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PSYCHOLOGICAL STUDY OF PERSONAL READINESS FOR CHANGE AND ACTUAL FUNCTIONAL STATES OF ADOLESCENTS

This study is aimed at studying the psychological aspects of adolescents' personal readiness for change and their functional conditions. Modern teenagers face a lot of social and psychological changes, so their ability to adapt plays an important role. The main purpose of the study is to study the features of the current functional state and psychological readiness of adolescents for changes.

The scientific and practical significance of the study lies in the fact that its results can be used to develop programs aimed at providing effective assistance to adolescents during psychological support and counseling. The results are especially relevant for improving methods of psychocorrection and stress management.

In the course of the study, the methods "Fatigue – Monotony – Boredom – Stress" and "Personal change readiness survey" were used, assessing the functional conditions of adolescents and their readiness for change. The results showed a high level of mental fatigue and stress in adolescents, which has a negative impact on their adaptation. Despite the fact that most teenagers have a low level of qualities such as passion, resourcefulness, courage and adaptability, their optimism is at a very high level, and self-confidence and tolerance to uncertainty are manifested at an average level, which indicates the need for additional support and motivation for their development.

The results of the study can also serve as a basis for practical recommendations to school psychologists and teachers on the development of emotional and psychological stability of students.

This study contributes to the understanding of the main factors affecting the personal development of adolescents and their psychological stability, and also contributes to improving the effectiveness of psychological support programs in the educational process.

Key words: personal readiness, functional conditions, stress, fatigue, psychological stability.

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Жасөспірімдердің өзгеріске тұлғалық даярлығы мен өзекті функционалды жағдайларының психологиялық зерттелуі

Бұл зерттеу жасөспірімдердің өзгерістерге тұлғалық даярлығы мен олардың функционалды жағдайларының психологиялық аспектілерін зерттеуге бағытталған. Қазіргі заманғы жасөспірімдер көптеген әлеуметтік және психологиялық өзгерістерге тап болады, сондықтан олардың бейімделу қабілеті маңызды рөл атқарады. Зерттеудің негізгі мақсаты – жасөспірімдердің өзгерістерге психологиялық дайындығының және өзекті функционалды жағдайларының ерекшеліктерін зерттеу.

Зерттеудің ғылыми-практикалық маңыздылығы психологиялық қолдау мен кеңес беру барысында жасөспірімдерге тиімді көмек көрсетуге бағытталған бағдарламаларды жасауға мүмкіндік береді. Әсіресе, психокоррекция және стресс басқару әдістерін жетілдіру үшін зерттеу нәтижелері қолданылуы мүмкін.

Зерттеу барысында «Шаршай – Монотония – Зерігу – Стресс», «Өзгерістерге тұлғалық даярлық» әдістемелері қолданылып, жасөспірімдердің психикалық жағдайлары және өзгерістерге тұлғалық даярлықтары бағаланды. Зерттеу нәтижелері жасөспірімдердегі психикалық шаршай

мен стресс деңгейінің жоғары екенін көрсетіп, олардың бейімделуіне кері әсер ететінін дәлелдеді. Жасөспірімдердің көпшілігінде құмарлық, тапқырлық, батылдық және бейімделу қасиеттері төмен деңгейде байқалса да, олардың оптимизм деңгейі өте жоғары, ал сенімділік пен екі ұштылыққа толеранттылық көрсеткіштері орташа дәрежеде көрінеді, бұл олардың дамуына бағытталған қосымша қолдау мен ынталандырудың қажеттілігін көрсетеді. Сондай-ақ зерттеу нәтижелері мектеп психологтары мен педагогтарға оқушылардың эмоционалдық және психологиялық тұрақтылығын дамыту бойынша практикалық ұсыныстар жасауға негіз бола алады.

Бұл зерттеу жасөспірімдердің тұлғалық дамуына, психологиялық тұрақтылығына әсер ететін негізгі факторларды түсінуге ықпал етіп, білім беру процесіндегі психологиялық қолдау бағдарламаларының тиімділігін арттыруға үлес қосады.

Түйін сөздер: тұлғалық даярлық, функционалдық жағдай, стресс, шаршау, психологиялық тұрақтылық.

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Психологическое исследование личностной готовности к переменам и актуальных функциональных состояний подростков

Данное исследование направлено на изучение психологических аспектов личностной готовности подростков к изменениям и их функциональных состояний. Современные подростки сталкиваются со множеством социальных и психологических изменений, поэтому их способность к адаптации играет важную роль. Основная цель исследования — изучить особенности актуального функционального состояния и психологической готовности подростков к изменениям.

Научно-практическая значимость исследования заключается в том, что его результаты могут быть использованы для разработки программ, направленных на оказание эффективной помощи подросткам в ходе психологической поддержки и консультирования. Особенно актуальными результаты являются для совершенствования методов психокоррекции и управления стрессом.

В ходе исследования применялись методики «Утомляемость – Монотония – Скука – Стресс» и «Личностная готовность к изменениям», оценивающие психические состояния подростков и их готовность к изменениям. Результаты показали высокий уровень психического утомления и стресса у подростков, что оказывает негативное влияние на их адаптацию. Несмотря на то, что у большинства подростков наблюдается низкий уровень таких качеств, как увлечённость, находчивость, смелость и адаптивность, их оптимизм находится на очень высоком уровне, а уверенность в себе и толерантность к неопределённости проявляются на среднем уровне, что указывает на необходимость дополнительной поддержки и мотивации для их развития.

Результаты исследования также могут служить основой для практических рекомендаций школьным психологам и педагогам по развитию эмоциональной и психологической устойчивости учащихся.

Данное исследование способствует пониманию основных факторов, влияющих на личностное развитие подростков и их психологическую устойчивость, а также вносит вклад в повышение эффективности программ психологической поддержки в образовательном процессе.

Ключевые слова: личностная готовность, функциональное состояние, стресс, утомляемость, психологическая устойчивость.

Introduction

The modern socio-economic and socio-cultural situation, which characterizes the multifaceted and ambiguous process of transformation of Kazakhstan's society, encourages a closer look at the issue of socialization of the younger generation, its integration into society, the search for ways to ensure the effectiveness of this process, the identification of factors complicating its course.

Adolescents living in the modern world can often be subjected to the destructive influence of certain social factors, groups and their individual representatives.

One of the distinctive features of adolescence, when the difficulties presented by modern society for adolescents expose them to a state of stress and determine the nature of social adaptation, is the intensive expansion of the teenager's living space, the space of their social activity, the circle of acquaintances.

tance and communication, and the information field. A new degree of freedom due to the weakening of home control inherent at this age contributes to the development of new places of entertainment, entry into various environments, and subcultural associations.

Adolescence is accompanied by alternating periods of adaptation. In addition, not all of them are suitable for the socialization of a teenager, the latter may not be ready to face the negative phenomena of life, to resist their spontaneous and sometimes purposeful influence on their mind and behavior, and to remain defenseless in front of them.

Therefore, it is the task of preparing the younger generation to resist negative social influences, forming personal readiness of young people for such resistance, which is one of the conditions for their successful and positive social adaptation. In this context, in addition to healing the environment and neutralizing the impact of its victimogenic factors, educational and preventive work aimed at increasing criticality and selectivity in interaction with society, developing the ability to morally and psychologically resist its negative effects is of particular importance.

Stressful conditions are one of the factors related to the genesis and formation of personality during adolescence, which is characterized by quantitative and qualitative changes, and hormonal explosion. Active psychophysical maturity, cognitive dissonance, interpersonal and intrapersonal conflicts can be the causes of stress. Adolescence is characterized by intensive psychophysiological development and reconstruction of the child's social experience, which should be taken into account when considering the problem of stress resistance. A teenager faces many problems, the negative impact of which leads to a stressful situation (Krasnova, 2016). Problems at home (family conflict, parental abuse, etc.) contribute to stress (Fredrickson et al., 2009).

Everyone can recall moments in their lives when their psychological well-being improved or worsened. Today, the study of concepts and theories that help to understand the process of personality change is relevant in psychology, especially it plays an important role in explaining the characteristics of individual readiness for change of people with different levels of psychological well-being.

The complex relationship between personality and actions is determined by the mental regulation of human behavior, the structure of personal qualities and their role in the development of activity directed towards a specific goal. Also, the characteris-

tics of the activity, its operational, spatial-temporal and other features are important. Since this system is dynamic, the process of adaptation of personality and activity structures is ongoing. This process is reflected not only in the actualization of mental components of a person in relation to actions, but also in the development of a person.

Everyone has moments when they face difficulties, because today's world is constantly changing. Change is dynamic, and dynamic is life. Therefore, if a person wants to continue their life, they must learn to manage changes and deal with them purposefully. This is called the process of self-improvement.

In adolescence, the period of physical maturity ends, and important social events take place at this time: obtaining a passport, the possibility of marriage, and criminal responsibility begins. Also, at this age, the main task is the problem of choosing professional education. Some young people start a career at this period and face the need for self-determination, which can disturb the balance of the inner world. When choosing a future profession, there is a need to give up other opportunities, which can increase internal tension.

At this stage, young people need to prove that they have the ability to make adult and independent decisions and support it because later it will be much more difficult to form independence and life courage.

It is important to consider the personality's readiness for change during adolescence. As components of preparation, one can consider the psychological approach, knowledge about the motives of the activity, its form and methods, the skills of using them in practice, and the attitude towards this activity. A person's readiness for purposeful action is closely related to their psychological attitude, because it requires a certain effort to achieve it. In psychology, attitude is interpreted as a state of readiness formed on the basis of past experience, the ability of a person to react to a certain situation.

The relevance of the topic of empirical research is explained by the presence of unresolved theoretical and practical questions on the psychological readiness of a person for changes in the state of youth development. In addition, there are reasons to believe that there remain issues that require general psychological, theoretical, and empirical research in this area.

The relevance and necessity of studying the psychological resources of individual preparation for student activities is obvious, since one of the main

tasks at this age stage is personal and professional development, preparation for independent life and qualified activities as a specialist. Changing social conditions leave an imprint on the process of forming readiness for student activities, although the requirements for the personal and professional characteristics of graduates of higher educational institutions remain high. Such qualities as the ability to regulate and plan one's own actions, set goals, self-organization and self-management are of great importance. Students should have a sufficiently high level of development of reflection, the ability to assess their own activity and the surrounding reality, have communicative competence, value orientations (Antsyferova, 1994; Argyle, 2013).

Literature review

Changes in various forms of human life require adaptation to the modern situation, which significantly affects their activity, actions and general condition. For example, social, economic, or technological changes affect people's lifestyles and behaviors, requiring them to acquire new skills, revise their actions, and adapt to new situations. Such changes may require a person to mobilize internal resources, increase their activity, or even reconsider their life values. The increase in instability and uncertainty in society is especially noticeable in transition periods. In such a situation, it is very important to determine the psychological resources of young people's personal readiness for action, to properly direct their potential and to study their adaptive abilities. These resources play an important role in increasing the resilience of young people to life challenges and changes (Buravleva et al., 2022).

It has been proven that the formation of personal readiness of adolescents to resist the negative consequences of Internet socialization is influenced by a complex of factors that can be conditionally divided into two groups: external (information-technological environment, natural and socio-cultural factors) and internal (biological and individual psychological features) (Khodaev, 2024).

Robicek et al. (2012) distinguished four components of personal growth, two of which affect cognitive thinking (i.e., planning and readiness to change), and two that assess behavioral activity (i.e., intentional behavior and resource utilization). Using a structural equation modeling approach, the authors showed that all four components of personal growth initiation (ie, planning, readiness for change, intentional behavior, and resource utilization) pre-

dicted various commitments and research processes, with planning being the most consistent predictor.

We encounter a variety of stressful events in our daily lives that affect resilience (Zhang et al., 2019). These can range from difficulties in personal relationships to problems related to work, education, or health. Stressful situations can weaken a person's emotional state, behavior and general well-being. However, the ability to resist such difficulties, that is, stress resistance, depends on the psychological stability and adaptability of a person.

It is known that psychological stress is a complex structure. It consists of many factors related to the internal state of a person and the influence of the environment. Stress is not limited to emotional pressure, but also includes physiological, cognitive and behavioral reactions. External factors (e.g. complex events in life, work, social relations) and internal factors (personal characteristics of a person, emotional stability, past experience) affect the occurrence of stress. The interaction of these factors determines the level of stress and ways to overcome it. Yes, indeed, stressors begin to affect a person from the moment they are born. After birth, the child begins to adapt to the environment, this is their first experience of stress. Unsatisfied physical needs (for example, hunger, cold or heat), getting used to a new environment, and emotional needs can be stressful for a child. Various stressors throughout life, including social, emotional, and physical factors, have complex effects that contribute to a person's mental and physical development. A person's response to stressors shapes his or her psychological defense mechanisms and coping abilities (Kramer et al., 2009) and occurs in every person's daily life activities, and stressors and the person's ability to cope with stress play a central role in adolescent distress and psychopathology (Compas et al., 1993). A positive correlation was found between the level of anxiety of schoolchildren and their emotional indicators such as neuroticism or emotional instability (Mi, & Mynbayeva, 2022). In our opinion, it may arise in connection with excessive information overload, social isolation issues. The abundance of social networks, news and other sources of information puts great pressure on children's psyche. Bullying and bullying online can lower a child's self-esteem and harm their mental health. Spending too much time on gadgets makes children feel isolated and distant from real life.

Cross-sectional studies have found consistent, albeit modest, correlations of stressful events with psychological, behavioral, and somatic problems.

Stressful life events represent life experiences that cause changes in a person's life and require coping and adaptive strategies (Compas, 1987). G.S. Hall's (1904) view that adolescence is a period of heightened "storm and stress" is being revised in light of current research. G. S. Hall's "storm and stress" theory described adolescence as a very difficult and conflictual period. According to him, during this period, teenagers experience very strong emotions, often quarrel with their parents and tend to take risks. The author provides a brief history of storm and stress and examines 3 key aspects of this approach: conflict with parents, mood swings, and risky behavior. In all three areas, evidence supports a modified view of storm and stress that takes into account individual differences and cultural variability. Not all teens experience storms and stress, but storms and stress are more common during adolescence than at any other age. Or in other words, of course, there are many changes during adolescence, but these changes do not necessarily appear in the form of "storm and stress".

Modern research does not fully confirm Hall's theory. Of course, there are many changes during adolescence, but these changes do not necessarily appear in the form of "storm and stress".

Why is Hall's theory being revised today?

Individual differences: not all teenagers are the same. Their experience, behavior and development may vary.

Cultural differences: different cultures experience adolescence differently. In some cultures, teenagers are given more freedom, while in others, stricter requirements are placed on them.

Social conditions: family, school, friends, and society have a major influence on adolescent development.

Advances in research methods: modern researchers use many new methods to study adolescent development, allowing them to obtain accurate data that was not available in Hall's time.

Adolescence from a modern point of view:

Stage of change and development: physical, emotional and social changes occur during this stage.

Formation of personality: a teenager tries to define who they are, and forms their values and goals.

Risk-taking: some teens may be risk-takers, but not all teens are.

Importance of social connections: friends and family play a big role in a teenager's life.

Hall's theory has played an important role in shaping our understanding of adolescence. However, modern research shows that adolescence is much

more complex and diverse. Adolescent development depends on many factors and each adolescent has its own characteristics.

Adolescence is an important processing time in academic, cognitive, social, physiological, and physical changes (Arnett, 1999) and a delicate period of development characterized by exposure to stressful life events and their debilitating effects on mental health (Byrne et al., 2007). Stressful life events among adolescents have attracted the attention of many researchers (Raklova, 2013; Dupéré et al., 2018; Mukhamediyev, 2022; Han et al., 2018; Humphreys et al., 2018). In addition, many studies have shown that stressful life events can have a profound effect on a person's adjustment (Sandler et al., 1994; Rod et al., 2009), and stressful life events during adolescence are associated with reduced well-being, poor mental health, anxiety, and depression (Troy et al., 2011). The more complex the new environment is (the number of social relations, the complexity of joint activities, the higher the social heterogeneity), the greater the changes in it, and therefore the more difficult the social-psychological adaptation will be (Baishukurova et al., 2012). Other studies have shown that stressful life events played an important role as a cause of high school dropout (Dupéré et al., 2018), and high levels of stress were associated with reduced hippocampal volume in adolescents (Piccolo and Noble, 2017). Thus, stressful life events have a negative impact on the physical and mental health of adolescents. Therefore, adaptation of adolescents to the environment is an important issue that the whole society should pay special attention to (Maclean et al., 2016; Mi et al., 2022; Chen et al., 2019). However, mediating processes that explain the relationship between perceived stressful life events and psychological and personal readiness for change and adolescent functional states remain to be identified. Therefore, it is important to study the individual readiness and functional states of adolescents for change, as well as the psychological mechanisms underlying these psychological states during adolescence.

Materials and Methods

A total of 187 people participated in the study, including 36 men and 151 women. Potential participants were selected by answering an online survey between August 11 and October 12, 2021. The age of the participants ranged from 14 to 19 years (mean = 16.80, standard deviation (SD) = 1.15). The results are presented in Table 1.

Table 1 – Descriptive statistics of the age of the subjects

	N	Minimum	Maximum	Mean	Standard deviation
Age range	187	14.00	19.00	16.7914	1.15206
N valid (according to the list)	187				

During the study, the «Fatigue – Monotony – Boredom – Stress» method (H.E. Plath, P. Richter) and the «Personal change readiness survey» (A. Rolnic, S. Heather, M. Gold, C. Hull) were used (Plath, Richter, 1984). The reliability of the test was tested by Cronbach's alpha coefficient in SPSS 23.

The method «Fatigue – Monotony – Boredom – Stress» (Ermuedung_Monotonie_Saetting_Stress. BMS-Handanweisung). «Fatigue – Monotony – Boredom – Stress» methodology was developed by German scientists H.E. Plath and compiled by P. Richter. The method was translated into Kazakh and tested. Cronbach's alpha was equal to 0.933.

The method «Fatigue – Monotony – Boredom – Stress» is designed to assess the clarity of the above-mentioned components of the current functional state and is used individually or in groups.

The questionnaire consists of 40 statements, and a 4-point scale is used for evaluation:

- 1 – almost never,
- 2 – sometimes,
- 3 – often,
- 4 – almost always.

Fatigue, monotony, boredom and stress coefficients are calculated according to the processing key, and a personality profile is created according to those four current conditions.

The method «Fatigue – Monotony – Boredom – Stress» measures the following parameters: fatigue; monotony; mental boredom; and stress.

By choosing one of the points of the scale: 1, 2, 3 or 4, the respondent indicates the degree of agreement with the mentioned opinion. The selected score is recorded on the answer sheet next to the serial number of the corresponding comment.

«Personal change readiness survey» (PCRS) methodology (A. Rollnick, S. Heather, M. Gold, C. Hull). PCRS (Personal change readiness survey) methodology was developed by Canadian scientists A. Rollnick, S. Heather, M. Gold and compiled by C. Hall (Rollnick et al., 1992).

This version of the PCRS methodology was translated into Kazakh and approved. Cronbach's alpha was equal to 0.935. Understanding the features of adaptation to change can help protect peo-

ple from stress in the most vulnerable situations. The questionnaire determines the parameters that correspond to the framework of positive psychology: passion, resourcefulness, optimism, courage, adaptability, confidence and tolerance to uncertainty.

The methodology of “Personal change readiness survey” consists of 35 items, and the responses of the examinees are evaluated from 1 (does not match at all) to 6 (high level of match) with a point of agreement with each statement. The authors also used the same six-point scale in their study.

When comparing symptoms in two groups, comparisons were made using the Mann-Whitney U test. Spearman's correlation coefficient was used as a measure of the relationship between indicators.

Methodological justification of the research: methodological principles (the principle of development, the principle of determinism) and the opinions of scientists who analyze the problems related to the study of the concept of psychological readiness for changes.

Purpose of the study. To study the features of the psychological readiness of adolescents for changes.

Research hypothesis. There is a direct connection between the psycho-emotional state of adolescents and their psychological readiness for change; boys and girls show differences in manifestations of components of psychological readiness for change.

Research questions:

1. Analysis of works on the actual functional condition of adolescents of different sexes and features of adaptation to changes;

2. Empirical study and comparison of specific functional conditions and features of adaptation to changes of adolescents of different sexes.

Mathematical processing of the results was carried out using the SPSS-23 data analysis package.

Results and Discussion

The first stage of research. Personal change-readiness survey (PCRS) by A. Rolnic, S. Heather, M. Gold and C. Hull and H.E. Plath and P. Richter's methodology “Fatigue – Monotony – Boredom –

Stress” (“Ermüdung-Monotonie-Sättigung-Stress”) were translated and adapted into the Kazakh language. According to the “Personal change readiness survey”, the Cronbach’s Alpha size was equal to 0.935, while according to the “Fatigue – Monotony – Boredom – Stress” methodology, the Cronbach’s Alpha size was equal to 0.933. A Cronbach Alpha’s coefficient equal to or higher than 0.9 indicates sufficient reliability of the methodology. A high level of Cronbach’s Alpha coefficient on the basis of standardized points indicates a high degree of reliability of these methods.

The second stage of research. To assess the reliability of the differences in the aspects of the current functional conditions and adaptation to changes in an independent group of respondents of different

genders, and to evaluate the features of the current functional conditions, a statistical analysis was carried out using the Mann-Whitney U test.

The third stage of research. Statistical analysis was carried out using Pearson’s correlation criterion to determine the relationship between the actual functional status of adolescents and adaptation to changes.

In the course of the research the adolescents’ indicators of fatigue, monotony, mental boredom, and stress were studied through the methodology of the “Fatigue – monotony – boredom – stress”; while passion, resourcefulness, optimism, courage, adaptability, confidence, tolerance to uncertainty – through the “Personal change readiness survey”. The result is presented in Table 2 below.

Table 2 – Personal change readiness survey of adolescents

	Passion	Resourcefulness	Optimism	Courage	Adaptability	Confidence	Tolerance to uncertainty
Low	50,27	47,59	92,51	96,26	95,72	49,2	0
Meduim	28,34	28,88	6,42	2,14	3,74	34,22	95,72
High	21,39	23,53	1,07	1,6	0,54	16,58	4,28

The diagram of indicators of passion, resourcefulness, optimism, courage, adaptability, confidence, and tolerance to uncertainty of adolescents according to the «Personal change readi-

ness survey» is presented below. By displaying the results visually, the low, medium and high level contributions of each indicator are clearly visible.

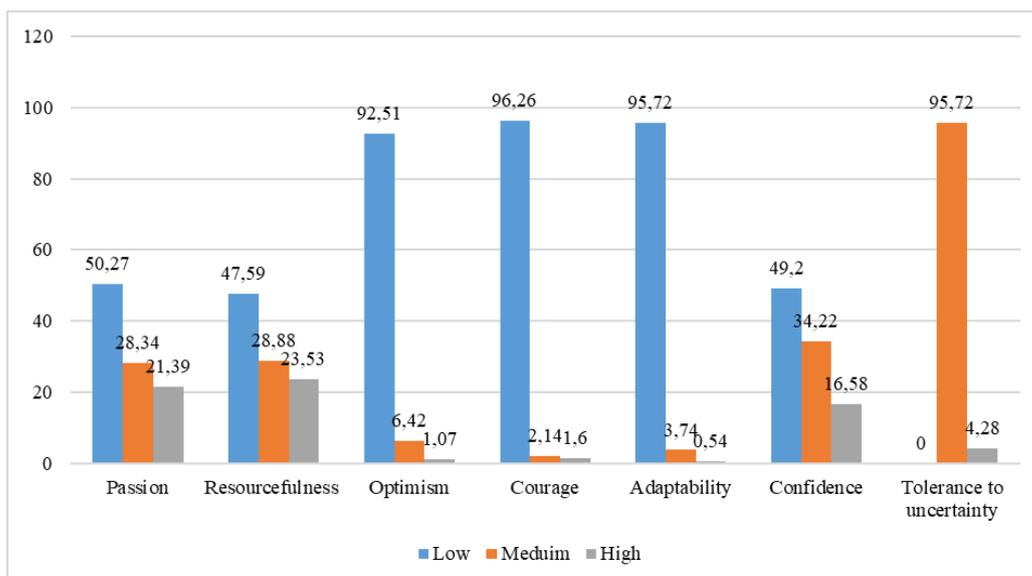


Figure 1 – Personal change readiness survey of adolescents (%)

As we can see from Figure 1, the majority of teenagers (50.27%) have a low quality of passion. This indicator means that their internal motivation and enthusiasm for certain activities is weak. Low passion indicates a lack of genuine interest and enthusiasm in a particular field or goal. This level of obsession is usually characterized by indifference to activities, difficulty achieving long-term goals, and dependence on extrinsic motivation. For this group of teenagers, it is important to arouse their interest and increase internal motivation. According to this indicator, 28.34% of teenagers had a medium level of passion. This indicator shows that although they are interested in a certain activity, they lack sufficient enthusiasm and internal motivation to develop it regularly and purposefully. Adolescents with a medium level of passion are sometimes willing to put in the effort to achieve their goals, but may be dependent on external circumstances or support. It is important to keep them constantly stimulated and motivated, which allows them to develop their passions more deeply and to be more committed to their activities. It was found that 21.39% of teenagers have a high level of passion. Therefore, teenagers in this group are genuinely interested and enthusiastic about their activities, spare no effort and work hard to achieve a certain goal. They have a high level of internal motivation, which encourages them to be active in various fields, acquire new knowledge and skills. Such teenagers tend to develop themselves, try to achieve their goals despite obstacles and can be an example for others.

In terms of the quality of resourcefulness, it was found that 47.59% of teenagers have a low level, that is, their ability to think creatively and innovativeness is limited. Such teenagers may have difficulty coming up with new ideas or solving complex problems.

28.88% have a medium level of resourcefulness, which means that they rely on standard solutions and sometimes use creative approaches, but may not always actively use this ability.

And 23.58% have a high level of resourcefulness. These teenagers are able to use unique methods to solve complex problems and offer creative ideas. They tend to think innovatively, easily adapt to changes and make unique decisions than others.

Interesting information on the quality of optimism was revealed: it was observed that the percentage of optimism is very low in the majority of teenagers, i.e. 92.51%. This shows that they look to the future with little confidence, do not easily accept difficulties and tend to think negatively. 6.42%

of teenagers have a medium level of optimism, that is, although they are sometimes optimistic, in some cases, feelings of doubt or anxiety can be observed. And 1.07% have a high level of optimism, which means that they are very positive, do not lose faith even in difficult situations and always try to see the bright side.

According to the data obtained on the quality of courage, it was found that 96.26% of teenagers have this quality at a low level. This shows that they are insecure and shy to take risks when faced with challenges or uncertain situations. It can be seen that the proportion of such teenagers is high. 2.14% of teenagers have a medium level of courage, that is, they can sometimes take decisive actions, but are often cautious. And 1.6% showed a high level of courage, which means that they are inclined to boldly defend their views, be decisive in difficult situations and actively take risks.

According to the results of the research, it was found that 95.72% of teenagers have a low level of adaptability. This shows that it is difficult for them to adapt to new situations or changes. Such adolescents may not be able to quickly adapt to the demands of the external environment and may resist changes.

3.74% of adolescents have a medium level of adaptability, that is, they are able to adapt to some changes, but this process is not always easy for them.

And 0.54% have a high level of adaptability. Teenagers in this group quickly adapt to any new environment or change and easily overcome difficulties.

According to the results of the research, it was found that 49.2% of teenagers have a low level of confidence. This shows that they lack confidence in their own strength and have difficulty making decisions and defending their views. Such adolescents are usually more dependent on external support and affirmations.

34.22% of teenagers have a medium level of confidence, which means that they act confident in some situations, but sometimes feel insecure and doubtful.

It was found that 16.58% have a high level of confidence. Teenagers in this group are confident in themselves, can defend their point of view and act courageously in difficult situations.

The proportion of adolescents who showed low results in the quality of tolerance to uncertainty was not determined. According to the research results, 95.72% of teenagers have this indicator at an average level. This means that they can sometimes stay calm and adapt in the face of uncertainty or ambigu-

ity, but sometimes such situations can be difficult for them.

And at 4.28%, tolerance to uncertainty was determined at a high level. Adolescents in this group can easily adapt to uncertainty or opposition and can be confident and calm in such situations.

In the next stage of our research, the indicators of fatigue, monotony, mental boredom, and stress of

teenagers were studied using the «Fatigue – Monotony – Boredom – Stress» methodology. The result is presented in Table 3 below.

It is effective to use diagrams to visualize indicators of mental conditions of teenagers using the «Fatigue – Monotony – Boredom – Stress» methodology in our study. The results are presented in Figure 2 below.

Table 3 – Functional condition of adolescents

	Fatigue	Monotony	Boredom	Stress
Low	16,04	5,88	30,48	10,16
Medium	81,82	83,96	67,38	80,21
High	2,14	10,16	2,14	9,63

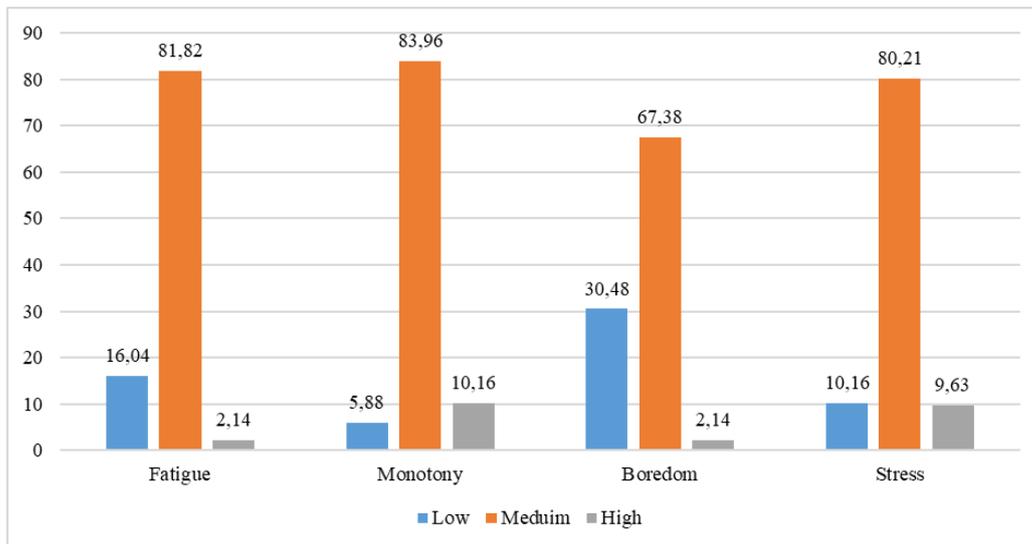


Figure 2 – Functional condition of adolescents (%)

It can be seen that about 16.04% of teenagers have a low level of fatigue. This may mean that teenagers have good fatigue scores or normal health conditions. Next, it is important to study the level of fatigue in the remaining adolescents and its relationship with other factors. This indicator means that the quality of fatigue in the vast majority of teenagers is at a medium level. That is, in 81.82% of teenagers, fatigue is at a normal level, and it does not significantly affect their daily activities. However, moderate levels of fatigue can prevent adolescents from reaching their full potential, so it is important to consider measures to reduce it. 2.14% of adolescents show high levels of fatigue, which can sig-

nificantly affect their daily activities. High levels of fatigue are likely to negatively impact the health, academic achievement, and overall quality of life of these adolescents. Therefore, it is important to develop special measures and prevention programs to identify such cases and provide them with appropriate support.

The results of the assessment of the quality of monotony of teenagers show the following: 5.88% have a low level of monotony, that is, monotony caused by monotonous activities is less noticeable in these teenagers. In addition, 83.96% have a medium level of monotony, which means that they experience monotony at a moderate level. And 10.16%

have a high quality of monotony, which indicates that they are more tired of monotonous activities, and monotony can have a significant effect on them. Based on these data, adolescents may need to take different measures to reduce the negative impact of monotony.

It was found that 30.48% of teenagers have a low quality of boredom, 67.38% have a medium quality, and 2.14% have a high quality. These data describe the level of boredom among teenagers as follows: 30.48% have a low quality of boredom, that is, these teenagers feel less bored during various activities, their interests can be more stable. And 67.38% have a medium level of boredom, which indicates that they are prone to boredom in some situations. In addition, 2.14% of teenagers have a high quality of boredom, indicating that they experience boredom more often and are more likely to negatively affect their daily activities and mood.

On the basis of these data, it may be necessary to develop activities and programs aimed at reducing boredom, and to consider various measures to increase the interest of adolescents.

It was found that 10.16% of teenagers have a low stress level, 80.21% have a medium stress level, and 9.63% have a high stress level. These data show that stress levels vary between teenagers. 10.16% of

teenagers have a low stress level, which means that the effects of stress are less noticeable in this group of teenagers. In addition, 80.21% have a moderate stress level, which means that most are at a moderate level of stress. And 9.63% have a high level of stress, which indicates that the negative impact of stress on their daily life and general well-being can be significant. Based on this information, it is important to pay special attention to adolescents with high stress levels. For this, it is necessary to consider psychological support programs aimed at reducing the level of stress and to create favorable conditions for the group experiencing moderate stress.

In general, most adolescents have average levels of these qualities, but there are groups with high levels of each aspect, who may need special support. Based on these findings, it is important to develop comprehensive support programs aimed at managing levels of stress, monotony, boredom and fatigue, as they have a significant impact on the overall well-being and development of adolescents.

In the next stage of our research, we moved to statistical processing of data. Our initial step was aimed at calculating the reporting statistics of the actual functional status of teenagers and personal readiness for change. The result can be seen in Table 4 below.

Table 4 – Reporting statistics of the actual functional condition of adolescents and their personal change readiness

Scales	N	Mean	Mean square deviation	Minimum	Maximum
Passion	187	21.8128	5.24171	5.00	30.00
Resourcefulness	187	22.1711	5.10351	5.00	30.00
Optimism	187	13.7647	4.75058	5.00	28.00
Courage	187	12.3850	5.16308	5.00	30.00
Adaptability	187	13.2299	4.76722	5.00	29.00
Confidence	187	21.8610	4.51186	9.00	30.00
Tolerance to uncertainty	187	12.7005	4.78642	5.00	25.00
Fatigue	187	22.1818	4.19666	10.00	35.00
Monotony	187	24.3316	3.94004	13.00	32.00
Boredom	187	20.7968	5.64081	10.00	34.00
Stress	187	23.4225	4.52569	12.00	34.00

The table shows the reporting statistics of the functional status of teenagers and personal readiness for change. Mean, mean square deviation, minimum and maximum values are presented for each scale. Based on these data, the following conclusions can be drawn.

According to the quality of Passion: Mean is 21.81; Mean square deviation is 5.24; Value range is from 5 to 30; The level of passion is high (21.81), which indicates that teenagers have interest and motivation in life.

According to the quality of Resourcefulness: Mean is 22.17; Mean square deviation is 5.10; Value range is from 5 to 30; Adolescents' ingenuity is at an average high level, which indicates that they have sufficient ability to receive new information and learn quickly.

According to the quality of Optimism: Mean is 13.76; Mean square deviation is 4.75; Value range is from 5 to 28; The level of optimism is medium, which indicates that teenagers have normal hopes for the future.

According to the quality of Courage: Mean is 12.39; Mean square deviation is 5.16; Value range is from 5 to 30; Courage is average, which means that some teenagers may have low decision-making skills.

According to the quality of Adaptability: Mean is 13.23; Mean square deviation is 4.77; Value range is from 5 to 29. Adaptability is at a medium level, the ability of teenagers to adapt to changes is estimated to be average.

According to the quality of Confidence: Mean is 21.86; Mean square deviation is 4.51; Value range

is from 9 to 30. Confidence is at a high level, which indicates that adolescents have confidence in their own opinions and decisions.

According to the quality of Tolerance to uncertainty: Mean is 12.70; Mean square deviation is 4.79; Value range is from 5 to 25. Ambiguity tolerance is moderate, indicating that adolescents have some difficulty in uncertain situations.

According to the quality of Fatigue: Mean is 22.18; Mean squared deviation is 4.20; Value range is from 10 to 35. Fatigue is moderate, and may indicate a slight decrease in energy levels in adolescents.

According to the quality of Monotony: Mean is 24.33; Mean square deviation is 3.94; Value range is from 13 to 32. The level of monotony is high, which indicates that fatigue from monotonous activities is noticeable.

According to the quality of Boredom: Mean is 20.80; Mean square deviation: 5.64; Value range: 10 to 34. Boredom levels are high, which means teenagers tend to lose interest.

According to the quality of Stress: Mean is 23.42; Mean square deviation is 4.53; Value range is from 12 to 34. The stress level is moderately high, which indicates that stress is often felt in their daily life.

These results indicate that adolescents need support for some functional and personality traits. High levels of stress, monotony and boredom can have a negative impact on the overall well-being of teenagers.

Table 5 presents the ranking indicators of Personal change readiness of teenagers.

Table 5 – Ranking indicators of Personal change readiness of teenagers

Scales	Gender	N	Average rank	Sum of ranks
Passion	female	151	95.13	14364.00
	male	36	89.28	3214.00
	total	187		
Resourcefulness	female	151	93.55	14126.00
	male	36	95.89	3452.00
	total	187		
Optimism	female	151	94.28	14237.00
	male	36	92.81	3341.00
	total	187		

Continuation of the table

Scales	Gender	N	Average rank	Sum of ranks
Courage	female	151	94.12	14212.00
	male	36	93.50	3366.00
	total	187		
Adaptability	female	151	94.19	14222.00
	male	36	93.22	3356.00
	total	187		
Confidence	female	151	92.96	14037.50
	male	36	98.35	3540.50
	total	187		
Tolerance to uncertainty	female	151	91.97	13887.50
	male	36	102.51	3690.50
	total	187		

In this table, the ranking indicators of personal change readiness of teenagers are given by gender. For each scale, average rank indicators between women and men and their rank sums are shown. Based on these data, the following conclusions can be drawn.

Passion: the average rank for female respondents is 95.13, and for male respondents it is 89.28. According to these indicators, the level of passion of women is slightly higher than that of men.

Resourcefulness: the average rank for female respondents is 93.55 and for male respondents it is 95.89. Men's intelligence is slightly higher than women's.

Optimism: the average rank for female respondents is 94.28, and for male respondents it is 92.81. Women have a slightly higher level of optimism than men.

Courage: the average rank for female respondents is 94.12, and for male respondents it is 93.50. There is no big difference between the sexes in the level of courage, the indicators are very similar.

Adaptability: the average rank for female respondents is 94.19, and for male respondents it is 93.22. There is no significant difference between the sexes in the level of adaptability.

Confidence: the average rank of female respondents is 92.96, and for male respondents it is 98.35. According to these indicators, the confidence level of men is higher than that of women.

Tolerance to uncertainty: the average rank for female respondents is 91.97, and for male respon-

dents it is 102.51. Men have a significantly higher tolerance for ambiguity than women.

In general, there are no significant differences between male and female respondents in the level of personal readiness for change, but there are differences in several indicators:

- male respondents have higher levels of confidence and tolerance for uncertainty than female respondents. This may indicate that men are more prone to uncertainty and are more self-confident;

- female respondents have slightly higher levels of passion and optimism, which may mean that their motivation and hope for the future are relatively high.

These data show that adolescents need an individual approach to personality traits. It is important to develop support programs adapted to different gender groups, taking into account indicators that need special attention.

For visual interpretation of the results, we preferred to present them in the form of a diagram. The results are shown in Figure 3.

Figure 3 shows the gender characteristics of adolescents' personal readiness for change in the form of a diagram by rank indicators. The average ranking results of female and male responders for each personality characteristic (passion, resourcefulness, optimism, courage, adaptability, confidence, tolerance to uncertainty) are shown. Based on this diagram, the following interpretation can be made.

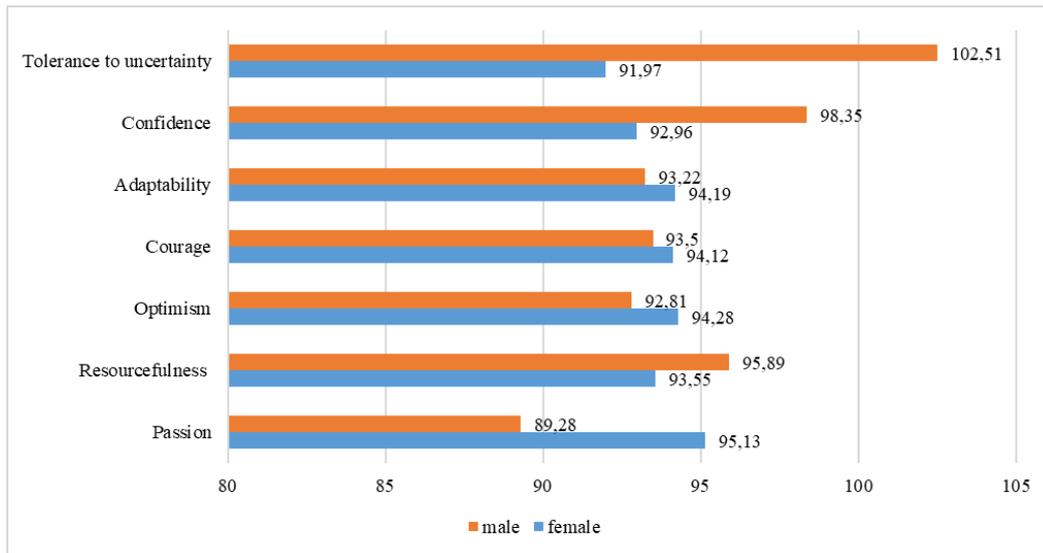


Figure 3 – Gender characteristics of adolescents’ personal readiness for change (by ranks)

Passion: female respondents have a slightly higher level of passion than male respondents. This shows that women’s willingness and motivation to change is somewhat higher than men’s.

Resourcefulness: male respondents are slightly higher in intelligence than female respondents, which may indicate that males are slightly more adaptable to situations and tasks.

Optimism: female respondents have a slightly higher level of optimism, which means that female responders have higher hopes for the future than male respondents.

Courage: There is no significant difference between male and female respondents in terms of the level of courage. This shows that both of them have similar courage in making decisions.

Adaptability: There is little difference in aptitude between male and female respondents, both groups are at a similar level in their ability to adapt to new situations and changes.

Confidence: male respondents are more confident than female respondents. This shows that male respondents prioritize confidence in their abilities.

Tolerance to uncertainty: male respondents have a significantly higher level of tolerance to uncertainty, which means that they have a higher tolerance for ambiguity than female respondents.

Overall, the figure clearly shows the differences in personality traits between men and women. Be-

cause men have higher levels of confidence and tolerance to uncertainty, they may feel more confident in uncertain situations. Women have slightly higher levels of passion and optimism, indicating that they are more motivated to change and more optimistic about the future.

With these characteristics in mind, it is important to create support and development programs tailored to individual characteristics. A detailed analysis of the results presented by the diagram helps to gain a deeper understanding of the personality characteristics of adolescents and can be useful in developing special strategies for each group.

The following table will focus on determining the statistical significance of gender differences in adolescents’ personal readiness for change.

The Mann-Whitney U statistic test is used to evaluate the difference between the means of two independent samples. In this case, this test helps to determine whether adolescents have differences in sexual characteristics or not.

The Z value of the standardized normal distribution is obtained by transforming the U statistic to the standard normal distribution, and it can be seen in the table presented that the Z distribution is based on the normal as it allows us to evaluate the significance of the result.

Table 6 – Statistical indicators of adolescents' personal readiness for change

	Passion	Resourcefulness	Optimism	Courage	Adaptability	Confidence	Tolerance to uncertainty
U Mann-Whitney	2548.000	2650.000	2675.000	2700.000	2690.000	2561.500	2411.500
Z	-0.584	-0.234	-.148	-0.062	-0.096	-0.538	-1.053
Asymptotic value (2-sided)	0.559	0.815	0.882	0.951	0.923	0.591	0.292

Asymptotic value (2-sided): this value corresponds to the p-value used to test a statistical hypothesis. If the p-value is less than 0.05, then the difference between the two groups is considered statistically significant. In our research, the p-value was lower than 0.05 for the qualities that determine the personal readiness of adolescents for changes, so no significant differences were found between the qualities.

According to the data in the table, no statistically significant differences were found among the adolescents who participated in the study in terms of the studied characteristics. The results of the conducted research showed that there are no significant differences in the studied characteristics of teenagers. However, this conclusion cannot be broadly generalized because of the limitations of the study sample and other factors.

Table 7 – Ranking results of the adolescents' functional conditions

Scales	Gender	N	Average rank	Sum of ranks
Fatigue	female	151	90.49	13664.00
	male	36	108.72	3914.00
	total	187		
Monotony	female	151	89.04	13445.00
	male	36	114.81	4133.00
	total	187		
Boredom	female	151	85.36	12889.00
	male	36	130.25	4689.00
	total	187		
Stress	female	151	88.07	13298.00
	male	36	118.89	4280.00
	total	187		

The table presents a comparative analysis of the functional conditions of teenagers by gender. Here is the average rank and sum of total ranks for fatigue, monotony, boredom and stress levels. Rank analysis is used to compare the intensity of certain indicators in different groups.

According to the data in the table, male responders have a higher average rank than female responders for all four indicators. This shows that male respondents feel fatigue, monotony, boredom and stress more than female respondents.

General trend: In general, the value of average ranks for all indicators in the table is high. This shows that most of the adolescents who participated in the study experience fatigue, monotony, boredom and stress to some extent.

Based on the results of the table, the following conclusions can be made.

Gender differences: the boys who took part in the study felt fatigue, monotony, boredom and stress more strongly than the girls. The reason for this may be related to social stereotypes, biological characteristics or other factors.

Status of teenagers: most of the teenagers who participated in the research experience fatigue, monotony, boredom and stress to some extent. This may be related to the peculiarities of adolescence.

Suggestions for further research

Determining the reasons: it is necessary to carry out additional studies to determine the specific reasons affecting the functional status of adolescents. For example, it is possible to study the influence of factors such as study load, social relations, and family conditions.

An in-depth study of differences between groups: Differences between groups can be compared not only by gender, but also by other factors such as socio-economic status, place of residence, or educational achievements.

Development of intervention programs: Based on the obtained results, it is possible to develop intervention programs aimed at improving the functional condition of adolescents.

We decided to present the results of the functional condition of teenagers (according to the rank indicators) in the form of a diagram so that they can

be visualized visually. The result is presented in Figure 4.

This diagram compares the level of feelings of fatigue, monotony, boredom and stress among teenagers by gender. According to the results, it was found that male respondents feel these feelings more strongly than female respondents. Biological, social and psychological factors can be considered as the cause of this phenomenon. Boys experience higher levels of fatigue, monotony, boredom and stress than girls.

General trend: Most adolescents experience some degree of functional impairment.

Suggestions for further research

Determining the reasons: further research is needed to determine the exact causes affecting the functional conditions of adolescents.

Development of psychological assistance programs: based on the obtained results, it is possible to develop programs aimed at improving the psychological condition of teenagers.

Comparative analysis: it is necessary to compare the results of research in different cultures and social groups.

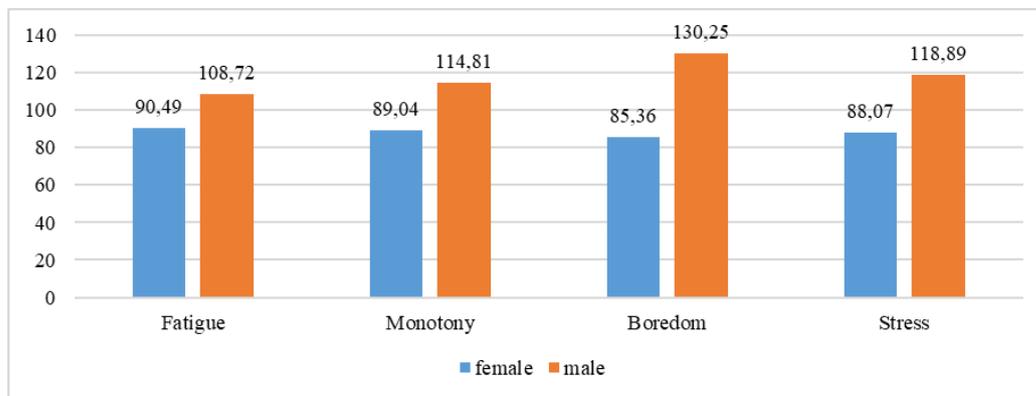


Figure 6 – Functional condition of adolescents (according to the rank indicators)

Table 8 – Statistical value of functional conditions of teenagers

	Fatigue	Monotony	Boredom	Stress
U Mann-Whitney	2188.000	1969.000	1413.000	1822.000
Z	-1.826	-2.577	-4.480	-3.079
Asymptotic value (2-sided)	0.068	0.010	0.000	0.002

Statistically significant differences were found between groups on all four scales ($P < 0.05$), which indicates the presence of significant differences in the level of fatigue, monotony, boredom and stress between the compared groups. This table shows the statistical data used to compare the level of feelings of fatigue, monotony, boredom and stress among teenagers. Here, the differences between different groups are determined using statistical methods such as the Mann-Whitney test, Z-statistics and p-value.

Gender differences among adolescents on all four studied indicators were recognized as statistically significant. This means that there are significant differences in the levels of fatigue, monotony, boredom and stress in adolescents by gender. Therefore, according to these qualities, boys' performance is higher than that of girls.

It was found that the gender differences between teenagers in four studied indicators: fatigue, monotony, boredom and stress levels are statistically significant. This means that there are significant differences between these indicators of boys and girls, and the indicators of boys are higher than those of girls.

A few possible reasons could explain these differences.

Physiological features: during the period of adolescent development, the hormonal levels of boys and girls differ significantly. Higher testosterone levels in boys can make them more aggressive and more active in stressful situations. This increases their fatigue and stress levels.

Social roles and expectations: in society, boys are often expected to be physically active, competi-

tive, and active. These demands contribute to their high level of fatigue and monotony. And girls are often expected to be more in control of their emotions and able to cope with stress, which makes them react differently to stress.

Environmental influence: friends, school and family play a major role during adolescence. High competition and frequent physical activity among boys may contribute to high levels of boredom and monotony. Girls tend to value emotional support and communication more, which can help them cope with stress.

Psychological features: adolescent boys' tendency to express their emotions outwardly makes them act proactively in stressful situations, which can lead to them feeling tired and bored more often. Girls struggle to control their emotions and deal with stress internally, which affects how they manage stress.

Physical activity level: boys may participate more in sports and other physically active activities, which increases their physical and emotional exhaustion. Physical exertion and competition are likely to increase feelings of stress and monotony.

These factors may explain the differences in the studied indicators between adolescent boys and girls. Additional studies that take into account each situation may fully reveal the characteristics of the behavior and emotional state of adolescents.

Table 9 shows the relationship between the functional conditions of teenagers and personal readiness for change. This indicator was calculated using Pearson's correlation test.

Table 9 – Interrelationship between functional conditions of adolescents and personal readiness for change

	Fatigue	Monotony	Boredom	Stress
Passion	-.220	.067	-.130	.052
	.003	.360	.075	.483
	187	187	187	187
Resourcefulness	-.183	.088	-.089	.077
	.012	.232	.226	.292
	187	187	187	187
Optimism	-.151	-.382	-.216	-.354
	.039	.000	.003	.000
	187	187	187	187

Continuation of the table

	Fatigue	Monotony	Boredom	Stress
Courage	.050	-.251	.031	-.239
	.500	.001	.674	.001
	187	187	187	187
Adaptability	-.049	-.303	-.105	-.286
	.509	.000	.153	.000
	187	187	187	187
Confidence	-.120	.169	-.017	.120
	.101	.021	.813	.103
	187	187	187	187
Tolerance to uncertainty	-.089	-.354	-.071	-.288
	.228	.000	.336	.000
	187	187	187	187

Table 9 shows the interrelationships between the functional conditions of adolescents (fatigue, monotony, boredom, and stress) and various aspects of their personal readiness for change. Correlation coefficients (r) and their significance (p values) describing the strength of relationships are given. Let's analyze and conclude each indicator individually below.

Passion: there is a negative correlation with fatigue ($r = -0.220$, $p = 0.003$), which means that higher levels of passion reduce fatigue.

- There is a weak positive correlation with monotony ($r = 0.067$, $p = 0.360$), which is not statistically significant.

- There is also a negative correlation with boredom ($r = -0.130$, $p = 0.075$), but it is not significant enough.

- A very weak positive correlation with stress ($r = 0.052$, $p = 0.483$), not statistically significant.

Adolescents with high levels of passion experience less fatigue, but no significant relationship is observed for monotony, boredom, and stress.

Resourcefulness:

- There is a negative correlation with fatigue ($r = -0.183$, $p = 0.012$), indicating that fatigue decreases as resourcefulness increases.

- Weak positive and negative correlations with monotony and boredom ($r = 0.088$, $p = 0.232$; $r = -0.089$, $p = 0.226$) are not significant.

- There is also a weak positive relationship with stress ($r = 0.077$, $p = 0.292$).

Resourcefulness reduces fatigue, but there are no significant associations with other indicators.

Optimism:

- There is a negative and significant relationship with all indicators: fatigue ($r = -0.151$, $p = 0.039$), monotony ($r = -0.382$, $p = 0.000$), boredom ($r = -0.216$, $p = 0.003$) and stress ($r = -0.354$, $p = 0.000$).

High levels of optimism significantly reduce fatigue, monotony, boredom and stress levels among teenagers.

Courage:

- There are negative and significant relationships with monotony and stress: monotony ($r = -0.251$, $p = 0.001$), stress ($r = -0.239$, $p = 0.001$).

- There are weak positive associations with fatigue and boredom, but they are not significant.

Courage reduces monotony and stress, but has no significant effect on fatigue and boredom.

Adaptability:

- There are negative correlations with monotony ($r = -0.303$, $p = 0.000$), stress ($r = -0.286$, $p = 0.000$) and fatigue ($r = -0.049$, $p = 0.509$).

- Weak negative correlation with boredom ($r = -0.105$, $p = 0.153$).

As adaptability increases, monotony and stress decrease significantly, but there is a weak association with fatigue and boredom.

Confidence:

- There are weak but insignificant correlations with fatigue ($r = -0.120$, $p = 0.101$) and stress ($r = 0.120$, $p = 0.103$).

- There is a positive ($r = 0.169$, $p = 0.021$), statistically significant relationship with monotony.

- No significant association with boredom.

Confidence increases monotony, but the effect on other indicators is not significant.

Tolerance to uncertainty:

- There is a negative and significant correlation with monotony ($r = -0.354$, $p = 0.000$) and stress ($r = -0.288$, $p = 0.000$) levels.

- There are weak associations with fatigue and boredom, but of low significance.

Tolerance to uncertainty reduces monotony and stress levels.

The results of the research show that there is a significant correlation between personality traits of adolescents and their functional conditions. In particular, qualities such as optimism, courage, adaptability and tolerance to uncertainty significantly reduce monotony and stress levels. In addition, passion and resourcefulness reduce fatigue, and confidence slightly increases monotony.

Conclusion

A total of 187 people participated in the study, including 36 men and 151 women. Potential participants were recruited by answering an online survey between August 11 and October 12, 2021. During the research, the «Fatigue – Monotony – Boredom – Stress» method (H.E. Plath, P. Richter) and «Personal change readiness survey» (A. Rolnic, S. Heather, M. Gold, S. Hull) were used. The reliability of the test was tested by Cronbach's alpha coefficient in SPSS 23.

In the course of the research, methodological principles (principle of development, principle of determinism) and problems related to the study of the concept of psychological readiness for changes were analyzed.

Theoretical and empirical work was carried out in accordance with the purpose of studying the characteristics of psychological readiness of adolescents for changes.

It was determined that there is a direct relationship between the psycho-emotional state of adolescents and their psychological readiness for change, and no statistically significant differences were found in the manifestations of components of psychological readiness for change between adolescent boys and girls.

However, the results of the study showed significant differences and trends between the functional conditions and personality traits of adolescents. The information obtained for each personality trait reveals important aspects of their personal development and behavior.

The observation of a low level in the majority of teenagers in terms of the quality of passion (50.27%) indicates their weak internal motivation and lack of real interest in a specific goal. People in this group have difficulty achieving long-term goals and often depend on external motivation. For teenagers belonging to this group, increasing internal motivation is an important task. A high level of passion found in 21.39% of teenagers means that they tend to take a genuine interest in their activities and work hard. This group is trying to acquire new knowledge and skills, so it is very important to support them.

Resourcefulness indicators showed that more than half of teenagers (47.59%) were at a low level of this quality. This means they have trouble solving complex problems or coming up with new ideas. And 23.58% have a high level of resourcefulness, which indicates their tendency to think creatively and implement innovative ideas. Teenagers belonging to this group easily adapt to changes and make creative decisions.

The obtained data on the quality of optimism showed a very positive result: 92.51% of teenagers had a high level of optimism. This means that they look to the future with confidence, accept challenges with a positive attitude and have a positive outlook on life. Such a high level of optimism has a positive effect on their emotional state and ability to overcome life's challenges.

Data on the quality of courage showed a low level: 96.26% of teenagers had this quality at a low level. This means that they become insecure and risk averse when faced with challenges. It is important to develop this quality and encourage them to take decisive action.

It was found that the level of adaptability is also low: 95.72% of teenagers have this quality at a low level. This shows that it is difficult for them to adapt to new situations or changes. It is important for such teenagers to develop flexibility.

In terms of confidence, 49.2% of teenagers have a low level of confidence, which indicates that they have difficulties in making decisions and defending their point of view. Measures are needed to increase their confidence by providing appropriate support.

95.72% of teenagers had a medium level of tolerance to uncertainty. This means that they are sometimes able to remain calm in situations of uncertainty, but such situations are not easy for them. And 4.28% show a high level of tolerance, which shows that they easily adapt to uncertainty and act confidently.

The results of the research showed that gender differences among adolescents significantly affect the level of functional disorders. It was found that boys feel fatigue, monotony, boredom and stress more strongly than girls. Biological, social, and psychological factors may play an important role in explaining these results. Among the possible reasons why boys experience such feelings at a higher level can be considered differences in the level of sex hormones, social pressure and responsibility typical of boys, as well as the characteristics of their emotional management strategies.

General trend: it has been found that the majority of adolescents experience some degree of functional disorders, especially feelings such as fatigue, monotony, boredom and stress. This trend shows that emotional and psychological burdens among adolescents are significant and need to be managed.

The results of the study show that functional disorders have a significant impact on the lives of adolescents and highlight the need for actions aimed at solving these problems. It is important to develop and implement practical measures to improve functional conditions among adolescents.

The results of the study showed that there are different levels of connections between the personality qualities of adolescents and their functional conditions. In particular, qualities such as passion, resourcefulness, optimism, courage and adaptability have a significant impact on the motivation and actions of adolescents. According to these indicators, a low level is detected in most teenagers, which indicates the need to develop their internal motivation and increase their ability to deal with various life challenges. In the future, as a result of such research, it is important to implement specific measures to support the personal development of adolescents and increase their potential.

The current research has its limitations, which also suggest prospects for future research. First, because the study was cross-sectional, it ruled out the existence of a causal relationship between the variables. Future research should conduct longitudinal, experimental, or interventional studies to address this issue and contribute to a better understanding of causal mechanisms. Second, this study was conducted against the background of the population of Kazakhstan, the results cannot provide a difference between the population of Kazakhstan and other countries in the psychological mechanisms underlying the relationship between the personality readiness for change and functional conditions of adolescents. Therefore, future cross-cultural studies may

be conducted to compare differences between Eastern and Western populations.

The following recommendations related to the results of our research can be noted:

1. Determining the reasons: it is necessary to study the specific reasons in depth that affect the functional conditions of adolescents. A deeper study of biological, social, and psychological factors is important to explain gender differences.

2. Development of psychological assistance programs: based on the research results, it is necessary to develop psychological assistance programs aimed at improving the emotional condition of adolescents. Such programs help adolescents manage their emotions, deal with functional disorders, and improve their overall psychological well-being.

3. Comparative analysis: comparing the functional conditions of adolescents from different cultures and social groups provides a broad understanding of the factors influencing adolescent health. Thus, ways of providing more comprehensive support can be determined, taking into account cross-cultural and social factors.

4. Developing Emotional Literacy Programs: developing programs aimed at developing self-regulation, emotion management, and communication skills in adolescents are of great significance.

5. Creating a safe and supportive environment at school: providing training to teachers on working with adolescents in emotionally difficult situations, creating interest groups and other forms of organizing free time.

6. Cooperation with parents: holding parent-teacher conferences and counseling sessions to educate and support parents about adolescent problems.

7. Early diagnosis and intervention: development of screening tools to identify adolescents prone to emotional problems.

In conclusion, the current study is an important step in the study of adaptation mechanisms between the personality readiness for changes and the functional conditions of adolescents. The results of the research make a significant contribution to both the educational system and the field of psychological support. This study represents a new effort to understand the complex interrelationships of adolescent personality traits, psychological stability, and readiness for change.

The practical significance of this work is determined by the possibility of using the research results in the course of psychological accompaniment of adolescents, especially during psychocorrection

and counseling, which increases the value of the research. The data obtained by studying the personality readiness and functional state of adolescents for changes will help to create specific, targeted methods of psychological support.

Areas of practical application:

1. Psychocorrective programs:

- The research results can be used to improve psycho correction methods for teenagers. In particular, specific techniques can be developed to manage stress, reduce fatigue, and improve attention and memory.

2. Psychological counseling:

- Taking into account the personality characteristics and mental state of adolescents during counseling, the possibility of effective counseling increases for them to successfully adapt to school and other social environments. Using the data from the study, individual personality traits can be taken into account and individual strategies can be developed for each teenager.

3. Educational environment:

- The results of the research can be used by school psychologists in the educational process.

They can help develop a support system within the school to support students' psychological stability and facilitate their adjustment.

On the basis of this research, psychological support work becomes more effective and allows to improve adaptation and emotional stability of adolescents.

Acknowledgments and Conflict of interest

The authors note that this study was conducted in the absence of commercial or financial relationships that could be considered a potential conflict of interest. That is, there were no financial or other incentives serving the interests of any organization or individual during the research. This ensures the scientific objectivity, fairness and reliability of the research.

Such a statement guarantees the independence and impartiality of the research results, and contributes to the fair and reliable reception of the research in the scientific community. The researchers indicate that they were guided only by scientific goals and based on objective data.

References

- Antsyferova L.I. (1994) Lichnost' v trudnyh zhiznennyh usloviyah: pereosmyslivanie, preobrazovanie situacij i psihologicheskaja zashhita [Personality in difficult life conditions: rethinking, transformation of situations and psychological protection]. *Psychological Journal*, vol. 15, no 1, pp. 3-18. (In Russian)
- Argyle M. (2013) *Psychology of Happiness*. London, Routledge, 288 p. <https://doi.org/10.4324/9781315812212>
- Arnett J.J. (1999) Adolescent storm and stress, reconsidered. *American Psychologist*, vol.54, pp. 317–326.
- Baishukurova A.K., Burkitbaeva D. (2012) Vzaimosvyaz' akcentuacij haraktera podrostkov s urovnem ih social'no-psihologicheskoy adaptacii [Inter-Relation between Adolescents' Character Accentuation and the Level of their Social-Psychological Adaptation]. *The Journal of Psychology&Sociology*, no 4(43), pp.108-112. (In Russian)
- Buravleva N.A., Karakulova O.V., Atamanova I.V., Bogomaz S.A. (2022) Psihologicheskie resursy lichnostnoj gotovnosti k dejatel'nosti studentov v situacii izmenenij [Psychological resources of personal readiness for students' activities in a situation of change]. *Pedagogicheskij obzor*, vol. 62(2), pp. 146-155. (In Russian)
- Byrne D.G., Davenport S.C., Mazanov J. (2007) Profiles of adolescent stress: the development of the adolescent stress questionnaire. *Journal of Adolescence*, no 30, pp. 393–416.
- Chen X., Li D., Xu X., Liu J., Fu R., Cui L.(2019) School adjustment of children from rural migrant families in urban China. *The Journal of School Psychology*, vol.72, pp.14–28.
- Compas B.E. (1987) Stress and life events during childhood and adolescence. *Clinical Psychology Review*, vol.7, pp. 275–302. [https://psycnet.apa.org/doi/10.1016/0272-7358\(87\)90037-7](https://psycnet.apa.org/doi/10.1016/0272-7358(87)90037-7)
- Compas B.E., Orosan P.G., Grant K.E. (1993) Adolescent stress and coping: implications for psychopathology during adolescence. *Journal of Adolescence*, vol. 16, pp. 331–349.
- Dupéré V., Dion E., Leventhal T., Archambault I., Crosnoe R., Janosz M. (2018) High school dropout in proximal context: the triggering role of stressful life events. *Child Development*, vol. 89, pp. 107–122.
- Fredrickson B., Loftus G.R., Wagenaar W., Fredrickson B. (2009) Atkinson & Hilgard's introduction to psychology. Wadsworth/Thomson Learning. URL: <https://invent.ilmkidunya.com/images/Section/introduction-to-psychology-css-psychology-book.pdf>
- Han L., Zhao S.Y., Pan X.Y., Liao C.J. (2018) The impact of students with left-behind experiences on childhood: the relationship between negative life events and depression among college students in China. *International Journal of Social Psychiatry*, no 64, pp. 56–62.

- Humphreys K. L., Watts E. L., Dennis E. L., King L. S., Thompson P. M., Gotlib I. H. (2018) Stressful life events, ADHD symptoms, and brain structure in early adolescence. *Journal of Abnormal Child Psychology*, vol. 47(3), pp. 421-432.
- Khodaev A.S. (2024) Faktory, vliyayushhie na formirovaniye lichnostnoy gotovnosti podrostkov k soprotivleniyu otricatel'nym vliyaniyam internet-socializatsii [Factors influencing the formation of adolescents' personal readiness to resist the negative influences of Internet socialization]. *Obzor Tambovskogo universiteta*, no 1 (29), pp. 36-45. (In Russian)
- Kramer M. S., Lydon J., Goulet L., Kahn S. R., Mcnamara H., Genest J. (2009) Stress pathways to spontaneous preterm birth: the role of stressors, psychological distress, and stress hormones. *American Journal of Epidemiology*, vol. 169, pp. 1319-1326.
- Krasnova M.A. (2016) Stressoustojchivost' uchashhihsya podrostkovogo vozrasta [Stress tolerance of adolescent students]. *Academy*, vol. 9(6), pp. 103-105. (In Russian)
- Luyckx K., Robitschek Ch. Personal growth initiative and identity formation in adolescence through young adulthood: Mediating processes on the pathway to well-being. *Journal of Adolescence*, vol. 37, no 7, pp. 973-981.
- Maclean M.J., Taylor C.L., O'Donnell M. (2016) Pre-existing adversity, level of child protection involvement, and school attendance predict educational outcomes in a longitudinal study. *Child Abuse & Neglect*, no 51, pp. 120-131.
- Mi Z., Mynbayeva A. (2022) Analysis of anxiety and mental health of schoolchildren in China (on the example of schools in the Autonomous Region of Inner Mongolia). *The Journal of Psychology & Sociology*, vol. 82, no 3, pp. 28-36.
- Mukhamediyev A.E. (2022) Adebietti zhyjeli sholu: «Z» urpaktyn zhana sintetikalik psihotrop zattarga (ZHSPZ) katynasy [Systematic review of the literature: the attitude of «Z» generation to new synthetic psychotropic substances (NSPS)]. *The Journal of Psychology & Sociology*, vol. 82, no 3, pp. 112-126. (In Kazakh)
- Piccolo L.R., Noble K.G. (2017) Perceived stress is associated with smaller hippocampal volume in adolescence. *Psychophysiology*, no 55. doi: 10.1111/psyp.13025.
- Plath H. E., Richter P. (1984) Ermuedung-Monotonie-Saetting-Stress. BMS-Handanweisung. Berlin: Psychodiagn. Zentrum Humboldt-University, 240 p.
- Raklova E.M. (2013) Theoretical aspects of the emergence of deviant behavior. *The Journal of Psychology & Sociology*, vol. 46, no 3, pp.30-37.
- Rod N.H., Gronbaek M., Schnohr P., Prescott E., Kristensen T.S. (2009) Perceived stress as a risk factor for changes in health behaviour and cardiac risk profile: a longitudinal study. *Journal of Internal Medicine*, no 266, pp. 467-475.
- Rollnick S., Heather N., Gold R., Hall W. (1992) Development of a short 'readiness to change' questionnaire for use in brief, opportunistic interventions among excessive drinkers. *British Journal of Addiction*, no 87, pp. 743-754.
- Sandler I.N., Tein J.Y., West S.G. (1994) Coping, stress, and the psychological symptoms of children of divorce: a cross-sectional and longitudinal study. *Child Development*, no 65, pp. 1744-1763.
- Troy A.S., Mauss I.B. (2011) Resilience in the Face of Stress: Emotion Regulation as a Protective Factor. Cambridge: Cambridge University Press, pp. 30-44.
- Zhang Y., Zhang X., Zhang L., Guo C. (2019) Executive Function and Resilience as Mediators of Adolescents' Perceived Stressful Life Events and School Adjustment. *Frontiers in Psychology*, vol. 10, pp.1-9.

Литература

- Анцыферова Л.И. Личность в трудных жизненных условиях: переосмысливание, преобразование ситуаций и психологическая защита // *Психологический журнал*. – 1994. – Т.15. – №1. – С. 3-19.
- Argyle M. Psychology of Happiness. – London, Routledge, 2013. – 288 p. <https://doi.org/10.4324/9781315812212>
- Arnett J.J. (1999) Adolescent storm and stress, reconsidered // *American Psychologist*. – Vol.54. – P. 317-326.
- Байшукурова А.К., Буркитбаева Д. Взаимосвязь акцентуаций характера подростков с уровнем их социально-психологической адаптации // *Вестник КазНУ. Серия психологии и социологии*. – 2012. – № 4(43). – P. 108-112.
- Буравлева Н.А., Каракулова О.В., Атаманова И.В., Богомаз С.А. Психологические ресурсы личностной готовности к деятельности студентов в ситуации изменений // *Научно-педагогическое обозрение*. – 2022. – № 2 (42). – С. 146-155. <https://doi.org/10.23951/2307-6127-2022-2-146-155>.
- Byrne D.G., Davenport S.C., Mazanov J. Profiles of adolescent stress: the development of the adolescent stress questionnaire // *Journal of Adolescence*. – 2007. – №. 30. – P. 393-416.
- Chen X., Li D., Xu X., Liu J., Fu R., Cui L. School adjustment of children from rural migrant families in urban China // *The Journal of School Psychology*. – 2019. – Vol. 72.- P. 14-28.
- Compas B.E. Stress and life events during childhood and adolescence // *Clinical Psychology Review*. – 1987. – Vol. 7. – P. 275-302.
- Compas B.E., Orosan P.G., Grant K.E. Adolescent stress and coping: implications for psychopathology during adolescence // *Journal of Adolescence*. – 1993. – Vol. 16. – P. 331-349.
- Dupéré V., Dion E., Leventhal T., Archambault I., Crosnoe R., Janosz M. High school dropout in proximal context: the triggering role of stressful life events // *Child Development*. – 2018. – Vol. 89. – P. 107-122.
- Fredrickson B., Loftus G.R., Wagenaar W., Fredrickson B., Atkinson & Hilgard's Introduction to psychology. – Wadsworth Thomson Learning, 2009. URL: <https://invent.ilmkidunya.com/images/Section/introduction-to-psychology-css-psychology-book.pdf>

Han L., Zhao S.Y., Pan X.Y., Liao C.J. The impact of students with left-behind experiences on childhood: the relationship between negative life events and depression among college students in China // *International Journal of Social Psychiatry*. – 2018. – № 64. – P. 56–62.

Humphreys K. L., Watts E. L., Dennis E. L., King L. S., Thompson P. M., Gotlib I. H. Stressful life events, ADHD symptoms, and brain structure in early adolescence // *Journal of Abnormal Child Psychology*. – 2018. – Vol. 47(3). – P. 421–432.

Краснова М.А. Стрессоустойчивость учащихся подросткового возраста // *Academy*. – 2016. – №6 (9). – С. 103–105.

Kramer M. S., Lydon J., Goulet L., Kahn S. R., Mcnamara H., Genest J. Stress pathways to spontaneous preterm birth: the role of stressors, psychological distress, and stress hormones // *American Journal of Epidemiology*. – 2009. – Vol. 169. – P. 1319–1326.

Luyckx K., Robertsckek Ch. Personal growth initiative and identity formation in adolescence through young adulthood: Mediating processes on the pathway to well-being // *Journal of Adolescence*. – 2014. – Vol. 37. – № 7. – P. 973–981.

Maclean M. J., Taylor C. L., O'Donnell M. Pre-existing adversity, level of child protection involvement, and school attendance predict educational outcomes in a longitudinal study // *Child Abuse & Neglect*. – 2016. – № 51. – P. 120–131.

Mi Z., Mynbayeva A. Analysis of anxiety and mental health of schoolchildren in China (on the example of schools in the Autonomous Region of Inner Mongolia) // *The Journal of Psychology & Sociology*. – 2022. – Vol. 82. – № 3. – P. 28–36.

Мұхамедиев А.Е. Әдебиетті жүйелі шолу: «Z» ұрпақтың жаңа синтетикалық психотроп заттарға (ЖСПЗ) қатынасы // *ҚазҰУ Хабаршысы. Психология және әлеуметтану сериясы*. – 2022. – Vol. 82. – № 3. – P. 112–126.

Piccolo L.R., Noble K.G. Perceived stress is associated with smaller hippocampal volume in adolescence // *Psychophysiology*. – 2017. – № 55. doi: 10.1111/psyp.13025.

Plath H. E., Richter P. Ermuedung-Monotonie-Saetting-Stress. BMS-Handanweisung. – Berlin: Psychodiagn. Zentrum Humboldt-University, 1984. – 240 p.

Raklova E.M. Theoretical aspects of the emergence of deviant behavior // *The Journal of Psychology & Sociology*. – 2013. – Vol. 46. – № 3. – P.30–37.

Rod N. H., Gronbaek M., Schnohr P., Prescott E., Kristensen T.S. Perceived stress as a risk factor for changes in health behaviour and cardiac risk profile: a longitudinal study // *Journal of Internal Medicine*. – 2009. – № 266. – P. 467–475.

Rollnick S., Heather N., Gold R., Hall W. Development of a short 'readiness to change' questionnaire for use in brief, opportunistic interventions among excessive drinkers // *British Journal of Addiction*. – 1992. – № 87. – P. 743–754.

Sandler I.N., Tein J.Y., West S.G. Coping, stress, and the psychological symptoms of children of divorce: a cross-sectional and longitudinal study // *Child Development*. – 1994. – № 65. – P. 1744–1763.

Troy A. S., Mauss I. B. Resilience in the Face of Stress: Emotion Regulation as a Protective Factor. – Cambridge: Cambridge University Press, 2011. – P. 30–44.

Zhang Y., Zhang X., Zhang L., Guo C. Executive Function and Resilience as Mediators of Adolescents' Perceived Stressful Life Events and School Adjustment // *Frontiers in Psychology*. – 2019. – Vol. 10. – P.1–9.

Ходаев А.С. Факторы, влияющие на формирование личностной готовности подростков к сопротивлению отрицательным влияниям интернет-социализации // *Вестник Тамбовского университета. Серия: Гуманитарные науки*. – 2024. – № 1(29). – С. 36–45.

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