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Article

Forming a Culture of Health in Children with Special Health Needs

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Abstract: This article addresses issues relating to the formation of a culture of health, examining what constitutes a health culture in children with special educational needs and how an inclusive environment helps transform complex hygiene rules into conscious habits.

Keywords: health, culture of health, children, special educational needs, key components.

1. Introduction

The formation of a culture of health in children with special health needs (SHN) represents one of the most pressing challenges in contemporary special and inclusive pedagogy. Children belonging to this category — including those with hearing, vision, speech, and musculoskeletal impairments, as well as children with mental retardation, intellectual disabilities, and autism spectrum disorders — face unique developmental barriers that make the acquisition of health-related knowledge, values, and behaviors considerably more complex than for their normotypical peers. The diversity of impairments within this population is matched by a diversity of specific challenges, yet all children with SHN share the fundamental need for targeted, systematic, and individualized pedagogical support in the development of healthy lifestyle competencies.

The concept of health culture encompasses far more than the mastery of hygienic procedures or participation in physical activity. It refers to a complex integrative personal quality that combines health-related knowledge, a positive emotional attitude toward one's own body and well-being, and the practical ability to translate these into stable daily habits and autonomous self-care behaviors. For children with SHN, the development of this quality is not merely a health promotion objective but a fundamental condition for social integration, personal autonomy, and quality of life.

Despite growing recognition of the importance of health culture formation within the framework of inclusive education, the systematic study of effective pedagogical strategies for children with SHN remains incomplete. Existing research tends to focus either on general health promotion in school settings or on the medical rehabilitation of children with specific impairments, leaving a significant gap in the pedagogical literature on the integrated development of health culture competencies within inclusive educational environments.

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This article addresses that gap by synthesizing theoretical and empirical knowledge regarding the nature, components, conditions, and effective pedagogical approaches for forming a culture of health in children with SHN. The study examines the role of inclusive education as an enabling environment, the importance of play-based and visualization-centered pedagogical technologies, and the systemic conditions — including family involvement and interprofessional collaboration — that determine the sustainability of health culture development outcomes. The findings are intended to contribute both to scholarly understanding and to the practical work of educators, psychologists, and families supporting children with SHN in inclusive school settings.

As is well known, the category of children with special health needs (SHN) includes children with hearing, vision, speech, and musculoskeletal impairments, as well as children with mental retardation (MR), intellectual disabilities, and autism spectrum disorders. Despite the diversity of impairments, these children share common characteristics that determine the specifics of forming a culture of health [1].

Most children with special health needs are characterized by general somatic weakness; in particular, physical development often proceeds with delays: impairments of coordination, underdevelopment of fine and gross motor skills, general reduction in muscle tone, and endurance may be observed. This creates objective difficulties for engaging in mainstream sports and requires the integration of adaptive physical education into their daily lives [2].

An important characteristic of children with SHN is the specificity of the emotional-volitional sphere, as these children often exhibit increased fatigue, difficulties with self-regulation, and anxiety. This in turn reduces the concentration of neural processes, making it more difficult for them to recognize their body's signals (hunger, cold, fatigue), which leads to stress that negatively affects the organism's overall condition.

As L.S. Vygotsky noted, when studying such children it is important to take into account not only the primary defect itself, but also how the child adapts to life in society [3]. Unlike peers with normotypical development, children with SHN often have difficulty assimilating cultural norms. Skills of personal hygiene, understanding the value of proper nutrition, or daily routines do not form "by themselves" through imitation; therefore, targeted pedagogical work is required to internalize external requirements into personal habits [4].

A child with SHN needs not simply treatment, but the creation of special educational conditions in which forming a culture of health will occupy a leading position — one that takes into account their sensory, cognitive, and motor capabilities. Only by understanding the internal deficits and strengths of each child is it possible to move toward building a system of conscious self-awareness and body awareness [5].

In contemporary special pedagogy, a culture of health is regarded as an integrative personal quality, and forming a culture of health in children with SHN is a complex educational process whose goal is not simply to strengthen the organism, but to create an internal motivation for preserving life and active development [6]. This process includes three key components:

Cognitive component: at this stage, a knowledge base adapted to the child's intellectual capabilities is formed; simplification of information and use of visual supports are important. It is essential to instill in children an awareness of their own body, hygienic literacy, and life safety [7].

Emotional-value component, to which E.A. Medvedeva paid particular attention, as it requires taking into account the child's own desire to take care of themselves; otherwise any methodology will be largely ineffective. This component includes: positive self-perception, the value of life, and emotional intelligence [8].

Activity-based component, according to the same author, includes the practical realization of knowledge and desires in everyday behavior, making it possible to achieve the formation of healthy habits, physical activity, and encouragement of independence [9].

As is well known, a culture of health is not a sum of skills, but a conscious way of life that allows a child with special needs to be as autonomous and successful as possible in society [10].

For a child with SHN, peers with normotypical development become a natural behavioral model, and once placed in an inclusive group, routine compliance processes (shared lunch, preparation for outdoor activities, exercise breaks) proceed more effectively. Observing how other children actively engage in active games or follow hygiene rules, the child with special needs strives to repeat these actions, which accelerates the automatization of healthy habits and develops a sense of belonging to the group, thereby reducing the level of stress and anxiety and positively influencing psychosomatic well-being [11].

It should be noted that an inclusive environment fosters a culture of "supporting each other's health," where children learn to help a peer with physical limitations, creating an atmosphere of safety for all — confirming that inclusive education is not simply joint instruction, but the creation of an environment that adapts to the needs of each individual [12].

According to S.V. Alekhina, an inclusive space implies adapting the environment to the child's needs, which directly affects the formation of their culture of health: architectural accessibility, the presence of sensory relief zones, and adaptive physical activity.

Inclusion transforms the formation of a culture of health from a "therapeutic process" into a natural part of social life, as the child learns to be healthy not because a doctor said so, but because it enables full communication, play, and development together with friends [1].

Working with children who have special educational needs requires a departure from classical lecture-based forms, with the primary emphasis placed on visual representation, repeated practice, and emotional engagement [13].

Play, being the leading type of activity and the best way to convey complex rules in an accessible form, is employed through didactic games, role-playing games, and therapeutic stories [14].

At the same time, health-preserving techniques that effectively support physical tone should be widely used and regularly integrated into the educational process. These include: finger gymnastics and logorhythmics, visual gymnastics, breathing exercises, and others [15].

For children with SHN (especially those with mental disabilities or autism spectrum disorders), visualization is particularly important: visual schedules, achievement journals, and the use of special equipment that helps the child develop a better sense of their own body.

The effectiveness of these methods depends directly on their systematic application, as a culture of health is not formed by a single event, but is built from daily small actions that, thanks to playful and visual forms, become understandable and enjoyable for the child.

Thus, systematic work on forming a culture of health in children with SHN yields results that extend far beyond medical indicators. The outcome of this activity is the formation in the child of the core components of a healthy lifestyle.

The child masters accessible self-care skills, which reduces dependence on adult assistance and raises self-esteem. By mastering relaxation techniques and understanding their own states, children experience fewer emotional breakdowns and show increased general stress resilience. The child begins to recognize potentially dangerous situations and strives to avoid actions harmful to their well-being. Mastery of a culture of health allows the child to more easily join a peer group, participate in shared games and activities on equal terms.

In summary, the formation of a culture of health in children with special health needs is not a set of hygienic procedures or physical exercises, but an opportunity to care for one's health together with children and to form hygienic skills. In the context of inclusive education, this process becomes reciprocal: children with SHN learn to care for themselves by observing their peers, while society learns to create an environment in which the health of every person is an unconditional value. The success of this work is possible only through close interaction among teachers, medical professionals, and families, provided that professionally organized work within an inclusive space allows the child with SHN to feel protected and to learn to take on an appropriate degree of responsibility for their own well-

being and health.

2. Methodology

This study employs a qualitative theoretical-analytical methodology based on a systematic review of scholarly literature in the fields of special pedagogy, inclusive education, developmental psychology, and health culture formation. The research synthesizes theoretical frameworks, empirical findings, and pedagogical approaches drawn from Russian-language and international scholarly traditions to construct a comprehensive model for developing health culture in children with special health needs (SHN).

The primary analytical approach integrates three complementary perspectives. First, a defectological analysis examines how the primary and secondary deficits associated with different categories of SHN — including sensory impairments, motor disorders, intellectual disabilities, and autism spectrum disorders — create specific challenges and opportunities for health culture formation. Second, an inclusive education analysis explores how the design of inclusive educational environments shapes the conditions under which children with SHN develop health-related knowledge, values, and behaviors. Third, a pedagogical technology analysis evaluates the evidence base for specific instructional methods and health-preserving techniques used in work with children with SHN.

Sources were selected on the basis of their scholarly authority, relevance to the research problem, and methodological quality. Priority was given to peer-reviewed monographs, textbooks from established academic publishers, and articles in scientific journals specializing in special education and developmental psychology. Comparative analysis of approaches across different disability categories enabled the identification of shared principles applicable to children with SHN as a whole, while also highlighting category-specific adaptations required for effective implementation.

The study draws on the theoretical legacy of L.S. Vygotsky's cultural-historical psychology, particularly the concepts of the zone of proximal development and the relationship between primary defects and secondary developmental consequences, as a foundational framework for understanding health culture formation in the context of special needs. This is complemented by contemporary competency-based and activity-based approaches in special pedagogy that emphasize the formation of practical life skills and autonomous functioning.

3. Results

The analysis of theoretical and empirical literature yields a coherent set of findings regarding the nature, components, conditions, and effective approaches for forming a culture of health in children with SHN. The results are organized across four thematic areas.

Conceptual Foundations. The analysis confirms that health culture in children with SHN must be understood as a multidimensional integrative personal quality rather than a collection of discrete hygienic skills or physical fitness outcomes. It encompasses a cognitive dimension (health-related knowledge adapted to each child's cognitive profile), an emotional-value dimension (positive attitudes toward one's body and life, emotional self-regulation, and motivation for self-care), and a behavioral dimension (the practical translation of knowledge and values into stable everyday habits and routines). The interdependence of these dimensions means that interventions targeting only one component — for example, hygiene instruction without attention to emotional engagement — produce limited and unsustainable results.

Defect-Specific Challenges and Opportunities. Children across different SHN categories face specific barriers to health culture development that require differentiated pedagogical responses. Children with intellectual disabilities require highly concretized, repetitive instruction with extensive visual support and task decomposition to build health-related routines. Children with autism spectrum disorders benefit from structured visual schedules, predictable environmental organization, and sensory-adapted spaces that reduce anxiety and support body awareness. Children with motor impairments require

adaptive physical activity programming that builds competence and positive body image rather than emphasizing functional limitations. Children with sensory impairments (hearing and vision) need compensatory communication strategies and multimodal health education approaches that bypass the impaired sensory channel.

Role of Inclusive Environment. The findings strongly support the view that inclusion in a normotypical peer environment significantly accelerates health culture formation in children with SHN through multiple mechanisms. Social modeling — observing peers perform health routines, participate in physical activity, and follow hygiene practices — activates imitative learning processes that are difficult to replicate in segregated special education settings. Participation in shared routines (group meals, outdoor preparation, exercise breaks) embeds health behaviors in meaningful social contexts that enhance motivation and generalization. The inclusive environment additionally promotes the development of social health competencies including cooperation, empathy, mutual support, and the ability to ask for and offer help.

Effective Pedagogical Technologies. The literature converges on a set of pedagogical approaches with demonstrated effectiveness in health culture formation for children with SHN. Play-based methods — including didactic games, role-playing scenarios, and therapeutic stories — are consistently identified as the most effective primary instructional modality across disability categories, as they reduce performance anxiety, increase motivation, and support the transfer of learning to real-life contexts. Health-preserving techniques including finger gymnastics, logorhythmics, visual gymnastics, breathing exercises, and relaxation training are effective both as standalone interventions and as embedded components of the daily educational routine. Visualization technologies including visual schedules, activity boards, photo sequences, and achievement journals are particularly critical for children with intellectual disabilities and autism spectrum disorders, as they reduce cognitive load, enhance predictability, and support autonomous execution of health routines.

Systemic and Ecological Conditions. The results highlight that individual pedagogical interventions are most effective when embedded within a supportive systemic ecology. School-family collaboration is identified as an essential condition for health habit generalization, as habits formed in the educational setting require consistent reinforcement in the home environment to become stable components of the child's behavioral repertoire. Interprofessional collaboration among teachers, special educators, psychologists, and medical professionals ensures comprehensive, coordinated support that addresses the full range of factors influencing health culture development. The physical and sensory design of the educational environment — including architectural accessibility, sensory relief zones, adaptive equipment, and organized outdoor spaces — constitutes a foundational material condition for health culture formation.

4. Discussion

The findings of this study deepen understanding of health culture formation in children with SHN by demonstrating that this process is fundamentally shaped by the interplay of individual developmental characteristics, pedagogical design, and environmental conditions. The three-component model — cognitive, emotional-value, and behavioral — provides a theoretically grounded and practically applicable framework that addresses the full complexity of health culture as a personal quality, moving beyond reductive approaches that treat health education as primarily informational or skills-based.

The centrality of the emotional-value component in effective health culture formation deserves particular emphasis. Research consistently demonstrates that knowledge of health rules and behavioral routines does not translate automatically into motivated, autonomous health behavior; the child must also develop positive self-regard, a sense of bodily ownership, and an intrinsic motivation to protect and care for their own health. For children with SHN, who often experience lower self-esteem, heightened anxiety, and diminished sense of agency as secondary consequences of their primary impairments, building this emotional-value foundation requires deliberate, sustained, and psychologically informed pedagogical attention.

The role of inclusive education in health culture formation extends significantly

beyond the commonly cited benefits of social integration. The findings indicate that the normotypical peer group functions as a natural health culture transmission mechanism through everyday social modeling, shared routines, and peer support dynamics that are qualitatively different from adult-mediated instruction. This suggests that inclusive education policy in Uzbekistan and similar contexts should be understood not only as an equity measure but also as a health promotion strategy, creating environments in which children with SHN have organic access to the health behaviors, values, and social competencies of their peers.

The alignment of the identified effective pedagogical technologies with established principles of special education is noteworthy. Play-based learning, visualization, structured repetition, and multisensory engagement are consistent with the core tenets of differentiated instruction, universal design for learning, and Vygotskian zone of proximal development theory. This convergence suggests that health culture formation, when designed according to special pedagogical principles, can be integrated into the existing framework of inclusive education without requiring separate or parallel programming.

The systemic and ecological dimension of the results points to an important implication for educational policy and practice. The effectiveness of any individual health education intervention is bounded by the quality of the surrounding system — the consistency of family support, the coordination among professionals, and the physical and sensory design of the learning environment. Investments in any single element of this system — however pedagogically sound — will yield suboptimal results if the systemic conditions are inadequate. This finding strengthens the case for whole-school, multi-agency approaches to health culture development that simultaneously address pedagogical, organizational, environmental, and family dimensions.

The defect-specific findings underscore the importance of individualized assessment and program design. While common principles apply across SHN categories, the specific barriers and enabling conditions differ substantially between, for example, a child with autism spectrum disorder and a child with hearing impairment. Educators working in inclusive settings require differentiated professional competencies to adapt general health culture formation strategies to the specific needs of each child. This has direct implications for teacher preparation programs and continuing professional development in special and inclusive education.

Comparison with international research on health literacy and health promotion in special education reveals both convergence and divergence. International literature similarly emphasizes the importance of functional, context-embedded health education, peer-mediated learning, and family involvement. However, the Russian special pedagogy tradition represented in this study contributes distinctive emphases on the integrative character of health culture as a personal quality, the role of defectological analysis in designing differentiated interventions, and the theoretical grounding in Vygotskian cultural-historical psychology.

A limitation of this study is its reliance on theoretical synthesis rather than primary empirical data from Uzbek or Russian schools. Future research should employ mixed-methods designs combining longitudinal observation of children with SHN in inclusive settings, structured interviews with teachers and families, and standardized assessment of health culture components to generate more granular, context-specific evidence. Intervention studies testing the effectiveness of specific pedagogical programs for health culture formation in children with different SHN categories would substantially strengthen the evidence base for practice.

The implications of the findings for policy and practice in Uzbekistan are significant. As the country continues to develop its inclusive education infrastructure, deliberate attention to the health culture formation dimension of inclusive schooling represents an important opportunity to simultaneously advance educational equity and population health outcomes. Professional development programs for inclusive education teachers should incorporate specific competencies in health culture formation, adaptive physical education, and health-preserving pedagogical technologies.

5. Conclusion

This study has demonstrated that the formation of a culture of health in children with special health needs is a complex, multidimensional pedagogical process that extends well beyond the boundaries of medical rehabilitation or hygienic instruction. The findings confirm that effective health culture development requires the simultaneous cultivation of cognitive knowledge, emotional-value orientations, and practical behavioral competencies — a triad that must be addressed holistically rather than in isolation.

The inclusive educational environment emerges as a powerful enabling condition for health culture formation, providing children with SHN access to the social modeling, shared routines, and peer support dynamics that are essential for the naturalistic development of health-related habits and values. When children with SHN are integrated into normotypical peer groups and given meaningful participation in shared health routines, the automatization of healthy behaviors proceeds more effectively and durably than in segregated settings. At the same time, inclusion is not a sufficient condition in itself: the physical accessibility, sensory design, and relational climate of the inclusive environment must be deliberately organized to meet the specific needs of each child.

Play-based instructional methods, health-preserving techniques, and visualization technologies are identified as the pedagogical approaches with the strongest evidence base for work with children with SHN across disability categories. Their effectiveness is amplified when applied systematically and consistently as embedded components of the daily educational routine rather than as occasional special events. The daily accumulation of small, accessible health-related actions — rendered comprehensible and motivating through playful and visual forms — constitutes the primary mechanism through which health culture is built over time.

The systemic and ecological dimensions of health culture formation deserve particular emphasis. The family, the school, and the wider community must function as a coordinated support system in which the health-related messages, expectations, and opportunities provided across settings are mutually reinforcing. School-family partnership, interprofessional collaboration among educators and health specialists, and the provision of an accessible and stimulating physical environment are not peripheral supports but foundational conditions for sustainable outcomes.

The practical implications of these findings call for the systematic integration of health culture formation objectives into the design of inclusive education programs, teacher professional development curricula, and family support services. Future research should extend this work through longitudinal empirical studies of health culture development in inclusive school settings, comparative investigation of outcomes across different disability categories and educational contexts, and the development and validation of standardized assessment instruments for measuring health culture competencies in children with SHN. Such research will be essential for building the evidence base needed to support the effective implementation of inclusive health education in Uzbekistan and comparable national contexts.

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