



AN INTEGRATED STUDY OF NEUROPSYCHOLOGICAL AND PSYCHOSOCIAL DETERMINANTS OF QUALITY OF LIFE IN ADOLESCENTS WITH CHRONIC SOMATIC DISEASES

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Abstract. This study examines the psychological factors influencing the quality of life of adolescents with chronic somatic diseases. The research involved 177 adolescents aged 14–17 with vegetative-vascular dystonia, diabetes mellitus, and gastritis. Using the SF-36 questionnaire, the Multidimensional Assessment of Children's Anxiety, and the Coping Behavior Methods, significant correlations were found between quality of life and various coping strategies. Productive coping strategies such as *problem-solving planning*, *positive reappraisal*, and *seeking social support* were associated with higher quality of life and reduced anxiety, whereas *escape-avoidance* and *accepting responsibility* correlated negatively with psychosocial well-being. The study highlights the importance of psychological support and adaptive coping strategies in improving the quality of life among adolescents with chronic illnesses.

Key words: quality of life, adolescents, chronic somatic diseases, coping strategies, anxiety, psychological adaptation

Аннотация. В исследовании рассматриваются психологические факторы, влияющие на качество жизни подростков с хроническими соматическими заболеваниями. В исследовании приняли участие 177 подростков в возрасте 14–17 лет с вегетативно-сосудистой дистонией, сахарным диабетом и гастритом. С использованием опросников SF-36, Многофакторной оценки детской тревожности и Методики копинг-поведения были выявлены значимые корреляции между качеством жизни и различными стратегиями совладания. Продуктивные копинг-стратегии, такие как *планирование решения проблемы*, *позитивная переоценка* и *поиск социальной поддержки*, были связаны с более высоким качеством жизни и снижением тревожности, тогда как *уход-избегание* и *принятие ответственности* коррелировали отрицательно с психосоциальным благополучием. Исследование подчеркивает важность психологической поддержки и развития адаптивных копинг-стратегий для повышения качества жизни подростков с хроническими заболеваниями.

Ключевые слова: качество жизни, подростки, хронические соматические заболевания, копинг-стратегии, тревожность, психологическая адаптация.

Annotatsiya. Ushbu tadqiqot surunkali somatik kasalliklarga chalingan o'smirlarning hayot sifatiga ta'sir etuvchi psixologik omillarni o'rganadi. Tadqiqotda 14–17 yoshdagi 177 nafar o'smir ishtirok etdi, ularda vegetativ-tomir distoniyasi, qandli diabet va gastrit kuzatildi. SF-36 so'rovnomasi, bolalar xavotirini ko'p o'lchovli baholash testi va koping-xulq metodikasi yordamida hayot sifati bilan turli koping-strategiyalar o'rtasida muhim bog'liqliklar aniqlandi. *Muammoni hal qilishni rejalashtirish*, *ijobiy qayta baholash* va *ijtimoiy yordam izlash* kabi samarali koping-strategiyalar yuqori hayot sifati va past xavotir darajasi bilan bog'liq bo'lsa, *qochish–oldini olish* va

mas'uliyatni qabul qilish psixososial farovonlik bilan salbiy bog'liqlikka ega edi. Tadqiqot natijalari surunkali kasallikka chalingan o'smirlar hayot sifatini yaxshilashda psixologik yordam va moslashuvchan koping-strategiyalarni rivojlantirish zarurligini ko'rsatadi.

Kalit so'zlar: hayot sifati, o'smirlar, surunkali somatik kasalliklar, koping-strategiyalar, xavotir, psixologik moslashuv

Introduction. The increasing incidence of diseases among children and adolescents remains a pressing issue today. Furthermore, there is an increasing frequency of diagnoses of chronic somatic diseases in minors [1]. Contemporary research emphasizes that one of the most important indicators for assessing the effectiveness of treatment and rehabilitation interventions is the quality of life of patients [2]. Despite the rapid advancement of medical technology and improvement in the quality of medical care, patients are not always satisfied with their lives following treatment. In this paper, we rely on the definition of quality of life by A. A. Novik and T. I. Ionova (2013). According to this definition, the quality of life of an adolescent with illness is considered an integrative characteristic of their life, including physical, psychological, and social functioning, and taking into account the specifics of subjective perception. Contemporary research points to the significant contribution of illness to the lives of patients. One way or another, illness sets special conditions for life, regardless of the age of its onset. During childhood and adolescence, it invariably influences the formation and development of personality. The very onset of a chronic somatic disease places both the child and his entire family in new, special circumstances. Research in recent years has placed the phenomenon of stress at the forefront at the diagnosis stage. The intensity of the child's experiences depends on various factors, including his age, the severity of the disease, existing knowledge about the specific disease, and the reactions of the parents. However, researchers note that the level of stress during the diagnosis can reach reactions comparable to the clinical picture of post-traumatic stress disorder [5], and the emergence of various signs of mental maladjustment in the child cannot be ruled out [6]. In adolescence, the onset of a chronic disease sets completely different trends. These are interconnected with the processes of forming prospects for the future, as well as the actualization of the processes of separation and the development of self-awareness. In the situation of diagnosis, the teenager experiences an emotional shock, which is caused by anxiety about possible restrictions on communication with peers, a value of primary importance at this stage of personality development. Feelings of alienation and loneliness are most characteristic of this stage. [7]. Moreover, the collapse of future plans, which begin to take on some reality at this age, plays a special role here. Consequently, adolescence is characterized by a more anxious perception of exacerbations of an existing illness. The future becomes uncertain, frightening, and evokes numerous concerns, often related to the adolescent's perceived limitations associated with the illness. The inability to achieve a satisfactory quality of life is also associated with decreased self-esteem, self-doubt [4]. We believe that in this case, the relationship between the level and profile of self-esteem influences the quality of life and is realized as a single mechanism associated with the processes of emotional self-regulation. At the same time, a violation of social and psychological adaptation is not a necessary consequence of the presence of a chronic somatic disease. In some cases, a different tendency is revealed, in which the mobilization and inclusion of compensatory processes of mental regulation is noted. The circumstances of the disease, for example, can stimulate the teenager to the cognitive activity necessary to overcome the barriers created by the disease. At the same time, the motivation for self-realization in the areas of life accessible to the teenager is mobilized. [3] The peculiarities of coping with the disease will depend on the teenager's usual ways of coping with difficult life situations. It is natural that, lacking sufficient experience in their life, the teenager will seek help from their parents. However, parents themselves may also experience a decrease in their adaptive capacity, which, due to a lack of necessary support, exacerbates the adolescent's situation [8]. Despite the significant number of modern studies describing the emotional, personality, and quality of life of children and adolescents with illness, there is a shortage of studies that describe psychological factors in the context of the quality of life of adolescents with chronic somatic diseases, which describe psychological factors in the context of the quality of life of adolescents with

chronic somatic diseases, which describe psychological factors in the context of the quality of life of adolescents with chronic somatic diseases.

Material and methods. The study involved 177 adolescents with various chronic somatic diseases. The age of respondents ranged from 14 to 17 years. Based on the total sample, comparison groups were formed, which included: adolescents with vegetative-vascular dystonia (ICD-10 code: G90.8), adolescents with diabetes mellitus (ICD-10 code: E10), adolescents with gastritis (ICD-10 code: K29). In accordance with the goals and objectives of the study, the following methods were chosen: the SF-36 questionnaire to assess the quality of life, the Multidimensional Assessment of Children's Anxiety questionnaire by E. E. Malkova (Romitsyna) (2007) to assess the level of anxiety, and the Coping Behavior Methods technique by R. Lazarus and S. Folkman (1988) to determine priority coping strategies. The study was conducted based on informed consent from parents and the adolescents themselves. Data were systematized and statistically processed using IBM SPSS Statistics 19.

Study results and discussion. Statistically significant differences were found in the "General Anxiety" ($F = 4.879$; $p = 0.009$) and "Decreased Mental Activity Caused by Anxiety" ($F = 6.743$, $p = 0.002$) scales between the comparison groups. The most vulnerable group in this regard is adolescents with vegetative-vascular dystonia. This disease is often triggered by emotional disturbances, neurotic disorders, and exposure to emotional stress, suggesting a significant role of the psychosomatic component in these diseases. Correlation analysis revealed direct statistically significant relationships between all quality of life scales and anxiety in all significant areas of life of adolescents with chronic somatic diseases ($p < 0.01$). Thus, it can be concluded that there are no differences in the choice of coping strategies between adolescents from the comparison groups. To identify significant relationships between quality of life and preferred coping strategies, we conducted a correlation analysis, which revealed both direct and inverse statistically significant relationships. The "Distancing" coping strategy showed direct correlations with the "Vital Activity" ($R = 0.188$, $p = 0.012$) and "Mental Health" ($R = 0.195$, $p = 0.009$) quality of life scales. Thus, the more frequently an adolescent uses the "Distancing" coping strategy, the more active they feel and the less anxious and depressive they are. Distancing is a relatively productive coping strategy, including in adolescence. Thus, the adolescent reduces the significance of a traumatic situation, dismissing it as if nothing had happened. The "Seeking Social Support" coping strategy shows direct correlations with the "Vital Activity" ($R = 0.182$, $p = 0.015$) and "Mental Health" ($R = 0.210$, $p = 0.005$) quality-of-life scales. Thus, the more frequently a teenager uses the "Seeking Social Support" coping strategy, the more energized and energetic they feel, and the less likely they are to experience depression and anxiety. For adolescence, the "Seeking Social Support" coping strategy is considered a productive coping style. Lacking sufficient experience and resources, teenagers often turn to others for help. If, for whatever reason, they find it impossible to seek help, this likely reflects mistrust and communication problems with parents and peers. The coping behavior method of the "Problem-solving planning" type shows direct correlations with the quality of life scales "Vital activity" ($R = 0.321$, $p = 0.000$), "Social functioning" ($R = 0.232$, $p = 0.002$), "Mental health" ($R = 0.328$, $p = 0.000$). As statistical analysis showed, the more often a teenager uses this type of coping strategy, the more he feels socially active, full of energy and strength and experience less anxiety and depressive tendencies. The use of the "Problem-Solution Planning" coping strategy by adolescents is associated with a high level of quality of life. This type of coping strategy is considered the most productive. The "Positive Reappraisal" coping strategy shows direct correlations with the "Vital Activity" quality of life scale ($R = 0.180$, $p = 0.017$). Thus, the more often an adolescent chooses this coping strategy, the more active, full of energy and strength they feel. The "Positive Reappraisal" coping style cannot be considered productive; however, it is directly related to quality of life. In the absence of life experience, for adolescents, it can provide an opportunity to reduce the stressfulness of a situation by believing in a positive outcome. The coping strategy type "Accepting responsibility" reveals an inverse correlation with the quality of life scales of both physical and psychological components: "Role functioning" ($R = -0.149$, $p = 0.048$), "Pain intensity" ($R = -0.172$, $p = 0.022$), "General health" ($R = -0.233$, $p = 0.002$), "Vital activity" ($R = -0.185$, $p = 0.014$), "Social functioning" ($R = -0.167$, $p = 0.026$), "Mental health" ($R = -0.185$, $p = 0.014$). The results of

statistical data processing showed a relationship between the use of this strategy and a decrease in social communication, activity of the teenager, the presence of anxious and depressive experiences. Despite the fact that the coping strategy of the “Accepting Responsibility” type is often considered productive coping, in adolescence it can be seen more as an indication of the teenager’s sense of guilt, which can suppress the teenager’s emotional state and strengthen psychosomatic relationships. The “Escape-avoidance” coping strategy reveals inverse correlations with the quality of life scales of both the physical and psychological components of quality of life: “Role functioning” ($R = -0.273, p = 0.000$), “Pain intensity” ($R = -0.163, p = 0.031$), “General health” ($R = -0.240, p = 0.001$), “Vital activity” ($R = -0.205, p = 0.006$), “Social functioning” ($R = -0.262, p = 0.000$), “Mental health” ($R = -0.206, p = 0.006$). The more often the adolescent uses this type of coping, the lower the level of his quality of life. “Escape-avoidance” refers to maladaptive coping strategies. Using this coping strategy, adolescents experience constant anxiety and emotional stress, actively avoiding the problem at hand, which is predictably associated with a decline in quality of life. Thus, we identified statistically significant correlations between the personality traits of adolescents with various chronic somatic diseases and their quality of life. The study’s findings have theoretical significance as they contribute to filling the gaps in understanding of the psychological factors that determine the quality of life of adolescents with chronic somatic illnesses. Furthermore, the study’s findings can be used by clinical psychologists in counseling these adolescents.

Conclusion. The present study provides valuable insights into the psychological mechanisms underlying the quality of life of adolescents with chronic somatic diseases. The findings demonstrate that the quality of life in this population is closely linked to the level of anxiety and the choice of coping strategies. Productive coping behaviors — such as *problem-solving planning*, *positive reappraisal*, and *seeking social support* — are associated with higher levels of vitality, social functioning, and mental health. In contrast, maladaptive strategies like *escape-avoidance* and *accepting excessive responsibility* correlate with increased anxiety, emotional distress, and reduced quality of life. These results emphasize that psychological support should become an integral part of medical and rehabilitation programs for adolescents with chronic diseases. Interventions aimed at developing adaptive coping skills, strengthening social support systems, and reducing anxiety can significantly improve psychosocial adjustment and life satisfaction in this vulnerable group. Furthermore, understanding individual differences in coping styles may help clinicians and psychologists tailor their therapeutic approaches to enhance emotional resilience and long-term well-being.

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