

ПЕДАГОГИКАЛЫҚ ЖӘНЕ ЖАС ЕРЕКШЕЛІК ПСИХОЛОГИЯСЫ
ПЕДАГОГИЧЕСКАЯ И ВОЗРАСТНАЯ ПСИХОЛОГИЯ

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THE RELATIONSHIP BETWEEN STRESS TOLERANCE AND SUBJECTIVE
PERCEPTION OF PSYCHOLOGICAL WELL-BEING IN STUDENTS

Abstract

The current task of modern psychological and pedagogical knowledge is to study the factors that contribute to maintaining and strengthening the psychological well-being of young people in conditions of increased academic and social stress. In this work, the research problem is to determine the degree of interdependence between the level of stress resistance and the subjective assessment of psychological well-being of students. The aim of the study is to identify patterns of interaction between these two factors in students of different specialties, as well as to develop recommendations for improving stress resistance and subjective perception of psychological well-being in the student environment. The study used a set of methods, including theoretical analysis of scientific literature on the topic; empirical testing of stress resistance and psychological well-being levels, followed by an analysis of the correlations between the indicators; an author's questionnaire aimed at identifying student profiles based on a number of psychological and behavioral characteristics; observation, used to study individual characteristics and coping strategies; and comparative analysis, which allowed us to establish relationships between observed behavioral reactions and the level of perceived psychological well-being and stress resistance. The test results showed that students of technical specialties have the highest integral indicators of stress resistance and subjective psychological well-being. Based on the author's survey, both general trends and specialized perceptions of students from different fields of study about the essence and manifestations of stress resistance and well-being were identified. A comparative analysis demonstrated a statistically significant relationship between the observed behavioral reactions in stressful situations and the level of subjective assessment of psychological well-being. The identified patterns formed the basis for practical recommendations addressed to both educational organizations and students and teaching staff.

Keywords: stress tolerance, psychological well-being, university students, subjective perception, correlations.

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Студенттердің күйзеліске төзімділігі мен психологиялық әл-ауқаттың субъективті
қабылдауы арасындағы өзара байланыс

Аңдатпа

Қазіргі психологиялық-педагогикалық білімнің өзекті міндеті-жоғары оқу және әлеуметтік жүктеме жағдайында жастардың психологиялық әл-ауқатын сақтауға және нығайтуға ықпал ететін факторларды зерттеу. Бұл жұмыста зерттеу мәселесі стресске

төзімділік деңгейі мен студенттердің психологиялық әл-ауқатын субъективті бағалау арасындағы өзара тәуелділік дәрежесін анықтау болып табылады. Зерттеудің мақсаты-әр түрлі мамандықтағы студенттерде осы екі фактордың өзара әрекеттесу заңдылықтарын анықтау, сонымен қатар стресске төзімділікті арттыруға және студенттік ортадағы психологиялық әл-ауқаттың субъективті қабылдауын жақсартуға көмектесетін ұсыныстар әзірлеу. Зерттеу барысында тақырып бойынша ғылыми әдебиеттерді теориялық талдауды қамтитын әдістер кешені пайдаланылды; стресске төзімділік пен психологиялық әл-ауқат деңгейлерін эмпирикалық тестілеу, содан кейін көрсеткіштер арасындағы корреляциялық байланыстарды талдау; бірқатар психологиялық және мінез-құлық сипаттамалары бойынша студенттің профилін анықтауға бағытталған авторлық сауалнама; жеке ерекшеліктер мен күресу стратегияларын зерттеу үшін қолданылатын бақылау әдісі; байқалған мінез-құлық реакциялары мен психологиялық әл-ауқат пен стресске төзімділікті қабылдау деңгейі арасында байланыс орнатуға мүмкіндік беретін салыстырмалы талдау әдісі. Тестілеу нәтижелері техникалық мамандықтар студенттерінің стресске төзімділік пен субъективті психологиялық әл-ауқаттың ең жоғары интегралды көрсеткіштеріне ие екендігін көрсетті. Авторлық сауалнама негізінде жалпы тенденциялар да, дайындықтың әртүрлі бағыттарындағы студенттердің стресске төзімділік пен әл-ауқаттың мәні мен көріністері туралы мамандандырылған идеялары анықталды. Бұл білім беру бағыттарының ерекшеліктерін ескере отырып, осы параметрлер бойынша студенттердің салыстырмалы идеалды профильдерін қалыптастыруға мүмкіндік берді. Салыстырмалы талдау стресстік жағдайларда байқалған мінез-құлық реакциялары мен психологиялық әл-ауқаттың субъективті бағалау деңгейі арасындағы статистикалық маңызды байланыстың болуын көрсетті. Анықталған заңдылықтар білім беру ұйымдарына да, студенттер мен оқытушылар құрамына да бағытталған практикалық ұсыныстардың негізін қалады. Зерттеу қолданбалы құндылыққа ие, өйткені ол стресстің жоғарылауы жағдайында әртүрлі мамандықтағы студенттердің өмір сүру сапасын жақсарту үшін нақты шараларды ұсынады. Әзірленген ұсынымдар тұрақты копинг-стратегияларды қалыптастыруға, психологиялық тұрақтылықты арттыруға және қазақстандық жоғары мектеп контекстінде қолайлы білім беру ортасын құруға бағытталған.

Түйін сөздер: стресске төзімділік, психологиялық әл-ауқат, жоғары оқу орындарының студенттері, субъективті қабылдау, корреляция.

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Взаимосвязь между стрессоустойчивостью и субъективным восприятием психологического благосостояния у студентов

Аннотация

Актуальной задачей современного психолого-педагогического знания является изучение факторов, способствующих сохранению и укреплению психологического благополучия молодежи в условиях повышенной учебной и социальной нагрузки. В данной работе проблематика исследования заключается в определении степени взаимозависимости между уровнем стрессоустойчивости и субъективной оценкой психологического благополучия студентов. Цель исследования — выявить закономерности взаимодействия этих двух факторов у студентов различных специальностей, а также разработать рекомендации, способствующие повышению стрессоустойчивости и улучшению субъективного восприятия психологического благополучия в студенческой среде. В исследовании использован комплекс методов, включающий теоретический анализ научной литературы по теме; эмпирическое

тестирование уровней стрессоустойчивости и психологического благополучия с последующим анализом корреляционных связей между показателями; авторский опросник, направленный на выявление профиля студента по ряду психологических и поведенческих характеристик; метод наблюдения, применявшийся для изучения индивидуальных особенностей и копинг-стратегий; метод сравнительного анализа, позволивший установить взаимосвязи между наблюдаемыми поведенческими реакциями и уровнем восприятия психологического благополучия и стрессоустойчивости. Результаты тестирования показали, что студенты технических специальностей обладают наивысшими интегральными показателями стрессоустойчивости и субъективного психологического благополучия. На основе авторского опроса выявлены как общие тенденции, так и специализированные представления студентов различных направлений подготовки о сущности и проявлениях стрессоустойчивости и благополучия. Это позволило сформировать сравнительные идеальные профили студентов по данным параметрам с учетом специфики образовательных направлений. Сравнительный анализ продемонстрировал наличие статистически значимой взаимосвязи между наблюдаемыми поведенческими реакциями в стрессовых ситуациях и уровнем субъективной оценки психологического благополучия. Выявленные закономерности легли в основу практических рекомендаций, адресованных как образовательным организациям, так и самим студентам и преподавательскому составу. Проведенное исследование обладает прикладной ценностью, так как предлагает конкретные меры по улучшению качества жизни студентов различных специальностей в условиях повышенного стресса. Разработанные рекомендации направлены на формирование устойчивых копинг-стратегий, повышение психологической устойчивости и создание благоприятной образовательной среды в контексте казахстанской высшей школы.

Ключевые слова: стрессоустойчивость, психологическое благополучие, студенты вузов, субъективное восприятие, корреляции.

Introduction. The relevance of the topic of the study is based on the fact that, under modern conditions, there is a noted increase in the number of psychoemotional problems among young people, especially among students. This is due to the fact that modern life places high demands on young people, as they face the need to adapt to the conditions caused by academic workloads, inflated social expectations, career ambitions, and other life difficulties while studying in higher education institutions. One of the important factors in maintaining psychological health, based on the development of students' ability to cope with stress even under uncertainty and external pressure, is considered to be the preservation of internal psychological well-being.

However, the relationship between stress resilience and students' subjective perception of psychological well-being remains understudied, despite the existence of many theoretical and empirical studies on students' stress resilience. Most of the studies focus on particular aspects of psychological or stress resilience or on the general assessment of students' well-being, without taking into account the personal subjective perception of stress and other individual characteristics. The present study is aimed at identifying the specifics of the relationship between stress resilience and the subjective perception of psychological well-being specifically in students, using an integrated approach to the study of the mental health of modern youth.

The purpose of the study is to identify patterns of interaction between stress tolerance and the subjective perception of psychological well-being among students of different specialties and to develop recommendations to improve stress tolerance and the perception of psychological well-being in the student environment.

The hypothesis of the study is the assumption that a high level of stress tolerance increases the probability of maintaining a high level of life satisfaction and a general feeling of happiness in students, despite the difficulties arising in the process of learning and socialization in society.

The objectives of the study are defined as:

1. To theoretically substantiate the issues of stress resistance and the subjective perception of psychological well-being, to identify existing approaches to the definition and development of this scientific aspect, and to measure the indicated characteristics;
2. To select a set of diagnostic tools to identify the levels of stress resistance and subjective perception of psychological well-being among students of different specialties and courses;
3. To conduct anonymous testing of students to identify levels of stress tolerance and subjective perception of psychological well-being for subsequent generalization of results, correlation, and establishing differences between various groups;
4. To determine the profile of a student with high levels of stress tolerance and good psychological well-being;
5. To establish the individual characteristics and coping strategies used by students with different levels of stress tolerance and their assessed psychological well-being;
6. To make recommendations to improve stress resilience and the overall sense of well-being in the student population.

The review of scientific and practical literature has shown that Kazakhstani and foreign researchers have a significant interest in studying the problems of stress and individual adaptation to it. However, most available works concern children and adult populations. The latter include studies on company employees whose activities are associated with increased stress. The student population is less researched, although the specifics of their academic activities involve a combination of academic load and social obligations, which makes this category particularly vulnerable to various emotional stresses and shocks. Research methods include literature analysis, testing, questionnaire surveys, statistical analysis of the obtained results, as well as methods of correlation and analytical analysis. The main methods include standardized self-assessment scales of stress tolerance, psychological well-being tests, and the author's materials.

The importance of the study lies in the possibility of establishing the relationship between stress resistance and the subjective perception of psychological well-being in students, and in developing practical recommendations for the educational system aimed at strengthening the psychological health of students and creating a more favorable educational and social environment for them. In addition, the results can serve as a basis for the development of special training programs aimed at increasing stress resistance and preventing depressive states among students of higher and secondary specialized educational institutions.

Materials and methods. Materials for the theoretical substantiation of the issues of stress resistance and subjective psychological well-being, approaches to the definition and development of this scientific aspect, and their measurement were selected from scientific publications by Kazakhstani and foreign authors, describing various aspects of resistance to stress and subjective psychological well-being. Monographs, textbooks, dissertation materials, articles from scientific university journals, and international databases such as RSCI, Scopus, Web of Science, and Google Scholar were used. Legal and regulatory acts, as well as methodological literature regulating the organization of psychological support for students of different specialties at universities, were also analyzed. The research method was the analysis of literary sources and diagnostic methods. The use of the materials indicated in the literature sources and the method of literary analysis allowed us to address the task and form the basis for further analysis and interpretation of the obtained empirical data. The materials for selecting a set of diagnostic tools to identify the levels of stress resistance and subjective perception of psychological well-being among students of different specialties and courses included standard methods and author's questionnaires designed to assess the level of stress resistance and subjective perception of psychological well-being in students. We mainly used foreign tests that have proven their reliability in both science and practice. These materials included: the Allport-Wernberg test (adult version); the Carroll-Whiting Psychological Well-Being Scale, designed to diagnose the inner feeling of happiness and life satisfaction; the "Psychological Well-Being Scale"

by K. Ryff (adapted by T.D. Shevelenkova and P.P. Fesenko); and the author's questionnaire to determine the profile of a stress-resistant and psychologically well-being student. A set of psychodiagnostic methods was selected from these tools, focused on identifying specific aspects of stress resistance and subjective perception of psychological well-being. These materials and methods made it possible to fully cover the necessary information and ensure the reliability of diagnostics for the planned indicators of stress resistance and subjective perception of psychological well-being in the surveyed respondents.

Organization of the study. The participants of the study were students from three streams: Humanities specialties (except pedagogy): 65 persons; Technical specialties: 75 persons; Pedagogical specialties: 60 persons; A total of 200 students from different undergraduate courses of Toraighyrov University and Q University were involved.

The tests were conducted anonymously in electronic form, the data were processed by the program, and statistical processing of the data was carried out within it. After the data were obtained, they were analyzed.

Thus, according to the Allport-Wernberg test (adult version), individual results of each student were collected for indicators E (extra-punitiveness), I (intro-punitiveness), M (impunitiveness), OD (ego-directive reactions), ED (extro-directive reactions), and NP (neutral reactions). The arithmetic mean of each indicator was calculated separately for each stream. The obtained averages were summarized to determine the overall level of stress tolerance for each stream. Then, a summary table with the results of calculations and corresponding percentages was prepared.

The Carroll-Whiting scale assesses six key components of psychological well-being: autonomy, positive relationships with others, personal growth, self-acceptance, purpose in life, and environmental mastery. When using the questionnaire "Scale of Psychological Well-Being" by K. Ryff (adapted by T.D. Shevelenkova and P.P. Fesenko), we used the average normative values of the test indicators for people aged 20–30 years (positive attitudes: average 63, standard deviation 7.12; autonomy: 56 and 6.86; environmental management: 57 and 6.27; personal growth: 65 and 4.94; goals in life: 63 and 5.16; self-acceptance: 59 and 6.99; psychological well-being in general: 363 and 24.20).

Next, we determined the correlation between the indicators of stress tolerance (variables OD, ED, NP) and the elements of psychological well-being (all 6 elements and the total index of well-being) separately for each studied stream. We used Pearson's method to identify correlations between stress tolerance and the subjective sense of well-being.

To determine the profile of a student with the required level of stress resistance and good psychological well-being, we applied the author's questionnaire with closed questions and one open question. The closed questions determine the student's compliance with the ideal of a person with a high level of stress resistance and good psychological well-being:

1. How clear are you about your future plans and steps?
2. Are you satisfied with your education and career opportunities?
3. Do you have reliable support and warm relationships?
4. Do you exercise regularly and lead a healthy lifestyle?
5. Do you adapt easily to new tasks and changing conditions?
6. Are you used to collaborating and participating in community initiatives?
7. Do you objectively assess your talents and limiting factors?
8. Do you skillfully handle defeats and crises?
9. Do you remain calm in the face of unpredictability and instability?
10. Do you see a bright future and have a positive attitude?
11. Do you support others in a difficult situation?

In the open-ended question, the respondent should select three items from the following as particularly affecting their psychological well-being and stress tolerance.

The study of individual characteristics and coping strategies used by students with different levels of stress resistance and psychological well-being, assessed by them on the example of students' reactions under real stress, was conducted by the observation method. It was aimed at identifying the differences in the behavior of students of humanities, technical specialties, and pedagogy under real stressful situations and at establishing a connection between the features of students' behavior and the established indicators of stress resistance and psychological well-being. The observation was conducted in an experimental setting that simulated real-life conditions. All participants were divided into three streams (students of humanities, technical, and pedagogical specialties). During the observation, the specifics of students' reactions, characterizing their emotions and difficulties in the real situation, were recorded. The control indicators were the following: the time of the onset of negative reactions; duration of the period of heightened anxiety; typical forms of expressing anxiety and discomfort; the ability to manage their own emotions and overcome emerging stressful states; the intensity of manifestations of expressed negative states; and the speed of recovery to a normal state. The method of comparative analysis showed the relationships between the observed behavioral reactions of students and the levels of established psychological well-being and stress tolerance. For this purpose, we compared the results of observation with the results of previous studies and the individual indicators of stress tolerance and psychological well-being of each student within the three streams.

Results and discussion. The results of the literature analysis on the theoretical substantiation of stress resistance and subjective psychological well-being showed the diversity of approaches and models proposed by different researchers.

According to F. He and B. Turnbull, stress resistance is a set of personality traits that allow a person to successfully function and adapt in stressful situations [1]. L. Martínez defines stress resistance as the ability of an individual to withstand psychological external stress. He denotes it through the indicators of endurance or resilience. In his opinion, it also includes such important components as control, involvement, and risk-taking [2]. At the same time, the concept of stress as a separate term originated in the English language as an external influence, pressure, or effort that underlies a given psychological state. Eustress is stress accompanied by positive emotions, and distress is stress that generates negative emotions [3]. A. Aziz and A. Dalmiş also distinguish acute psychological distress, which usually occurs during natural and other disasters [4; 5].

B. D. Kairbekova, in her article Psychological aspects of stress and stress resistance in modern conditions, defines stress resistance from the perspective of the functions performed by the organism and personality, presenting it in two directions: activity and personal. From the first perspective, it is a property that affects the productivity and success of human activity in stressful conditions, showing how effectively a person continues to fulfill their duties while under stress. From the second, it is a characteristic that contributes to preserving the integrity and internal balance of a person's personality, as a system that maintains stability and balance of psychophysiological processes in the body and consciousness (homeostasis). At the same time, the author points out that stress resistance is not the only characteristic that determines a person's relative susceptibility and resistance to stress [6].

S. A. Stelmakh, in his textbook Stress in human life, points out that a person's lifestyle can greatly influence stress resistance. In addition, certain habits and actions can become additional sources of stress, such as overeating, hypodynamia, excessive alcohol consumption, and other unhealthy behaviors. All this leads to a weakening of the body's general resistance to the effects of stress and increases the risk of ordinary stress transitioning into a destructive phase — distress [7]. M. B. Zhunisova notes that stress resistance, like stress itself, is a complex reaction of the entire organism, depending on various factors [8].

Based on the analysis of available works on stress tolerance research, the following approaches were identified:

1. A biological concept that considers physiological mechanisms and genetic predispositions influencing the body's response to stress [9];

2. A psychodynamic approach based on psychological defense mechanisms and ways of processing stress [10];
3. A cognitive-behavioral approach, which emphasizes the role of beliefs, attitudes, and behaviors in adapting to stressful situations [11];
4. An integral approach that combines biological, psychological, and sociocultural factors [12].

Subjective psychological well-being is an individual's perception of important aspects of their life, consisting of the following components:

1. Emotional well-being: life satisfaction, positive emotions, cheerfulness [13; 14];
2. Self-acceptance: a positive attitude toward oneself, realistic self-esteem [15];
3. Meaningfulness of life: having goals, making sense of the past and future [16];
4. Independence and autonomy: the ability to act freely and independently, exploring insecure attachment, gender roles, and interpersonal dependence in the Basque Country [17], and F. Otkarisa exploring interpersonal regulation of emotions across gender, relationships, and cultures [18];
5. Quality of social relationships: satisfaction with friendship, love, and social support, exploring the quality of friendship: examining hypotheses about friendship theories of self-control and social control [19].

The analysis of scientific approaches to the development of stress resistance and psychological well-being allowed us to highlight modern studies by D.M. Zhaksybaev [20], M. Knisarin [21], and B. Abdikalikov [22], who propose the following approaches for students: programs to improve emotional competence, including techniques for emotion management, self-esteem, and self-control; and trainings aimed at developing the basic components of psychological well-being. Both classical and modern researchers emphasize that chronic stress in educational institutions negatively affects students' academic performance, health, and overall quality of life. The analysis indicates that the relationship between stress tolerance and the subjective perception of psychological well-being in students, as well as the development of measures to promote psychological well-being and stress tolerance in educational systems, remains relevant. The results of determining stress tolerance according to the Rosenzweig method (adult adapted version) are shown in Table 1.

Table 1 Determination of students' stress tolerance in three areas according to the Rosenzweig methodology (adult adapted version)

Direction	Average E	% E	Average I	% I	Average M	% M	Average OD	% OD	Medium ED	% ED	Average NP	% NP
Humanities	10	41%	8	33%	6	25%	12	50%	10	41%	8	33%
Technical	12	50%	9	37%	7	29%	14	58%	11	45%	9	37%
Pedagogical	11	45%	8	33%	7	29%	13	54%	10	41%	8	33%

On average, students of technical specialties demonstrated a high degree of stress tolerance across most indicators, with their internal fixation especially pronounced (OD percentage — 58%), significantly exceeding the indicators of other specialties. Pedagogical and humanities specialties are close in terms of stress response, but pedagogical students show slightly higher stress resistance in their overall ability to withstand negative environmental influences (OD percentage — 54% vs. 50% for humanities). The indicators of internal experiences (E, I, M) are approximately the same for both groups, indicating similar psychological mechanisms for perceiving external and internal difficulties.

Additionally, the analysis of stress resistance levels by reaction directions showed that ego-directive reactions (OD) are highest among technical students, suggesting increased self-control and a tendency to attribute failures to themselves. The lowest OD index is observed among humanities

students, who likely experience internal worries less frequently and more often shift responsibility to external factors. The highest number of extra-directive reactions (ED) was recorded among pedagogical students, indicating a tendency to attribute difficulties to others or external circumstances. The lowest ED indicator is found in humanities students (10), suggesting a lower tendency for external blame and a predominance of inward-directed aggression. The level of negativity neutralization (NP) is highest among technical students (9 points), indicating developed emotional control and a rational approach to difficulties. Neutrality is somewhat lower among humanities students (8 points), possibly due to their heightened sensitivity and more delicate nervous system.

Based on these results, the following conclusions can be drawn:

1. Self-accusatory reactions (OD) are predominant among technical students, highlighting their higher self-organization and self-demanding attitudes.
2. External orientation (ED) is more characteristic of pedagogical students, who are more inclined to assign responsibility to others.
3. High stability and adequate acceptance of reality (NP) are also observed in technical students, while humanities students display a lower ability to maintain internal balance under discomfort.

The results of testing using the Psychological Well-Being Scale questionnaire (K. Ryff) are presented in Tables 2 and 3.

Table 2 Test results of the questionnaire "Psychological Well-Being Scale" (K. Riffe), in points

Well-being component	Humanities	Technical	Pedagogical
Positive relationships	60	65	66
Autonomy	55	58	57
Environmental management	58	60	59
Personal growth	64	66	65
Goals in life	62	64	63
Self-acceptance	58	60	59
Psychological wellbeing	357	373	365

Table 3 Result of data transformation with normalized z-values

Well-being component	Humanities	Technical	Pedagogical
Positive relationships	-0,42-0,42	+0,28+0,28	-0,14-0,14
Autonomy	-0,14-0,14	+0,29+0,29	+0,14+0,14
Environmental management	+0,16+0,16	+0,48+0,48	+0,32+0,32
Personal growth	-0,20-0,20	+0,20+0,20	+0,00+0,00
Goals in life	-0,19-0,19	+0,19+0,19	+0,00+0,00
Self-acceptance	-0,14-0,14	+0,16+0,16	+0,00+0,00
Psychological wellbeing	-0,25-0,25	+0,41+0,41	-0,08-0,08

Normalization formula (z-score): $Z = \frac{X - M}{\sigma}$, where: X — individual indicator of the participant, M — mean value of the norm, σ — standard deviation of the norm.

The obtained data allow us to draw the following conclusions. Students of technical specialties demonstrate good results compared to both the norms and the indicators of students from other fields. They show particularly high scores in environmental management and goals in life. Students of humanities specialties show lower levels across most indicators compared to normative values, with especially low scores in personal goals and positive attitudes. Pedagogical students demonstrate average results, falling between those of humanities and technical students. Some of their indicators slightly exceed the norm, while the rest remain close to the average values. The results of the correlation analysis are presented in Table 4.

Table 4 Results of correlation of the three directions

A couple of variables	Humanities		Technical		Pedagogical	
	Pearson's coefficient (r_p)	Level of significance (p-value)	Pearson's coefficient (r_p)	Level of significance (p-value)	Pearson's coefficient (r_p)	Level of significance (p-value)
% OD vs Welfare	0,35	0,08	0,51	0,02	0,45	0,03
% ED vs Autonomy	0,42	0,05	0,48	0,03	0,38	0,05
% NP vs Environmental Management	0,28	0,12	0,39	0,04	0,32	0,07
% E vs Personal Growth	0,15	0,34	0,25	0,15	0,23	0,18
% I vs Goals in life	0,21	0,25	0,32	0,09	0,27	0,13
% M vs Self-acceptance	0,18	0,29	0,19	0,25	0,21	0,27

In humanities students, the most significant correlations are found between % ED and Autonomy ($p = 0.05$); weak correlations are observed between % OD and Well-being ($p = 0.08$). In engineering students, the most significant correlations are between % OD and Well-being ($p = 0.02$), % ED and Autonomy ($p = 0.03$), and % NP and Environmental Management ($p = 0.04$). In pedagogical students, notable correlations are found between % OD and Well-being ($p = 0.03$), % ED and Autonomy ($p = 0.05$), and % NP and Environmental Management ($p = 0.07$).

Thus, we can conclude that the relationships between stress resistance and subjective well-being depend on personal characteristics reflected in the students' chosen fields of study. The strongest correlations are observed among technical students, while humanities students show weaker and mostly statistically insignificant correlations. The results of the author's questionnaire are presented in Table 5.

Table 5 Results of the author's questionnaire (distribution by areas)

Questionnaire criteria	Humanities	Technical	Pedagogical
A clear understanding of your goals and how to achieve them	4,5	4,7	4,6
High satisfaction with studies and profession	4,6	4,8	4,7
Having a strong social circle and friendly relationships	4,7	4,8	4,7
Good physical fitness and a habit of taking care of your health	4,4	4,6	4,5
Quickly adapt to change and work effectively in multitasking mode	4,3	4,5	4,4
Willingness to cooperate and participate in active community projects	4,5	4,7	4,6
Adequate self-esteem and a realistic view of one's capabilities	4,4	4,6	4,5
Flexible strategy for overcoming crisis situations and quick recovery from setbacks	4,4	4,6	4,5
Calm acceptance of uncertainty and chaos	4,3	4,5	4,4
Optimism and belief in a better future	4,5	4,7	4,6
Empathy and support for others in difficult times	4,6	4,7	4,6
Three factors, as chosen by the students, particularly affecting their psychological well-being	<i>Creativity</i>	<i>Sport</i>	<i>Family</i>
	<i>Communication</i>	<i>Schedule</i>	<i>Work</i>
	<i>Vacation</i>	<i>Study</i>	<i>Health</i>

Comparative findings from the questionnaire survey of students from three fields (humanities, technical, pedagogical) revealed key features that shape their views on high stress resistance and good psychological well-being. All groups emphasized the importance of having a clear vision of the future and realistic ways to achieve it. Technical students expressed the greatest satisfaction with their studies and chosen field, highlighting the role of their profession in supporting emotional well-being. Humanities students placed the highest value on a strong social circle and supportive relationships, emphasizing the importance of warm connections and social support. For technical students, good physical fitness and a healthy lifestyle were especially important, noting a direct link between physical activity and emotional stability. Quick adaptation to change and effective multitasking were also characteristic of technical students, who stressed the importance of flexibility and the ability to

adjust quickly to new situations. Willingness to cooperate and participate in community projects was particularly significant for pedagogical students, who viewed community involvement as a key source of positive emotions.

All students agreed that adequate self-assessment and a realistic understanding of their strengths and limitations play a major role in maintaining psychological comfort. Flexible coping strategies and quick recovery after setbacks were especially emphasized by technical students, who highlighted the importance of returning to normal life after difficulties. Humanities students noted that remaining calm in uncertain situations helps them cope with stress more easily. Optimism and belief in a better future were important across all groups but were most strongly emphasized by pedagogical students, who viewed optimism as essential for a successful life. Empathy and supporting others during difficult times were most highly valued by future teachers, who saw mutual assistance as a key trait of well-being.

In addition, the groups' opinions on stress resistance and psychological well-being were analyzed in more detail. According to humanities students, warm human relationships and support from close contacts are most important. They value creative self-expression as a way to relieve stress and boost mood. Regular rest and the ability to relax are identified as critical to their emotional well-being, with particular emphasis on self-esteem and an honest assessment of personal capabilities. The defining characteristic of stress resistance and well-being for humanities students is the ability to remain calm in the face of uncertainty and chaos, even during stressful situations.

Technical students identified physical activity and health as the main factors of well-being. Flexibility and quick adaptation to change help them navigate difficult academic stages. Logical thinking and systematic approaches are also seen as essential for success. They place great importance on their studies, professional development, and the ability to return to normal life after setbacks. Effective personal time management and a stable work rhythm are considered the foundation of stress resistance and well-being for future technical specialists.

Pedagogical students viewed family and friends as central to their well-being, with the support of loved ones being the main resource for coping with stress. Participation in community life and volunteer activities also plays a significant role, fostering a sense of belonging and satisfaction. A healthy work atmosphere providing emotional comfort is important, as is the ability to independently plan schedules and tasks, which helps reduce the risk of overwork. The most important principle of stress resistance and psychological well-being for pedagogical students is empathy and helping others, which they believe strengthens emotional resilience and promotes positive thinking.

It should be noted that the three factors identified by students as especially influencing their psychological well-being made it possible to create a more accurate profile of the ideal student for each specialty. This allowed for a clearer assessment of the needs and expectations of each field regarding high stress resistance and the perception of psychological well-being.

Profile of the Ideal Student:

1. A clear understanding of personal goals and ways to achieve them;
2. High satisfaction with studies and chosen profession;
3. A reliable social circle and supportive friends;
4. Good physical fitness and regular health care;
5. Ability to adapt quickly to change and work effectively in a multitasking environment with some uncertainty;
6. Willingness to collaborate and participate in community projects;
7. Adequate self-esteem and realistic self-perception;
8. Flexible coping strategies and quick recovery after setbacks;
9. Calm acceptance of uncertainty and chaos;
10. Optimism and belief in a better future;
11. Empathy and support for others in difficult times.

It is important to note that the questionnaire survey not only identified universal characteristics common to students with high stress resistance and optimal psychological well-being but also revealed certain differences specific to each field.

Results of establishing individual characteristics and coping strategies used by students with different levels of stress tolerance and their assessed psychological well-being. The results of observing behavioral responses under real stress are shown in Table 6.

Table 6. Results of observation by direction

Directions	Manifestations of anxiety			Average time to return to normal (min.)			Coping strategies used		
	High	Medium	Low	High	Average	Low	Effective	Averages	Substandard
Humanities	50%	20%	30%	60%	22%	13%	40%	40%	20%
Technical	20%	40%	40%	40%	33%	27%	60%	20%	20%
Pedagogical	10%	40%	50%	30%	30%	40%	50%	30%	20%

The data obtained allow us to draw the following conclusions from the observation of behavioral responses under real stress conditions. Humanities students demonstrated the highest intensity of anxiety manifestations (50%), while technical and pedagogical students showed lower frequencies (technical – 20%, pedagogical – 10%). These results suggest that humanities students may be more sensitive to the effects of stress factors. Additionally, only a small proportion of humanities students exhibited low anxiety reactions (30%), whereas a larger proportion of technical and pedagogical students (40% and 50%, respectively) showed such reactions, indicating noticeable intergroup differences in stress perception and experience.

The longest recovery period from stress was observed among humanities students (60%), highlighting their lower ability to recover quickly. Pedagogical students demonstrated shorter recovery periods (40% on average), reflecting better adaptability to stress. Technical students occupied an intermediate position (about 40% experienced long recovery periods, while a significant portion showed medium and fast recovery).

The highest frequency of using effective coping strategies was observed among pedagogical and technical students (50–60%), indicating a good ability to regulate emotional states and actively address psychological challenges. Humanities students showed moderate use of effective strategies (40%). All groups equally (20%) resorted to ineffective coping strategies, indicating difficulties in selecting optimal solutions for stressful situations. The main coping strategies used by students included rationalization, social contacts, active approaches, situation control, self-reflection, and systematic actions.

The data reveal both commonalities and differences among students from different fields, which should be considered when developing specialized stress prevention and intervention programs, as well as practical recommendations aimed at enhancing overall stress resistance and improving psychological health in students from various profiles. The data for analyzing the comparative relationships between the observed reactions and the levels of psychological well-being and stress tolerance across the three fields are presented in Table 7.

Table 7. Comparison of observed behavioral responses and levels of stress tolerance and psychological well-being

Directions	Manifestations of anxiety	Time to return to normal (minutes)	Coping strategies used	Indicators of stress tolerance (Rozencvejga)	Indicators of psychological well-being (K. Riff)
Humanities	High: 50%	High: 60 min.	Effective: 40%	Low scores (average E: 10, average OD: 12)	Averages (overall index: 357)
Technical	Average: 40%	Average: 33 min.	Effective: 60%	High scores (mean E: 12, mean OD: 14)	High performance (overall index: 373)

Pedagogical	Low: 50%	Low: 30 min.	Effective: 50%	High scores (mean E: 11, mean OD: 13)	High performance (overall index: 365)
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The data obtained allow the following conclusions: Humanities students exhibit a high level of anxiety and take longer to return to a normal state, which corresponds to low levels of stress tolerance and psychological well-being. Only half of humanities students use effective coping strategies, limiting the remaining students' ability to manage stress successfully and promptly. Technical students demonstrate an average level of anxiety and quick recovery. They widely apply effective strategies, which is reflected in their high stress resistance and psychological well-being. Future teachers show low levels of anxiety and a short recovery time, as they more frequently use effective strategies to overcome psychological challenges. This results in relatively high stress resistance and good psychological well-being. Thus, the comparative analysis clearly demonstrates the relationship between observed behavioral responses and levels of stress tolerance and psychological well-being.

The following recommendations focus on increasing stress resilience and improving psychological well-being:

- Speed of recovery from stressful states;
- Breadth of effective coping strategies;
- Quantity and quality of social ties;
- Support for adequate self-esteem and a realistic self-perception.

Comprehensive and individualized programs for developing stress resistance and improving psychological well-being in students of different fields have been developed based on these key problem areas.

Program for humanities students:

- Increasing recovery speed from stress (daily breathing exercises and meditation; mastering relaxation and body techniques such as yoga and autogenic training);
- Developing effective coping strategies (time management courses; interactive anxiety-reduction trainings and solution-focused workshops);
- Strengthening social ties (master classes on building partnerships and interpersonal communication; organizing creative clubs and communities);
- Supporting self-esteem and realistic self-perception (self-esteem counseling; personal development and psychological hygiene courses).

Program for technical students:

- Increasing recovery speed from stress (concentration training and mental reboot sessions; deep breathing and muscle relaxation techniques);
- Developing effective coping strategies (decision-making and problem-solving trainings; simulated stress tests and responsiveness training);
- Strengthening social ties (business etiquette and public speaking master classes; engineering creativity circles and joint project teams);
- Supporting self-assessment and realistic goal setting (goal-setting and career planning trainings; regular self-reflection sessions).

Program for pedagogy students:

- Increasing recovery speed from stress (relaxation sessions and anti-stress training; art therapy and dance-movement classes);
- Developing effective coping strategies (conflict resolution simulations; preventive psychology and early crisis warning practices);
- Strengthening social ties (teacher networking through clubs and communities; conferences and forums for experience sharing and peer support);
- Supporting self-esteem and realistic self-perception (self-confidence and public speaking master classes; success journals and regular achievement discussions).

All these measures aim to more effectively address the development of stress resistance and psychological well-being in students, taking into account the specifics of their chosen fields.

Conclusion According to the test results, students studying in technical specialties are recognized as stress-resistant, as they have the highest overall indicators of stress resistance and psychological well-being. They have well expressed key aspects of psychological well-being: positive relationships, autonomy, personal growth and goal setting. There is an optimal distribution of energy between internal resources and external activity. Second in terms of stress resistance students of pedagogical specialties, having a good level and distinguished indicators of psychological well-being, expressed in good social interaction, but having small problems in the field of managing their capabilities. Low indicators are registered in students of humanitarian specialties, both in relation to stress resistance and psychological well-being, especially in the area of autonomy and self-acceptance of their "I", which negatively affects their overall life satisfaction. Thus, technical education provides students not only stress resistance, but also the most favorable conditions for maintaining psychological well-being, while students of humanitarian specialties require additional resources to strengthen both confidence and autonomous functioning. In the course of the author's survey it was found that students of humanities specialties note the special importance of creativity, communication and space for recreation, which reflects their attraction to the aesthetic aspects of life and an important element of social support. While students of technical specialties emphasize such indicators as physical activity, convenient schedule and quality education, pointing out the need to create a balance between intellectual workload and physical fitness. Future educators cite family relationships, professional development and health as the most important, emphasizing that a stable personal life and career success are crucial to their well-being. On its basis, comparatively ideal profiles of stress tolerance and psychological well-being in students are compiled, with the peculiarities of different specialties. The results of observation on establishing individual characteristics and coping strategies used by students with different levels of stress tolerance and their assessed psychological well-being indicate significant intergroup differences in terms of perception and response to stress. The most important differences are related to the intensity of anxiety manifestations, the speed of rehabilitation and the quality of coping strategies chosen. Comparative analysis clearly shows the relationship between the observed behavioral reactions and the level of stress resistance and psychological well-being. As high level of anxiety and long recovery time is associated with low indicators of stress resistance and psychological well-being, which is especially indicative, on the example of indicators of students - humanitarian specialties. The average level of anxiety and fast rates of return to normal indicate sufficient stress resistance and a good level of psychological well-being, which is evident in the example of students of technical specialties. Minimal level of anxiety and short-term recovery in combination with effective use of proven strategies confirm a high level of stress resistance and excellent psychological well-being, which is most clearly manifested in students of pedagogical specialties. The study is a certain contribution to the study of stress resistance and psychological well-being among student youth in Kazakhstan. The relevance is aimed at addressing the increasing number of factors affecting the emotional state of students, including increased learning loads, the demands of modern society and rapid changes in the educational environment. Since the obtained results allowed to reveal the relationship and differences in the levels of stress resistance and psychological well-being among students of different areas of training, which is important for the development of more targeted preventive measures and effective methods of psychological support of students in universities. The novelty of the study lies in the complex approach to the study of interrelations between the direction of professional training and psychological characteristics of students. For the first time significant differences in aspects of mental health and quality of life in representatives of three specialties (technical, pedagogical and humanitarian) have been revealed. Recommendations on the application of the obtained results are intended for educational institutions, students themselves and teachers. In general, the conducted research has practical significance, as it offers specific measures aimed at improving the quality of

life of Kazakhstani university students of different specialties on stress resistance and improving the perception of psychological well-being.

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