METHODOLOGICAL FOUNDATIONS FOR ORGANISING THE TRAINING PROCESS OF PERSONS WITH SPECIAL NEEDS WITHIN THE SYSTEM OF EASTERN MARTIAL ARTS AIMED AT THEIR PSYCHOSOCIAL ADAPTATION

The fifth chapter reveals the pedagogical potential of Eastern martial arts (second objective) and contains the results of the experimental verification of the developed methodological support in children with ASD (sixth objective).

A historical-genetic analysis of Eastern health-improving systems revealed the interrelation between motor practice, self-regulation and moral education. A theoretical generalisation of the historical and philosophical foundations of Eastern martial arts made it possible to identify three interrelated directions of their use within the system of psychosocial adaptation: developing motor capacities, forming emotional self-regulation and mastering the norms of social interaction (Fig. 5.1).

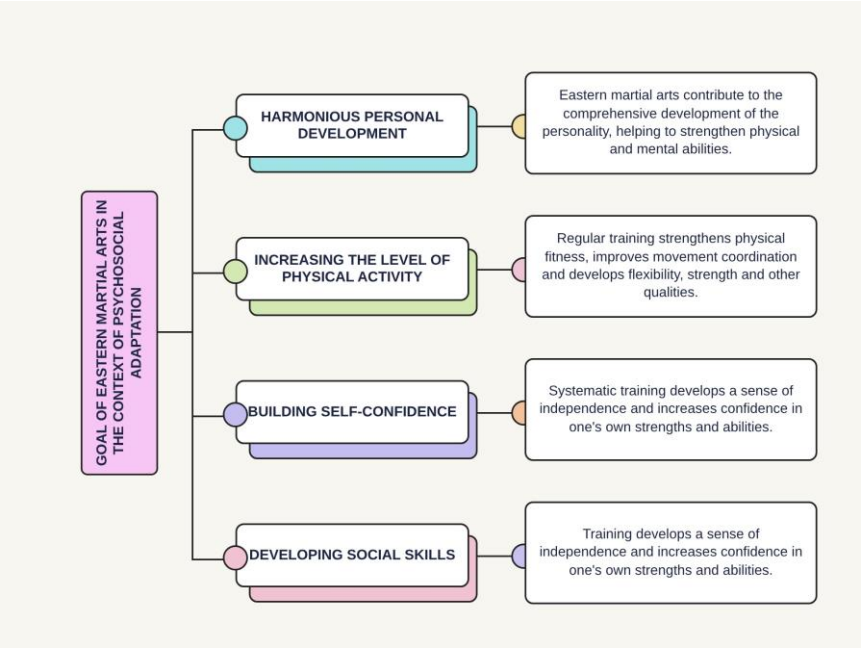

Fig. 5.1. Model of psychosocial adaptation of the individual through Eastern martial arts: interrelation of physical, psycho-emotional and social components

Discipline, respect, responsibility, self-control and mutual assistance were defined as the main value guidelines for organising the training process in judo [**38**]. Their mastery is associated with practical experience of following rules, performing joint tasks and taking responsibility for the partner's safety; for persons with special needs, such an organisation of sessions creates conditions for gaining experience of cooperation and belonging to a group.

A survey of 113 specialists showed that swimming (46.02%), team sports and games (40.78%), gymnastics and martial arts (about 30%) are considered the most suitable for the psychosocial adaptation of children with special needs. 70% of respondents reported that they were not ready to work with such children, 26% expressed conditional readiness and 4% gave a positive answer; the main obstacles cited were a lack of practical experience and of methodological manuals. A mismatch was identified between the recognition of the potential of sports activity and the readiness of specialists to organise it.

The results of the pedagogical experiment on the assessment of motor abilities are presented in Tables 5.1 and 5.2.

Table 5.1. Results of testing motor qualities in young neurotypical judokas and judokas with ASD at the beginning (2022) and end (2025) of the pedagogical experiment, Me (Q1; Q3)

Indicator	Stage	Neurotypical (n = 17)	With ASD (n = 10)
3×10 m shuttle run, s	beginning	10,13 (10,02; 10,28)	14,36 (14,30; 14,56)
	end	8,91* (8,91; 8,92)	13,11* (12,95; 13,25)
Standing long jump, cm	beginning	147,00 (145,00; 151,00)	17,00 (17,00; 20,00)
	end	168,00* (164,00; 171,00)	52,00* (48,00; 52,50)

*Note. * – differences are statistically significant ($p \leq 0.05$).*

Table 5.2. Results of testing physical qualities in young neurotypical judokas and judokas with ASD at the beginning (2022) and end (2025) of the pedagogical experiment, Me (Q1; Q3)

Indicator	Stage	Neurotypical (n = 17)	With ASD (n = 10)
Tapping test, number of taps	beginning	57,50 (54,00; 60,00)	43,50 (42,75; 45,25)
	end	71,50* (68,50; 75,50)	55,50* (52,75; 58,00)
Hand dynamometry, kg	beginning	8,45	3,70 (3,20; 4,60)
	end	13,20 (12,80; 13,20)	8,00 (7,60; 8,20)

*Note. * – differences are statistically significant ($p \leq 0.05$).*

In children with ASD, shuttle run time decreased by 1.25 s, the standing long jump result increased more than threefold (from 17 to 52 cm), the number of taps in the tapping test increased by 12, and hand dynamometry rose from 3.70 to 8.00 kg. Positive dynamics were observed in both groups, while between-group differences persisted. The nature of adaptive-compensatory responses depends on the load regime [43], which justifies the individual dosing of training influence taking into account the initial state and the dynamics of indicators [**41**].

To specify the psychological component of psychosocial adaptation, the results of the parent questionnaires at the initial and final stages of the experiment were compared (n = 10; nine ordinal indicators; a lower score corresponds to a more favourable rating of the skill) (Tables A.4.1–A.4.2).

Table A.4.1–A.4.2. Dynamics of ordinal ratings of psychosocial adaptation on the nine items of the parent questionnaire and results of non-parametric testing

Indicator	n pairs	Me beginning	Me end	Z	p (Wilcoxon)	p (Holm)
Confidence in actions	10	4,5	2,0	−2,831	0,005	0,0176
Independence	10	4,0	2,0	−2,831	0,005	0,0176
Interaction with children	9	5,0	1,5	−2,699	0,007	0,0195
Asking for help	9	5,0	1,5	−2,694	0,007	0,0195
Self-regulation	10	4,0	1,0	−2,873	0,004	0,0176
Respect for others	8	4,0	1,0	−2,588	0,010	0,0195
Mutual assistance	10	3,5	1,5	−2,844	0,004	0,0176
Responsibility	9	4,0	1,5	−2,739	0,006	0,0195
Honesty	9	3,5	1,0	−2,719	0,007	0,0195

Note. Stage medians were calculated from the available responses and may include different numbers of observations; n pairs – number of complete paired ratings; p (Holm) – exact sign test with Holm correction for nine comparisons.

A favourable shift was recorded in all 84 complete pairs of ratings; comparison of paired measurements using the Wilcoxon test revealed statistically significant shifts in all nine indicators (Z from −2.588 to −2.873; p = 0.004–0.010). Psychologically, the dynamics identified describe three interrelated directions of adaptation: personal-regulatory (confidence, independence, self-regulation), social-communicative (interaction, asking for help, mutual assistance) and value-behavioural (respect, responsibility, honesty). All ten parents noted changes in the child's behaviour at home, eight at school or kindergarten, and seven in communication with peers outside training; five parents reported that the child attends sessions willingly, four that the child sometimes attends willingly.

To identify the interrelationships between motor, physical and psychophysiological characteristics, a **factor analysis** (principal component analysis) was performed, which revealed a three-factor structure of functional preparedness in both groups (Tables 5.3–5.4).

Table 5.3. Results of the factor analysis of indicators of neurotypical young judokas (n = 17)

Indicator	Loading
First factor – "psychophysiological state"	
Fatigue (Lüscher test)	0,70

Indicator	Loading
Eccentricity (Lüscher test)	0,73
Concentricity (Lüscher test)	−0,92
Vegetative coefficient (Lüscher test)	0,87
Latency (reaction time)	0,86
Efficiency (digit search)	0,91
Latency (digit search)	0,77
Efficiency (digit comparison)	0,84
Decision latency (digit comparison)	0,84
Decision latency (spatial perception)	0,90
Visual productivity (decision-making)	−0,77
Decision-making time	0,72
Second factor – "psychomotor skills"	
Working capacity (Lüscher test)	−0,81
Heteronomy (Lüscher test)	−0,74
Autonomy (Lüscher test)	−0,75
Shuttle run	−0,80
Long jump	0,75
Third factor – "emotional"	
Anxiety (Lüscher test)	0,78
Stability (reaction time)	0,76
Impulsivity (decision-making)	−0,77

Table 5.4. Results of the factor analysis of indicators of young judokas with ASD (n = 10)

Indicator	Loading
First factor – "psychophysiological state"	
Working capacity (Lüscher test)	0,99
Fatigue (Lüscher test)	−0,86
Anxiety (Lüscher test)	−0,98
Deviation from the autogenic norm (Lüscher test)	−0,97
Eccentricity (Lüscher test)	0,82
Heteronomy (Lüscher test)	0,94
Autonomy (Lüscher test)	0,95
Latency (reaction time)	0,92
Efficiency (digit search)	0,88

Indicator	Loading
Latency (digit search)	0,99
Stability (digit comparison)	0,79
Efficiency (digit comparison)	0,86
Decision latency (digit comparison)	0,90
Efficiency (spatial perception)	0,85
Decision latency (spatial perception)	0,77
Muscle strength	0,86
Second factor – "psychomotor skills"	
Concentricity (Lüscher test)	0,71
Accuracy (number comparison)	0,88
Stability (number comparison)	−0,96
Accuracy (spatial perception)	0,92
Shuttle run	−0,82
Long jump	0,78
Number of taps (tapping test)	0,89
Third factor – "decision-making"	
Stability (reaction time)	−0,91
Stability (spatial perception)	0,89
Dynamism (decision-making)	0,81
Visual productivity (decision-making)	0,73

The factor structures of the two groups share common features but differ in the content of the third factor: in neurotypical judokas it characterises the emotional sphere, whereas in children with ASD it characterises the ability to make decisions under information load. This difference may reflect the specifics of cognitive regulation in children with ASD and justifies the need for joint monitoring of motor, cognitive and emotional characteristics when individualising sessions. On the basis of the factor analysis, a differential scale and an integral criterion of the level of functional preparedness of young judokas were developed, and their application was illustrated by an individual case; given the small sample sizes, the factor structure obtained is preliminary.

6. THE CONCEPT OF METHODOLOGICAL SUPPORT FOR THE PROCESS OF PSYCHOSOCIAL ADAPTATION OF PERSONS WITH SPECIAL NEEDS WITHIN THE SYSTEM OF EASTERN MARTIAL ARTS (THE CASE OF JUDO)

The sixth chapter addresses the fourth and fifth research objectives: it sets out the author's concept of methodological support, the structural-functional model for its implementation, its mechanisms, ways of differentiated application and the practical implementation of the concept through judo.

6.1. Aim, objectives and logic of the concept

The aim of the concept is the theoretical and methodological substantiation and organisation of the pedagogical conditions, means and mechanisms of psychosocial adaptation of persons with special needs within the system of Eastern martial arts. Achieving the aim implies individualisation of sessions, improvement of the psychomotor organisation of motor activity and expansion of participants' involvement in joint tasks; improving the quality of life is regarded as the long-term social goal of the concept.

Objectives of the concept: to systematise the theoretical and normative foundations of psychosocial adaptation in physical education and sport; to reveal the interrelation between the sensorimotor, cognitive-regulatory and social-communicative components of motor activity; to substantiate the importance of pedagogically organised motor activity for the development of independence, self-regulation and interaction; to define the principles of session design and the requirements for individualisation, accessibility, gradualness, variability and safety of learning; to reveal the mechanisms of including the child in pair and group activity, including together with neurotypical peers; to define criteria and indicators for assessing individual dynamics; to substantiate the conditions for transferring the mastered ways of acting and interacting to changing learning, training and everyday situations.

In the concept, psychosocial adaptation is understood as a process of expanding independence, improving behavioural regulation and changing the nature of a person's participation in joint activity. Physical fitness characterises the motor prerequisites for such participation; to assess adaptive dynamics, its indicators are compared with the independence of task performance, the amount of assistance required, the stability of participation, the nature of interaction and the use of acquired experience in new conditions.

The normative basis of the concept comprises the Convention on the Rights of Persons with Disabilities, which enshrines the requirements of accessibility and reasonable accommodation [61], the World Health Organization recommendations on physical activity [63], Law of the Republic of Moldova No. 60 of 30.03.2012 "On the social inclusion of persons with disabilities" and the Education Code No. 152/2014 [5; 10]. For the organisation of sessions, these provisions set the requirements for removing barriers and ensuring equal opportunities for participation.

The theoretical basis is formed by: the biopsychosocial approach, which reveals human functioning in the interrelation of biological, psychological and social factors [48; 64]; L. S. Vygotsky's cultural-historical theory on the role of the social environment, pedagogical mediation and pedagogically organised "roundabout ways" of mastering cultural forms of activity [28]; A. N. Leontiev's activity theory, which makes it possible to consider the development of mental processes in connection with the mastery of actions [34]; H. Gardner's proposition on bodily-kinaesthetic intelligence [50]; N. A. Bernstein's theory of sensory corrections and the level structure of movements [27].

The empirical basis comprised a comparative study of young judokas with ASD and their neurotypical peers, which revealed differences in sensorimotor reactions, processing of non-verbal information, decision-making speed and vegetative regulation [**55**], as well as the materials of sociological surveys, the pedagogical experiment and repeated parental ratings.

The logic of the concept provides for assessing individual capacities, choosing accessible tasks and the conditions for performing them, organising motor and joint activity, analysing changes and refining pedagogical decisions. This sequence forms a feedback loop. The structure of the concept is shown in Figure 6.1.

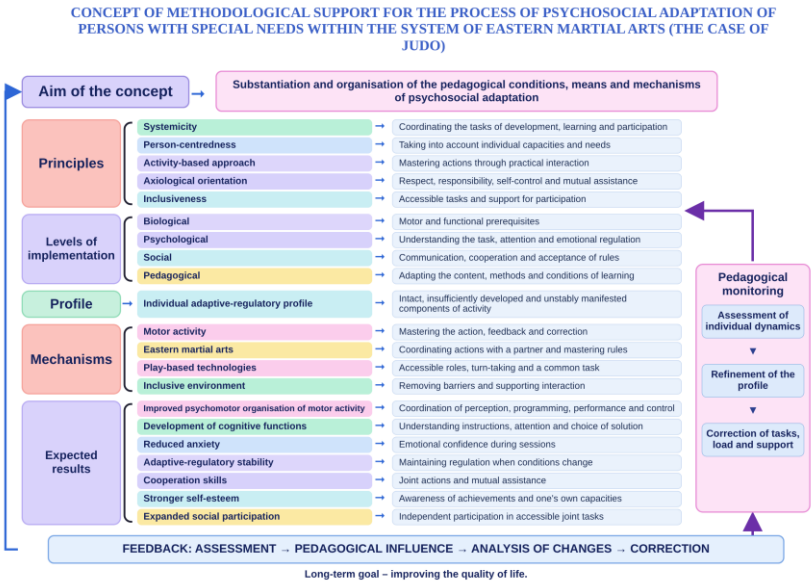

Fig. 6.1. Structure of methodological support for the psychosocial adaptation of persons with special needs within the system of Eastern martial arts (the case of judo)

Principles of the concept: *the principle of systemicity* implies considering psychosocial adaptation as a coherent process in which the tasks of development, learning and participation are coordinated; *the principle of person-centredness* determines the need to take into account the individual needs, capacities and characteristics of participants; *the principle of the activity-based approach*, based on the tenets of L. S. Vygotsky and A. N. Leontiev, provides for mastering actions through practical interaction; *the principle of axiological orientation* provides for the inclusion of respect, responsibility, self-control and mutual assistance in the content of sessions; *the principle of inclusiveness* reflects the need to ensure the accessibility of sessions and equal opportunities for participation.

Levels of implementation. *The biological level* covers the motor and functional prerequisites for participation: coordination, balance, fatigue, recovery and tolerance of contact. *The psychological level* is associated with attention, understanding of the task, emotional regulation and motivation. *The social level* covers communication, cooperation, acceptance of rules and participation in group life. *The pedagogical level*

determines the ways of organising learning: the choice of exercise content, instructions and demonstration, and the amount of support. The levels are not successive steps: a single exercise simultaneously involves motor load, emotional reaction, regulation of action and interaction. The interrelation of these levels makes it possible to coordinate the tasks of motor development, emotional regulation, social interaction and pedagogical support. The comprehensive nature of the methodological support lies in the fact that the concept simultaneously covers the motor, psychomotor, cognitive, emotional-volitional, social-communicative and cultural-value components of psychosocial adaptation; integrates aims, principles, pedagogical conditions, means, methods, assessment criteria and implementation mechanisms into a coherent system; and provides for the coordinated participation of the coach, the family and interdisciplinary support specialists.

The linking component of the concept is the **individual adaptive-regulatory profile** – a pedagogical description of the relationship between the child's sensorimotor, cognitive, emotional-regulatory and social capacities. It includes information on intact, insufficiently developed and unstably manifested components of activity; in compiling it, understanding of the task, the way the action is performed, the nature and amount of assistance, emotional reactions and interaction with the partner are taken into account. The profile is used to choose accessible exercises and learning conditions and is refined on the basis of observation.

The expected results include improvement of the psychomotor organisation of motor activity, development of cognitive functions, reduction of anxiety, increased adaptive-regulatory stability, formation of cooperation skills, strengthening of self-esteem and expansion of social participation. *Adaptive-regulatory stability* is understood as the ability to maintain an accessible level of attention, control of actions, emotional regulation and interaction when the conditions of the task change.

The implementation of the conceptual tenets in the experimental programme is presented in Table A.6.2.

Table A.6.2. Implementation of the conceptual tenets of methodological support for psychosocial adaptation in the experimental programme

Tenet of the concept	Implementation in the programme
Systemicity	Each task links a motor goal, a regulatory requirement and an observable participation outcome

Tenet of the concept	Implementation in the programme
Person-centredness	Choice of an accessible task, way of responding, pace and necessary assistance
Activity-based approach	Mastering rules through action: stop, wait, change role, help
Axiological orientation	Respect is shown by observing the partner's signal; responsibility by controlling one's own action; mutual assistance by jointly solving the task
Inclusiveness	Accessible roles and a common task at different levels of difficulty; preparing peers for cooperation
Biological level	Taking into account motor capacities, fatigue, recovery and tolerance of contact
Psychological level	Understanding instructions, attention, choice, emotional regulation
Social level	Communication, turn-taking, cooperation and acceptance of rules
Pedagogical level	Changing the content, conditions, ways of presentation and amount of assistance

6.2. Mechanisms of the concept

The mechanisms of the concept are revealed through the interrelation of motor activity, Eastern martial arts, play-based technologies and an inclusive environment. Their effect is determined by the organisation of learning: the way the task is presented, the sequence of mastering movements, the nature of feedback and the conditions of interaction.

Motor activity is the system-forming link of the concept. Its targeted use provides for mastering motor skills and developing strength, coordination, flexibility and endurance, taking into account the participants' level of preparedness. The mechanism of mastering an action is revealed through repeated performance with feedback: the child compares the result of an attempt with a demonstration or a clear reference point and refines the next action. Motor training and the mastery of interaction develop within the same sessions.

Eastern martial arts (the case of judo) act as a mechanism for coordinating motor activity, behavioural regulation and social interaction. Mastering technical actions involves following rules, distributing roles and the mutual responsibility of partners: the child learns to perform the movement, take into account the actions of the other participant, match effort to the learning task and stop the exercise on a signal. The educational requirements of respect, discipline, responsibility and mutual assistance are made concrete through accessible actions: greeting the

partner, taking turns, performing an agreed task and treating the other participant with care. The essence of the mechanism lies in the transition from performing an action with support to more independent compliance with rules in pairs and groups.

Play-based technologies ensure the child's engagement in activity through a clear goal, accessible rules and interaction with other participants. Play combines performing an exercise with the need to perceive a signal, choose an action, take turns and take into account the partner's behaviour. The potential of structured play for mastering ways of communication by persons with ASD has been described in the author's research [**15**]. When a play task becomes more complex, the familiar motor basis is retained and a single condition is changed: the direction of movement, the sequence of actions or the participant's role.

An inclusive environment ensures the participation of children with special needs in joint training activity with neurotypical peers, which corresponds to the understanding of inclusion as a process of identifying and reducing barriers to learning and participation [42]. In the experiment, children were included in existing training groups taking into account age, anthropometric characteristics, level of socialisation and readiness for joint activity. Explanatory work was carried out with the neurotypical participants; as joint sessions progressed, they helped the child with ASD to take a place in the line-up and supported the child during the warm-up and in games. Staffing support was provided by training student interns who were involved in working with children with special needs. The effectiveness of the inclusive environment is assessed by the child's inclusion in common tasks, interaction with partners, use of assistance and independent performance of mastered actions.

The interrelation of the four mechanisms is manifested in the organisation of sessions: motor activity forms the basis of practical action, judo exercises define the content of individual and partner work, play-based technologies create clear performance situations and the inclusive environment provides the conditions for participation and support. The psychological content of the concept is revealed by a scheme of transition from pedagogically organised activity to observable manifestations of psychosocial adaptation (Fig. 6.2); it corresponds to the three directions of dynamics identified from parental ratings.

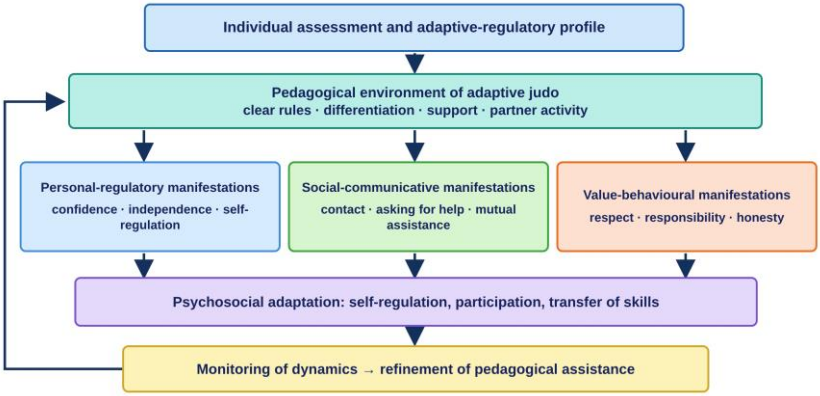

Fig. 6.2. Conceptual scheme of the psychological mechanisms and manifestations of psychosocial adaptation through adaptive judo

6.3. Specifics of applying the concept for different special needs

Belonging to a particular category sets the directions of preliminary pedagogical analysis; however, children with the same diagnosis may show different combinations of difficulties and intact capacities. The practical grounds for differentiation were refined at the adaptation-preparatory sub-stage of the research during sessions with children with Down syndrome, ADHD and ASD.

In ASD, a clear sequence of actions ensures the predictability of the session; if the child performs a familiar exercise but has difficulty when the partner or form of work changes, it is advisable to keep the familiar structure and change one condition. Mastery of an exercise is assessed taking into account whether the child performs the movement individually, on a common command or next to peers. In intellectual disabilities, when understanding and retaining a sequence is difficult, accessible parts of the task are singled out and then linked step by step into a whole; practical action is accompanied by a short instruction and a demonstration. In ADHD, particular attention is paid to organising the beginning, continuation and completion of a task, retaining the instruction and moving on to the next action; clear rules, rhythmic alternation of motor tasks and training in controlling one's own actions are used. For all categories, the value-moral orientation and support for social participation are maintained. Ways of individualising pedagogical assistance according to the difficulties observed are presented in Table A.6.6.

Table A.6.6. Ways of individualising pedagogical assistance according to the child's observed difficulties

Observed difficulty	Pedagogical solution
The instruction is not accessible	One step, demonstration, picture, familiar gesture; longer waiting time for a response
The sequence breaks down	A chain of two accessible actions, separate cards, gradual combination
Responses are unstable when conditions change	Keeping the familiar structure; changing one condition; announcing the transition in advance
Contact causes discomfort	Action without contact or with an agreed familiar partner; the right to refuse and choose another role
Difficulty waiting or changing roles	Short turns, visible marking of the role, a predictable number of attempts
Speech is limited or absent	Familiar means of augmentative communication; assessment of choice and action regardless of speech

Peer assistance complements the coach's direct support. When a child refuses a task, both possible difficulties in performing the movement and fear of starting an unfamiliar action are taken into account. As tasks are mastered, the initially chosen forms of support are reviewed: with stable independent performance, assistance is reduced or a single condition is changed; when difficulties arise, the content of the task is refined.

6.4. Practical implementation of the concept (the case of judo)

The organisational-pedagogical conditions for implementing the concept are: creating an inclusive training environment that guarantees psychological and physical safety and mutual respect; training coaches proficient in methods of differentiated and inclusive teaching and in pedagogical monitoring tools; interdisciplinary support with the participation of the family, psychologist, special educator and speech therapist; flexible organisation of the training process with variability of load, pace and content; systematic reliance on the value-normative foundation of judo.

The experimental programme is implemented in group (90 minutes) and individual (60 minutes) formats and includes five stages with defined grounds for transition (Table A.6.3).

Table A.6.3. Stages of implementation of the experimental programme: content and transition criteria

Stage	Content and use of the diary	Grounds for transition
I. Adaptation and motivation	Getting to know the coach, the tatami and the session route; greeting; choosing a task; learning the signals “stop”, “help”, “pause”	Engages in a familiar task with accessible support; uses the agreed way of communicating
II. Formation of basic motor and behavioural skills	General developmental exercises, stances, movement, balance, preparation for breakfalls (ukemi) from low positions; handling the kimono (judogi) and belt	Repeats an accessible motor sequence; responds to the stop signal
III. Development of self-control and reflection	Choosing an action on a signal, changing one condition, comparing performance with a picture; initial elements of balance-breaking (kuzushi) without throwing	Uses feedback for correction; signals difficulty or state; performs the task with less assistance
IV. Socialisation and joint activity	Pair movement, mirror repetition, changing tori/uke roles; accessible groundwork elements (ne-waza) and play situations	Coordinates the beginning and end of an action; respects the partner's signal; takes part in role changes
V. Control-evaluation and consolidation	Repeating the initial tests, demonstrating the mastered sequence, analysing the diary with the child and the family	A final profile is compiled; stable achievements and tasks for further support are identified

A session consists of an organisational and value-ritual block (greeting, focusing), a preparatory part (warm-up), a main sensorimotor block, a play and communication block, a relaxation-reflection part and a final value-ritual part. Methodologically, it is advisable to increase the complexity of motor tasks step by step, combine individual, pair and group forms of work, use play-based technologies as the leading mechanism of socialisation, apply coordination, balance and orientation exercises, and maintain a positive emotional atmosphere and a situation of success. The methodological recommendations are aligned with the curriculum “Educație fizică și judo” for grades I–IV [**14**].

“Judoka's Diary” links the content of learning with the child's individual experience [**18**]. It ensures the recording of mastered actions and emerging difficulties, the development of self-assessment skills and participation in setting the immediate learning tasks, ongoing feedback between the coach, the child and the family, and reflection on one's own progress in judo. The sections “My sports achievements” and “Coach's

comments" make it possible to compare the coach's assessment with the child's own assessment when moving on to the next stage of work.

Pedagogical monitoring includes initial, ongoing, interim and final assessment and provides for comparing the results of testing, pedagogical observations, entries in the "Judoka's Diary" and information from parents with the child's initial state and the conditions under which tasks are performed. The operational indicators of monitoring are presented in Table A.6.8.

Table A.6.8. Operational indicators of pedagogical monitoring

Area	Operational indicator
Psychomotor organisation	Accuracy and sequence of an accessible action; maintaining balance; number of corrections and type of assistance
Cognitive-motor regulation	Correct choice on a signal; starting and stopping; retaining the instruction; switching after one change
Emotional regulation	Signalling one's state; requesting a pause; resuming participation after it
Adaptive-regulatory stability	Maintaining the quality of a mastered action and accessible participation when one pre-announced condition changes
Cooperation	Taking turns; changing roles; coordinating the start and end of an action; addressing and responding to the partner
Self-assessment	Choosing one's own achievement and indicating the assistance needed in an accessible form
Social participation	Independent inclusion in a common task; number of accessible roles; transfer of a mastered rule to another situation

Pedagogical decisions are determined by the relationship between the observed changes: if the quality of movement has improved but the child still waits for a prompt before each action, the immediate task is to gradually expand independence. The grounds for correcting sessions are changes in independence, control of actions, the nature of interaction and the amount of assistance required; the retention of mastered behaviours in everyday situations is treated as a separate object of assessment.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

The research made it possible to accomplish the objectives set, achieve the aim and formulate the following conclusions.

1. *Accomplishment of the first objective.* The theoretical and methodological analysis substantiated the understanding of the

psychosocial adaptation of persons with special needs as a pedagogically supported process of developing independence, self-regulation and participation in joint activity. The content of methodological support was refined; it combines scientific approaches, principles of organising sessions, ways of adapting learning and criteria for assessing change. For persons with Down syndrome, ADHD and ASD, common directions of pedagogical work were determined, given the differences in their motor, cognitive and communicative needs. Motor activity combines the mastery of movements, rules of behaviour and ways of interaction; its use for psychosocial adaptation requires an appropriate organisation of learning.

2. *Accomplishment of the second objective.* The theoretical and methodological basis for organising the adaptation process was a combination of the systemic, activity-based, person-centred, biopsychosocial, inclusive and axiological approaches. The principles of individualisation, accessibility, gradualness, safety and alignment of motor tasks with tasks of self-regulation and interaction were defined. The choice of judo for practical implementation is determined by the combination of breakfalls, regulated partner actions and the norms of responsibility, respect and mutual assistance. Pedagogical mechanisms were specified through the structuring of tasks, feedback, regulation of assistance and the mastery of the rules of joint activity.

3. Four sociological surveys covering a total of 326 respondents revealed organisational and methodological difficulties in including children with special needs in physical education and sports activity. In the survey of 113 representatives of physical education, sports training and support for children, 70% reported that they were not ready for such work, 26% expressed conditional readiness and 4% gave a positive answer; the reasons cited included a lack of practical experience and of methodological manuals. The information obtained substantiated the need to train specialists, develop accessible learning tools and coordinate the coach's actions with the family.

4. *Accomplishment of the third objective.* The examination of children with ASD revealed individual differences in sensorimotor responsiveness, performance of motor tasks and responses to dosed physical load. A set of criteria and diagnostic tools was determined, covering motor and psychomotor indicators, cognitive processes, psycho-emotional state, sensorimotor reactions and vegetative regulation. The assessment of psychosocial adaptation was supplemented by observation of independence, rule-following, interaction and the amount of assistance needed.

5. *Accomplishment of the fourth objective.* A concept of comprehensive methodological support for psychosocial adaptation and a structural-functional model for its implementation were developed. The author's contribution lies in integrating theoretical foundations, individual assessment, session content, pedagogical support and outcome monitoring into a system of interrelated decisions. The psychomotor organisation of motor activity was described through its sensorimotor, cognitive-regulatory and social-communicative components. The individual adaptive-regulatory profile links the child's characteristics to the choice of tasks and the conditions for performing them; subsequent assessment of change serves as the basis for correcting learning.

6. *Accomplishment of the fifth objective.* Differentiated instructional support for adaptive judo was developed and implemented, providing for adapted instructions, visual support, a step-by-step increase in the complexity of motor tasks, play exercises and a combination of individual, pair and group forms of work. The content of sessions was aligned with the sensory, cognitive, emotional-regulatory and communicative characteristics of participants. The curriculum "Educație fizică și judo" defines the content of basic training, while the experimental programme specifies the ways of adapting it. The author's manual "Judoka's Diary" was included in teaching as a means of presenting tasks visually, recording achievements and difficulties, and supporting interaction between the child, the coach and the family. The materials have been implemented, as confirmed by the corresponding acts.

7. *Accomplishment of the sixth objective.* The longitudinal pedagogical experiment (September 2022 – May 2025) revealed positive dynamics of motor and psychomotor indicators in young judokas with ASD: the median shuttle run time decreased from 14.36 to 13.11 s; the median values of the standing long jump increased from 17 to 52 cm, the number of taps in the tapping test from 43.5 to 55.5, and hand dynamometry from 3.70 to 8.00 kg. The psychophysiological dynamics were less uniform: simple visual-motor reaction time at rest decreased by 19.9%, complex reaction time by 11.3%, and the proportion of errors from 25.00 to 15.28%; the statistical significance of between-stage changes in the group data was not established. Principal component analysis identified factors in both groups interpreted as "psychophysiological state" and "psychomotor skills"; the third factor was labelled "emotional" in neurotypical judokas and "decision-making"

in children with ASD. On the basis of the factor analysis, a differential scale of functional preparedness was proposed.

8. A comparison of parental questionnaire ratings (n = 10) revealed favourable dynamics in nine indicators of psychosocial adaptation, ranging from confidence, independence and self-regulation to interaction, mutual assistance and responsibility. For individual indicators, 8–10 complete pairs of ratings were obtained; a favourable shift was recorded in all 84 pairs. The p-values were 0.004–0.010 for the Wilcoxon test and no more than 0.0195 for the exact sign test after Holm correction. The results characterise the changes noted by families in independence, voluntary regulation, social inclusion and the mastery of norms of joint activity.

9. Taken together, the results constitute a theoretical and applied solution to the complex problem of aligning scientific foundations, the content of adapted sessions and the assessment of psychosocial adaptation, and define a new scientific direction in sports pedagogy and adapted physical education – methodological support for the psychosocial adaptation of persons with special needs through Eastern martial arts. The scientific contribution lies in the development of a concept and a model that link the child's individual characteristics to the organisation of motor and joint activity, and in the experimental evaluation of their implementation through adaptive judo in children with ASD. The results support the tenets of the hypothesis regarding positive dynamics of motor and psychomotor indicators and, according to parental ratings, of independence, self-regulation and social interaction.

Limitations of the research. The quasi-experimental design, the non-equivalence of the groups and differences in the duration and regularity of participation limit the causal interpretation of the results. The final three-month cycle (March–May 2025) represents a repeated observation of the reproducibility of mastered actions and behaviour while sessions were continuing and is not a delayed follow-up after their cessation.

Practical recommendations.

1. *Education and sports authorities and founders of educational and sports institutions* should provide for the development of interdisciplinary support as an organisational condition for including children with special needs in systematic sessions; provide coaches and physical education teachers with advisory assistance from psychologists, special education specialists, kinetotherapists and neurologists; and define forms of

cooperation between educational, sports and specialised organisations that ensure continuity of support.

2. *Heads of educational institutions, sports schools and clubs* should build a support system based on an assessment of the participants and staff resources and appoint a specialist to coordinate interaction between coaches, consultants and the family; form groups taking into account age, anthropometric characteristics, level of preparedness and readiness for joint activity; provide for initial individual work, temporary participation of a parent and gradual inclusion of the child in the group; and prepare peers for joint sessions.

3. *Developers of curricula, programmes and methodological materials* should use the tenets of the concept to align the aims of motor training with the tasks of independence, self-regulation and social participation; provide for variability of tasks, ways of explaining, pace of mastery and assistance; and align the curriculum "Educație fizică și judo" with the experimental programme and the materials of the "Judoka's Diary".

4. *Higher education institutions and professional development organisations* should include in professional training methods of pedagogical assessment, adapting motor tasks, dosing load and organising inclusive sessions; use the materials developed when analysing typical difficulties (not understanding an instruction, breaking the movement sequence, refusal to participate, overload, difficulties in partner interaction); and prepare students for interdisciplinary cooperation.

5. *Coaches, physical education teachers and adaptive physical education specialists* should base the choice of content and the initial form of sessions on an individual assessment of understanding instructions, motor performance, regulation of actions and interaction; adapt exercises taking into account medical clearance and the child's current state; and use the "Judoka's Diary" to record independent performance and the support needed and to refine the adaptive-regulatory profile.

6. *Interdisciplinary support specialists* should relate their recommendations to the specific requirements of motor activity and the conditions of the child's participation, and organise the exchange of observations between the family, coach, teacher and other specialists.

Prospects for further research include clarifying the conditions for the effectiveness of the concept on larger and comparable samples; studying the retention of mastered actions after the programme ends;

verifying the reproducibility of the factor structure and the applicability of the differential scale on independent samples; assessing the contribution of individual components of the instructional support; and independent experimental verification of adapted programmes for children with Down syndrome and ADHD and for other Eastern martial arts.

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12. ПОЛЕВАЯ-СЕКЭРЯНУ А., АФТИМИЧУК О.Е. Значимость формирования специализированных восприятий для технической подготовки дзюдоистов. В: ВІСНИК, Педагогічны науки: за матеріалами Международного науково-практичного семинару «Формування фізичної культури особистості в системі неперервної освіті» №8 (2-3 квітня 2013), ЛНУ Імені Тараса Шевченко. Частина І. 2013. С. 146-155 (ISSN 2227-2844)
13. ПОЛЕВАЯ-СЕКЭРЯНУ А. Особенности формирования координационных способностей у дзюдоистов В: Спортивный Вісник Придніпров^(,)я. VIII Науково-практический журнал, ДДІФКС (Додаток до постанови Призедіі ВАК Украіини від 26 травня 2010 р. №1-05/4), 24-25 октября 2013 №3, 2013. с.66-72 ISBN2071-1476

2.3. In journals included in the National Register of specialised journals

14. ПОЛЕВАЯ-СЕКЭРЯНУ, А. Восточные единоборства как одна из систем формирования культурно-нравственных ценностей для лиц с особыми потребностями на примере дзюдо. Revista de proprietate intelectuală, ştiinţă şi educaţie „Intellectus", 2 / 2024. С. 103-113 https://doi.org/10.56329/1810-7087.24.2.10 (categoria B)
15. GLIGOR V. POLEVAIA-SECĂREANU A., DEMCENCO P.P. Studierea potenţialului funcţional-motrice şi psihologic al judocanilor de performanţă cu dizabilităţi vizuale. În: Ştiinţa culturii fizice, 2014, nr.18(2), Chişinău, USEFS. p. 19-25. (ISSN: 1857-4114) http://scf.usefs.md/PDF/Revista%20SCF/2-2014.pdf (categoria C)

2.4. In other journals

16. POLEVAIA-SECAREANU, A., CRACIUN, V. Rolul ludoterapiei în recuperarea persoanelor cu spectrul autist. In: Journal of Physical Rehabilitation and Sports Medicine, 2023, nr. 5(R), pp. 15-16. ISSN 2587-3709.

3. Articles in the proceedings of conferences and other scientific events

3.1. In the proceedings of international scientific conferences (abroad)

17. POLEVAIA-SECAREANU, A. The role of the game-based method in the development of cognitive abilities of judo athletes at the initial stage of training. În: 7TH Scientific and Professional Conference: APPLICABLE RESEARCH IN JUDO" 20-21. June 2024. POREČ – CROATIA pp. 79-82. ISBN 9789533170794 https://www.eju.net/download-file/?parentId=282019&id=325537
18. POLEVAIA-SECAREANU, A. Formation of specialized perceptions in judoists by means of rhythmic and musical education. În: 6th European Judo Science & Research Symposium And 5th Scientific And Professional Conference – Applicable Research In Judo". Porec Croatia, 12-14 June 2019. P. 89-93. (ISBN: 978-953-317-059-6)
19. GLIGOR V., POLEVAIA-SECAREANU A., DEMCENCO P. State of functional, motor and psychological abilities of the high class judoists with limited visual ability during the precontest period. International Scientific Conference VI nd EDITION Trends and Perspectives In Physical Culture And Sports Suceava 26th – 27th of May 2016. P. 186-193 ISSN 2065 – 3948
20. ПОЛЕВАЯ-СЕКЭРЯНУ А., ГЛИГОР В., ВЫСОЧИНА Н.В. Психическая адаптация как основа социализации дзюдоистов с тотальным и ограниченным отсутствием зрения// Университетский спорт в современном образовательном социуме : материалы Междунар. научно-практической конференции, Минск, 23–24 апр. 2015 г. : в 4 ч. / Белорус. гос. ун-т физ. культуры ; редкол. : Т. Д. Полякова (гл. ред.) [и др.]. Минск: БГУФК, 2015. Ч. С. 305-309.
21. ВЫСОЧИНА Н.В., ПОЛЕВАЯ-СЕКЭРЯНУ А., ГЛИГОР В: Психические свойства личности дзюдоистов с тотальным и ограниченным отсутствием зрения В: Современное состояние и тенденции развития физической культуры и спорта: Материалы Всероссийской заочной научно-практической конференции, 10 октября 2014 г. / НИУ «БелГУ» ; под общ. ред. И.Н. Никулина. Белгород: ИД «Белгород» НИУ «БелГУ», 2014. С. 77-80.
22. ГЛИГОР В., ПОЛЕВАЯ-СЭКЕРЯНУ А., ДЕМЧЕНКО П. Изучение функционально-двигательного и психологического потенциала спортсменов-дзюдоистов высокого класса с ограниченными зрительными возможностями. Актуальные проблемы теории и методики физической культуры, спорта и туризма: материалы IV Международной научно-практической конференции молодых ученых (часть 1): Минск, БГУФК, 2014. С. 42-45. (ISBN 978-985-7076-47-5 (ч. 1), ISBN 978-985-7076-46-8
23. ВЫСОЧИНА Н.В., ПОЛЕВАЯ-СЕКЭРЯНУ А., ГЛИГОР В. Характеристики темперамента у дзюдоистов с тотальным и ограниченным отсутствием зрения В: Медицинское обеспечение спорта высших достижений. 2014: Материалы научно-практической конференции. Москва: Аквариус, 2014. С. 46-49. ISBN 978-5-8125-2040-3

3.2. In the proceedings of international scientific conferences (Republic of Moldova)

24. ГРИГОРЕЦЬ, М., ПОЛЄВА-СЕКЕРЯНУ, А. Розвиток силових здібностей у дітей з обмеженими можливостями здоров'я за допомогою дзюдо на основі спостереження батьків. В: Підвищення фізичної працездатності різних груп населення в процесі занять фізичною культурою і спортом: збірник матеріалів IV Міжнародної науково-практичної конференції, Ірпінь, 21-22 травня 2026 р.

Ірпінь: Державний податковий університет, 2026, с. 260-264. ISBN 978-966-337-802-2. Disponibil: https://omp.dpu.edu.ua/catalog/view/1358/2155/13094

25. КУРТЕВА, О., ПОЛЕВАЯ-СЕКЭРЯНУ, А. Анализ текущего состояния здоровья студенческой молодежи в Республике Молдова и возможного потенциала физкультурно-оздоровительной деятельности в условиях вуза. В: Știință. Educație: Cultură, Conferința științifico-practică internațională Vol. 2, 2025. pp. 275-280. ISBN 978-9975-83-333-2; DOI: 10.5281/zenodo.15177373
26. ПОЛЕВАЯ-СЕКЭРЯНУ, А. Восточные единоборства как система психосоциальной адаптации лиц с особыми потребностями. В: Научно-образовательное пространство: реалии и перспективы повышения качества образования: Сборник материалов IV международная научно-практическая конференция, 6 декабря 2024: Комрат, 2025. pp. 11-16. ISBN 978-9975-83-337-0; DOI: 10.5281/zenodo.15259731(lucru în plen)
27. ЯСАБАШ, В., ПОЛЕВАЯ-СЕКЭРЯНУ, А. Использование информационных ресурсов в проектной деятельности для формирования коммуникативной и социальной экосистемной компетенции младших школьников. В: Роль образования в подготовке конкурентоспособных специалистов. Студенческие исследования-2025: студенческая научно-практическая конференция с международным участием, 8 апреля 2025: сборник статей. Комрат: [Б. и.], 2025, с. 194-201. ISBN 978-9975-83-349-3. DOI: https://doi.org/10.5281/zenodo.17300638.
28. HILIȚANU, L.R., POLEVAIA-SECĂREANU, A. Tehnici pedagogice în judo: îmbunătățirea performanței sportive și a valorilor personale. Научно-образовательное пространство: реалии и перспективы повышения качества образования: Сборник материалов IV международная научно-практическая конференция, 6 декабря 2024: Комрат, 2025. pp. 42-45. ISBN 978-9975-83-337-0; DOI: 10.5281/zenodo.15259731
29. POLEVAIA-SECAREANU, A. Psychosocial adaptation of persons with special needs as one of the factors of national security of the country. Proceedings of International Conference "Economic Security in the Context of Systemic Transformations", 3rd Edition, December 7-8 2023, Chişinău / drafting committee: Tatiana Bucos [et al.]. Chişinău: SEP ASEM, 2024. pp. 260-268. DOI: https://doi.org/10.53486/escst2023
https://ase.md/files/conferinte/econsec/EconSec_Proceedings_2024.pdf
30. ДАРИЙ А., ПОЛЕВАЯ-СЕКЭРЯНУ А. Особенности развития и социализации детей с аутизмом средствами иппотерапии. În: Conferința Științifică Internațională a Tinerilor Cercetători cu genericul: „Probleme actuale ale teoriei şi practicii culturii fizice”, ediţia I-a. 13 aprilie 2023. Chișinău, 2024. P. 398-403 ISBN 978-9975-83-322-6
31. SCOBIOALĂ GH., POLEVAIA-SECĂREANU A. Influența stilului de predare al antrenorului în procesul dezvoltării calităților fizice în sporturi de lupte. În: Formarea continuă a specialistului de cultură fizică în conceptul acmeologic modern : Materialele Conferinței Științifice Internaționale, Ediția a 2-a, 2 decembrie 2021, Chișinău : S. n., (Valinex SRL). 2021 p. 102-110.

3.3. In the proceedings of national conferences with international participation

32. FURDUI, D., POLEVAIA-SECĂREANU, A. Impactul Jiu-Jitsu Brazilian asupra funcțiilor cognitive la copii: o abordare interdisciplinară. In: Роль образования в подготовке конкурентоспособных специалистов. Студенческие исследования-

2026: студенческая научно-практическая конференция с международным участием, 23 апреля 2026: сборник статей. Комрат: [Б. и.], 2026, с. 66-69. ISBN 978-9975-83-377-6 DOI: https://doi.org/10.5281/zenodo.20741508

33. HILIȚANU, R. L., POLEVAIA-SECĂREANU, A. Transformarea învățământului general în secolul XXI: realități, disfuncționalități și modele prospective de dezvoltare instituțională. In: Роль образования в подготовке конкурентоспособных специалистов. Студенческие исследования-2026: студенческая научно-практическая конференция с международным участием, 23 апреля 2026: сборник статей. Комрат: [Б. и.], 2026, с. 70-74. ISBN 978-9975-83-377-6 DOI: https://doi.org/10.5281/zenodo.20741508.
34. STRUJUC, S., POLEVAIA-SECĂREANU, A. Importanța Qigong-lui în dezvoltarea capacității respiratorii. In: Роль образования в подготовке конкурентоспособных специалистов. Студенческие исследования-2026: студенческая научно-практическая конференция с международным участием, 23 апреля 2026: сборник статей. Комрат: [Б. и.], 2026, с. 75-79. ISBN 978-9975-83-377-6 DOI: https://doi.org/10.5281/zenodo.20741508
35. ГРИГОРЕЦ, М., ПОЛЕВАЯ-СЕКЭРЯНУ, А. Использование средств дзюдо в развитии силовых способностей у детей с ограниченными возможностями здоровья. В: Роль образования в подготовке конкурентоспособных специалистов. Студенческие исследования-2026: студенческая научно-практическая конференция с международным участием, 23 апреля 2026: сборник статей. Комрат: [Б. и.], 2026, с. 109-113. ISBN 978-9975-83-377-6 DOI: https://doi.org/10.5281/zenodo.20741508
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37. ДАРИЙ А., ПОЛЕВАЯ-СЕКЭРЯНУ А. Влияние иппотерапии на развитие моторных навыков у детей с аутизмом. В: Роль образования в подготовке конкурентоспособных специалистов. Студенческие исследования-2024. Национальная конференция с международным участием, Комрат, 26 апреля, 2024 С. 36-39. ISBN 978-9975-83-322-6 https://kdu.md/images/Files/rol-obrazovaniya-v-podgotovke-konkurentosposobnykh-spetsialistov-studencheskie-issledovaniya-2024.pdf.
38. POLEVAIA-SECĂREANU, A., GLIGOR, V., CREȚUL, O. Индивидуально-психологические свойства личности спортсменов-дзюдоистов с тотальным и ограниченным отсутствием зрения. Materialele conferinței științifico-practice, dedicate campionului paralimpic la judo Oleg Crețul, ediția a 7-a, 10 mai 2022, Chișinău : S. n., 2022 (Print-Caro). P. 40-47. ISBN 978-9975-164-93-1

4. Abstracts of papers presented at scientific forums

4.1. International conferences (abroad)

39. POLEVAIA-SECAREANU, A. Martial arts training as a means of enhancing gender inclusion and psychosocial adaptation of persons with special needs. In: Підвищення фізичної працездатності різних груп населення в процесі занять фізичною

культурою і спортом [Електронне видання] : збірник матеріалів III Міжнародної науково-практичної конференції, м. Ірпінь, 22–23 травня 2025 р. Ірпінь : Державний податковий університет, 2025. с. 126-128 PDF-формат ; мережеве видання ; інституційний репозитарій. ISBN 978-966-337-764-3 Disponibil: https://dpu.edu.ua/images/2025/.pdf

40. POLEVAIA-SECĂREANU A., KOROBEINIKOV G. HILITANU R. Cognitive Properties of Young Healthy Judokas and Persons with Mental Disabilities. In: YOUTH IN THE PERSPECTIVE OF THE OLYMPIC MOVEMENT. International Scientific Conference February 22-24, 2024 - Brașov, Romania. Disponibil: https://sport.unitbv.ro/images/YPOM/YPOM_2024/YPOM_2024_final_12.pdf

4.2. International conferences (Republic of Moldova)

41. POLEVAIA-SECAREANU, A. Psychosocial adaptation of persons with special needs: factors and mechanisms. In: Competitivitatea şi inovarea în economia cunoaşterii, Ed. 28, 20-21 septembrie 2024, Chişinău. Chişinău Republica Moldova: Departamentul Editorial-Poligrafic al ASEM, 2024, Ediţia a 28-a , p. 62. ISBN (pdf) 978-9975-168-04-5.
42. POLEVAIA-SECĂREANU A. Physical, technical and tactical training of judoists using the means of rhythmic education and music. In: Monography. Coordination abilities in physical education, sports and rehabilitation: International association of sport kinetics library series: MONOGRAPHY. Vol. 39. 26th – 27th of May 2016, p.200-201. ISBN 978-83-61509-36-3

5. Scientific-methodological and didactic works

5.1. Guides, curricula, course books

43. NEAGU, I., POLEVAIA-SECĂREANU, A. Educație fizică și judo: curriculum: clasele 1-4 / Neagu Igor, Polevaia-Secăreanu Angela; Ministerul Educației și Cercetării al Republicii Moldova, Federația de Judo din Republica Moldova, Universitatea de Stat de Educaţie Fizică şi Sport. Chişinău : [S. n.], 2024 (Valinex). 52 p. ISBN 978-9975-68-528-3.
44. POLEVAIA-SECĂREANU A. Didactica dezvoltării și pregătirii fizice a copiilor cu autism prin activități motrice cu caracter sportiv-aplicativ. Suport de curs. Chișinău: Valinex, 2023. 80 p. ISBN 978-9975-68-501-6.
45. POLEVAIA-SECĂREANU A. Didactica dezvoltării și pregătirii fizice a copiilor cu autism prin activități motrice cu caracter sportiv-aplicativ. Curriculum la programul de formare profesională a adulților. Chișinău: Valinex, 2023. 28 p. ISBN 978-9975-68-500-9.
46. POLEVAIA-SECĂREANU, A., COJEMEACHIN, V. Agenda judoka : îndrumar metodic / Federația de Judo din Republica Moldova. Chișinău: [S. n.], 2026 (Tipogr. „Pulsul Pieței”). 108 p. ISBN 978-9975-3731-3-5.

ANNOTATION

Polevaia-Secăreanu Angela: Methodological support for the process of psychosocial adaptation of persons with special needs within a system of Eastern martial arts training: habilitation thesis in education sciences, specialty 533.04. Physical education, sport, kinetotherapy and recreation. Chisinau, 2026.

Thesis structure: annotation in 3 languages; introduction; 6 chapters; general conclusions and recommendations; bibliography – 357 sources; 6 appendices; 244 pages of main text; 22 figures; 18 tables. The results have been published in 35 scientific articles.

Keywords: psychosocial adaptation, special needs, methodological support, Eastern martial arts, adaptive judo, autism spectrum disorder, motor activity, pedagogical monitoring.

Aim of the research: to provide a theoretical and methodological substantiation for, and to develop, a concept of methodological support for the process of psychosocial adaptation of persons with special needs within the system of Eastern martial arts training, and to evaluate experimentally the effectiveness of its implementation.

Research objectives: to conduct a theoretical and methodological analysis of scientific approaches to the problem of psychosocial adaptation of persons with special needs, including persons with ADHD, Down syndrome and ASD; to identify and substantiate the approaches, principles, mechanisms and pedagogical conditions of psychosocial adaptation through Eastern martial arts and to justify the choice of a priority martial art; to identify the characteristics of the categories of persons studied and to establish criteria, indicators and diagnostic tools for assessing their psychosocial adaptation, with an in-depth study of children with ASD; to develop and theoretically substantiate the concept of comprehensive methodological support for psychosocial adaptation and a structural-functional model for its implementation; to develop and implement differentiated instructional support for adaptive judo training; to verify experimentally the effectiveness of the developed methodological support through adaptive judo in children with ASD.

Scientific novelty and originality: the concept of methodological support for the psychosocial adaptation of persons with special needs within the system of Eastern martial arts training and the structural-functional model for its implementation have been developed and theoretically substantiated; the mechanisms of psychosocial adaptation through Eastern martial arts have been identified and systematised; a criterion-based diagnostic system for assessing the components and dynamics of psychosocial adaptation has been developed, including the assessment of the functional state of the central and autonomic nervous system; the specific features of the dynamics and interrelationships of psychosocial adaptation indicators in children with ASD engaged in systematic adaptive judo training have been established.

Main results: the body of theoretical and experimental results obtained constitutes a new scientific direction in sports pedagogy and adapted physical education – methodological support for the psychosocial adaptation of persons with special needs through Eastern martial arts. In the longitudinal pedagogical experiment (September 2022 – May 2025), young judokas with ASD showed positive changes in motor and psychomotor indicators; according to parents' assessments, favourable changes were established in nine indicators of psychosocial adaptation.

Theoretical significance: the understanding of the psychosocial adaptation of persons with special needs as a pedagogically supported process of developing independence, self-regulation and participation in joint activities has been substantiated; the psychomotor organisation of motor activity has been described through its sensorimotor, cognitive-regulatory and social-communicative components; an individual adaptive-regulatory profile has been proposed that links the child's characteristics to the choice of tasks and the conditions for performing them.

Applied value: differentiated instructional support for adaptive judo, an experimental programme, the curriculum "Educație fizică și judo" and the author's interactive manual "Judoka's Diary" have been developed; based on factor analysis, a differential scale of functional preparedness of young judokas has been proposed.

Implementation of research results: the experimental programme, methodological recommendations, the curriculum and the manual "Judoka's Diary" have been implemented in the activities of the Judo Federation of the Republic of Moldova (implementation act No. 225 of 17.11.2026); the curriculum and the course book "Didactica dezvoltării și pregătirii fizice a copiilor cu autism prin activități motrice cu caracter sportiv-aplicativ" have been implemented in the continuing professional education of physical education teachers and coaches at the Continuing Education Resource Centre of IEFS USM. The results were tested in institutions and sports clubs in the Republic of Moldova, Romania and Ukraine.

ADNOTARE

Polevaia-Secăreanu Angela: Suport metodologic al procesului de adaptare psihosocială a persoanelor cu necesități speciale în sistemul de practicare a artelor marțiale: teză de doctor habilitat în științe ale educației, specialitatea 533.04. Educație fizică, sport, kinetoterapie și recreație. Chișinău, 2026.

Structura tezei: adnotare în 3 limbi; introducere; 6 capitole; concluzii generale și recomandări; bibliografie – 357 de surse; 6 anexe; 244 de pagini de text de bază; 22 de figuri; 18 tabele. Rezultatele au fost publicate în 35 de articole științifice.

Cuvinte-cheie: adaptare psihosocială, necesități speciale, suport metodologic, arte marțiale, judo adaptat, tulburări din spectrul autist, activitate motrică, monitorizare pedagogică.

Scopul cercetării: fundamentarea teoretico-metodologică și elaborarea concepției suportului metodologic al procesului de adaptare psihosocială a persoanelor cu necesități speciale în sistemul de practicare a artelor marțiale și evaluarea experimentală a eficienței implementării acesteia.

Obiectivele cercetării: realizarea analizei teoretico-metodologice a abordărilor științifice privind problema adaptării psihosociale a persoanelor cu necesități speciale, inclusiv a persoanelor cu ADHD, sindrom Down și TSA; identificarea și fundamentarea abordărilor, principiilor, mecanismelor și condițiilor pedagogice ale adaptării psihosociale prin intermediul artelor marțiale și justificarea alegerii artei marțiale prioritare; identificarea particularităților categoriilor de persoane investigate și stabilirea criteriilor, indicatorilor și instrumentelor de diagnostic pentru evaluarea adaptării lor psihosociale, cu studierea aprofundată a copiilor cu TSA; elaborarea și fundamentarea teoretică a concepției suportului metodologic complex al adaptării psihosociale și a modelului structural-funcțional de implementare a acesteia; elaborarea și implementarea suportului metodic diferențiat al ședințelor de judo adaptat; verificarea experimentală a eficienței suportului metodologic elaborat prin intermediul judo-ului adaptat la copiii cu TSA.

Noutatea și originalitatea științifică: au fost elaborate și fundamentate teoretic concepția suportului metodologic al adaptării psihosociale a persoanelor cu necesități speciale în sistemul de practicare a artelor marțiale și modelul structural-funcțional de implementare a acesteia; au fost identificate și sistematizate mecanismele adaptării psihosociale prin intermediul artelor marțiale; a fost elaborat sistemul criterial-diagnostic de evaluare a componentelor și dinamicii adaptării psihosociale, care include evaluarea stării funcționale a sistemului nervos central și autonom; au fost stabilite particularitățile dinamicii și ale relațiilor dintre indicatorii adaptării psihosociale ai copiilor cu TSA în condițiile practicării sistematice a judo-ului adaptat.

Rezultatele principale: ansamblul rezultatelor teoretice și experimentale obținute constituie o nouă direcție științifică în pedagogia sportivă și educația fizică adaptată – suportul metodologic al adaptării psihosociale a persoanelor cu necesități speciale prin intermediul artelor marțiale. În cadrul experimentului pedagogic longitudinal (septembrie 2022 – mai 2025), la tinerii judoka cu TSA a fost identificată o dinamică pozitivă a indicatorilor motrici și psihomotori; conform evaluărilor părinților, a fost stabilită o dinamică favorabilă a nouă indicatori ai adaptării psihosociale.

Semnificația teoretică: a fost fundamentată înțelegerea adaptării psihosociale a persoanelor cu necesități speciale ca proces susținut pedagogic de dezvoltare a autonomiei, autoreglării și participării la activități comune; organizarea psihomotorie a activității motrice a fost relevată prin componentele senzoriomotorie, cognitiv-reglatorie și social-comunicativă; a fost propus profilul individual adaptativ-reglator, care corelează caracteristicile copilului cu alegerea sarcinilor și a condițiilor de realizare a acestora.

Valoarea aplicativă: au fost elaborate suportul metodic diferențiat al judo-ului adaptat, programul experimental, curriculumul „Educație fizică și judo” și ghidul interactiv al autorului „Agenda judoka”; în baza analizei factoriale a fost propusă scala diferențială a pregătirii funcționale a tinerilor judoka.

Implementarea rezultatelor cercetării: programul experimental, recomandările metodice, curriculumul și ghidul „Agenda judoka” au fost implementate în activitatea Federației de Judo a Republicii Moldova (act nr. 225 din 17.11.2026); curriculumul și suportul de curs „Didactica dezvoltării și pregătirii fizice a copiilor cu autism prin activități motrice cu caracter sportiv-aplicativ” – în procesul de formare profesională continuă a profesorilor de educație fizică și a antrenorilor în cadrul Centrului de resurse pentru formare continuă al IEFS USM. Aprobarea s-a desfășurat în instituții și cluburi sportive din Republica Moldova, România și Ucraina.

АННОТАЦИЯ

Полевая-Секэряну Анжела: Методологическое обеспечение процесса психосоциальной адаптации лиц с особыми потребностями в системе занятий восточными единоборствами: диссертация доктора хабилитат педагогических наук, специальность 533.04. Физическое воспитание, спорт, кинетотерапия и рекреация. Кишинёв, 2026.

Структура диссертации: аннотация на 3-х языках; введение; 6 глав; общие выводы и рекомендации; библиография – 357 источников; 6 приложений; 244 страницы основного текста; 22 рисунка; 18 таблиц. Результаты опубликованы в 35 научных статьях.

Ключевые слова: психосоциальная адаптация, особые потребности, методологическое обеспечение, восточные единоборства, адаптивное дзюдо, расстройства аутистического спектра, двигательная деятельность, педагогический мониторинг.

Цель исследования: теоретико-методологическое обоснование и разработка концепции методологического обеспечения процесса психосоциальной адаптации лиц с особыми потребностями в системе занятий восточными единоборствами и экспериментальная оценка результативности её реализации.

Задачи исследования: провести теоретико-методологический анализ научных подходов к проблеме психосоциальной адаптации лиц с особыми потребностями, включая лиц с СДВГ, синдромом Дауна и РАС; определить и обосновать подходы, принципы, механизмы и педагогические условия психосоциальной адаптации средствами восточных единоборств и обосновать выбор приоритетного вида единоборства; выявить особенности исследуемых категорий лиц и определить критерии, показатели и диагностический инструментарий оценки их психосоциальной адаптации с углублённым изучением детей с РАС; разработать и теоретически обосновать концепцию комплексного методологического обеспечения психосоциальной адаптации и структурно-функциональную модель её реализации; разработать и внедрить дифференцированное методическое обеспечение занятий адаптивным дзюдо; экспериментально проверить эффективность разработанного методологического обеспечения средствами адаптивного дзюдо у детей с РАС.

Научная новизна и оригинальность: разработаны и теоретически обоснованы концепция методологического обеспечения психосоциальной адаптации лиц с особыми потребностями в системе занятий восточными единоборствами и структурно-функциональная модель её реализации; выявлены и систематизированы механизмы психосоциальной адаптации средствами восточных единоборств; разработана критериально-диагностическая система оценки компонентов и динамики психосоциальной адаптации, включающая оценку функционального состояния центральной и автономной нервной системы; установлены особенности динамики и взаимосвязей показателей психосоциальной адаптации детей с РАС при систематических занятиях адаптивным дзюдо.

Основные результаты: совокупность полученных теоретических и экспериментальных результатов формирует новое научное направление в спортивной педагогике и адаптивном физическом воспитании – методологическое обеспечение психосоциальной адаптации лиц с особыми потребностями средствами восточных единоборств. В лонгитюдном педагогическом эксперименте (сентябрь 2022 г. – май 2025 г.) у юных дзюдоистов с РАС выявлена положительная динамика двигательных и психомоторных показателей; по оценкам родителей установлена благоприятная динамика девяти индикаторов психосоциальной адаптации.

Теоретическая значимость: обосновано понимание психосоциальной адаптации лиц с особыми потребностями как педагогически поддерживаемого процесса развития самостоятельности, саморегуляции и участия в совместной деятельности; психомоторная организация двигательной деятельности раскрыта через сенсомоторный, когнитивно-регуляторный и социально-коммуникативный компоненты; предложен индивидуальный адаптационно-регуляторный профиль, связывающий характеристики ребёнка с выбором заданий и условий их выполнения.

Прикладная ценность: разработаны дифференцированное методическое обеспечение адаптивного дзюдо, экспериментальная программа, куррикулум „Educație fizică și judo” и авторское интерактивное пособие „Дневник дзюдоиста”; на основе факторного анализа предложена дифференциальная шкала функциональной подготовленности юных дзюдоистов.

Внедрение результатов исследования: экспериментальная программа, методические рекомендации, куррикулум и пособие „Дневник дзюдоиста” внедрены в деятельность Федерации дзюдо Республики Молдова (акт № 225 от 17.11.2026); куррикулум и учебное пособие „Didactica dezvoltării și pregătirii fizice a copiilor cu autism prin activități motrice cu caracter sportiv-aplicativ” – в процесс непрерывного профессионального образования учителей физического воспитания и тренеров в Центре ресурсов непрерывного образования IEFS USM. Апробация проводилась в учреждениях и спортивных клубах Республики Молдова, Румынии и Украины.

UNIVERSITATEA DE STAT DIN MOLDOVA
INSTITUTUL DE EDUCAȚIE FIZICĂ ȘI SPORT

Cu titlu de manuscris
C.Z.U.: 796.853.23:376.1(043.2)=111

POLEVAIA-SECĂREANU Angela

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Rezumatul tezei de doctor habilitat în științe pedagogice

CHIȘINĂU, 2026

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Summary of the Doctor Habilitatus thesis in pedagogical sciences

Approved for printing: 14.11.2026 Paper format 60x84 1/16
Offset paper. Offset printing. Edition: 50 copies.
Printing sheets: 9.0 Order No. 22

The summary was printed at the " Pulsul Pieței" Printing House,
from Chisinau, Gh. Iablocikin str., 5