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## THE IMPACT OF STRESS ON THE ADAPTATION OF FIRST-YEAR IT STUDENTS

The stress level experienced by first-year students of IT specialties negatively affects their adaptation to the new academic environment. This impacts the learning process, including academic performance, social and psychological components, communication, well-being, and self-realization. In this regard, the aim of the study was to identify the factors causing stress and the possibilities of overcoming stress among first-year IT students at Astana IT University.

The study found that first-year students face difficulties in meeting deadlines, understanding technical information in a foreign language, and building communication with teachers and peers. The methods used by first-year students to cope with stressful conditions are limited to sleep, watching TV shows, and playing games. This indicates a lack of awareness among students about effective methods to enhance stress resistance and overcome stress.

The research included an analysis of studies and theories on stress, an online survey using Google Forms, and offline in-depth interviews with 15 participants out of 125 who completed the survey. This allowed the conclusion that the study not only expands existing knowledge about the impact of stress on students but also has practical significance for educational institutions striving to create a more supportive and adaptive environment for IT students.

**Key words:** stress, IT specialization, students, adaptation, mental health.

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### Бірінші курс студенттерінің ІТ бағыттарына бейімделуіне стрестің әсері

ІТ мамандықтарының бірінші курс студенттері бастан кешіретін стресс деңгейі олардың жаңа академиялық ортаға бейімделуіне кері әсер етеді. Бұл оқу үдерісіне, оның ішінде академиялық үлгерімге, әлеуметтік және психологиялық компоненттерге, коммуникацияға, денсаулық пен өзін-өзі жүзеге асыруға ықпал етеді. Осыған байланысты, зерттеудің мақсаты – Astana IT University-дің ІТ мамандықтарының бірінші курс студенттерінде стрессті тудыратын факторларды және стрессті жеңу мүмкіндіктерін анықтау болды.

Зерттеу нәтижесінде бірінші курс студенттері оқу жылының басында келесідей қиындықтарға тап болатыны анықталды: «дедлайндарды» сақтау, шет тілінде техникалық ақпаратты қабылдау, оқытушылармен және топтастармен коммуникация орнату. Стресстік жағдайларды жеңу үшін бірінші курс студенттері негізінен ұйқы, телехикаяларды көру және ойындар сияқты әдістерді пайдаланады. Бұл олардың стресске төзімділікті арттыруға және стресс жағдайларын жеңуге арналған тиімді әдістер туралы хабардар еместігін көрсетеді.

Зерттеу барысында стресс мәселесін зерттейтін зерттеулер мен теорияларға талдау жасалды, Google Forms арқылы онлайн сауалнама жүргізілді және сауалнамаға қатысқан 125 адамның ішінен 15 қатысушымен офлайн тереңдетілген сұхбат өткізілді. Осы зерттеу стресстің студенттерге әсері туралы білімді кеңейтіп қана қоймай, сонымен қатар ІТ мамандықтары бойынша студенттерге қолдау көрсететін және бейімделгіш ортаны құруға ұмтылатын білім беру мекемелері үшін практикалық маңызға ие деген қорытындыға келуге мүмкіндік берді.

**Түйін сөздер:** стресс, ІТ-мамандығы, студенттер, бейімделу, психикалық денсаулық.

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### Влияние стресса на адаптацию первокурсников IT-направлений

Уровень стресса, испытываемого студентами IT-специальностей на первом году обучения, отрицательно влияет на их адаптацию в новой академической среде, что отразится на учебном процессе, включая академическую успеваемость, социальную и психологическую составляющие, коммуникации, самочувствие и самореализацию. В связи с этим целью данного исследования стало отражение факторов, вызывающих стресс и возможностей преодоления стресса у студентов первого курса IT-специальностей Astana IT University.

В результате проведенного исследования выяснено, что на первом году обучения студенты сталкиваются с трудностями соблюдения «дедлайнов», сложностями восприятия технической информации на иностранном для них языке, проблемами построения коммуникаций с преподавателями и одногруппниками. Методы, применяемые студентами первого курса в преодолении стрессового состояния, ограничиваются сном, просмотром телевизионных фильмов и играми, это свидетельствует о неосведомленности студентов об эффективных методах, используемых в повышении стрессоустойчивости и преодолении стрессовых состояний.

В исследовании включило анализ исследований и теорий по изучению стресса, онлайн опрос при помощи Google Forms, офлайн проведенное глубинное интервью с 15 участниками из прошедших опрос 125. Что помогло прийти к заключению того, что данное исследование не только расширяет существующие знания о влиянии стресса на студентов, но и имеет практическое значение для образовательных учреждений, стремящихся создать более поддерживающую и адаптивную среду для студентов IT-специальностей.

**Ключевые слова:** стресс, IT-специальность, студенты, адаптация, ментальное здоровье.

### Introduction

Modern Kazakhstan society is an example of a progressive community with high standards and rapid changes. Constant development and continuous change are not only beneficial at our country's current "point of development," but also a challenge at all stages of personal development. Schoolchildren, students, young specialists, and professionals in their field face the challenges of an unstable, rapidly changing modern world every day, exposing themselves to stress, challenges, and sources of negative influence. In this regard, the issue of stress in higher education institutions (hereinafter referred to as HEIs) is currently the most pressing, with student stress being particularly important. Stress has been haunting students literally since they enrolled at the HEI. Enrolling in a HEI is a major and significant step, bringing with it a new social status, new opportunities, and new prospects, accompanied by undeniable stress, which is an opportunity to adapt and expand one's comfort zone. However, enrollment is not the first stage of changes and/or stress factors, but the continuation of a major stressful "epic" – preparation for the unified national testing. Preparation for this "epic" usually begins two, and in some

cases three, years before admission, followed by the test itself, with its personal expectations, the expectations of family and friends, social pressure, and a high probability of choosing the wrong answers in the test, where each participant becomes a competitor in the struggle for free education. Undoubtedly, admission to HEI brings new opportunities and horizons, becomes a source of professional self-determination, a new social status, a stage of the first independent actions, individual responsibility. At this stage of maturity in the life of a student, various events occur, ranging from positive encounters and acquaintances, adaptation to academic and social trajectories, to personal responsibility for participation in classes and compliance with all deadlines for submitting assignments that determine the final grade and, in some cases, the possibility of continuing education. Adapting to new requirements in student status often becomes a source of high stress levels, which in the future can have a positive or negative impact on academic performance, mental health, activity in building communication, self-esteem, self-presentation and self-knowledge.

According to the definition of the World Health Organization (WHO), stress is a state of anxiety or cognitive tension that occurs in response to unusual

or difficult situations (World Health Organization, n.d.). This condition is a natural human reaction that helps to cope with difficulties and threats that arise both in the human body and in the non-human, social and/or material world. However, the level of stress's impact on a person's overall well-being depends on how they cope with it, how they react to it, and how they perceive it.

The American Psychological Association considers stress as a normal reaction to everyday stress, which, in the long term, can disrupt a person's daily physiological and psychological reactions (APA Dictionary of Psychology, n.d.). Stress causes changes in almost all body functions, affecting emotions, behavior, changing activities, bringing chaos to decision-making, communication, and self-regulation.

Stress is defined as any change that causes physical, emotional, or intellectual stress (Mills, 2022). This is the body's reaction to the need for decisions or actions. Despite the fact that stress is perceived by all people, its effects on health depend on a person's ability to adapt to these changes.

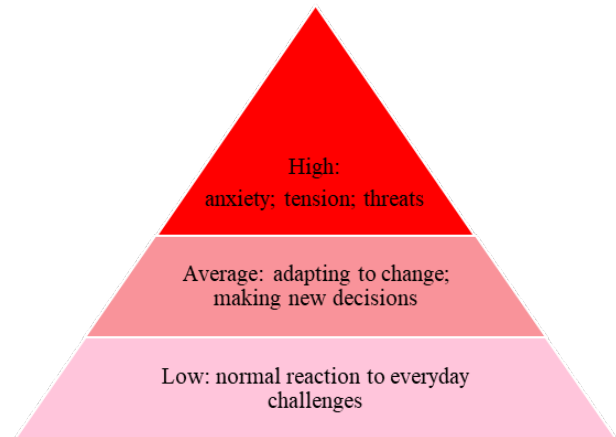
Thus, stress can be characterized as a natural psychophysiological reaction of the body to demands or changes in the environment. When adapted appropriately, it helps to cope with challenges, but when managed poorly or for too long, it can cause mental and/or physical health to deteriorate. Of course, the stress level (Fig. 1) in its time frame and within the framework of exposure can cause different reactions and consequences. However, it is worth noting that the consequences can lead to a decrease in the quality of life, conflicts, physiological diseases, impaired psychological stability, a negative perception of oneself and one's surroundings, the inability to predict the future, goal setting, and activity in difficult life situations.

According to research, stress manifests itself in various ways:

- personality characteristics, for example, according to personality typology extraversion/introversion; activity/passivity, etc. (Rettew et al., 2021)
- social and social processes, such as a change in place of residence, place of work or study, various situations related to a close circle of people, such as birth or death, a change in social status, marriage or divorce, adaptation to new challenges in life, for example, changes in the political regime, changes in self-determination opportunities, etc., the need for support in new unfamiliar life situations (McLean et al., 2022)
- physical and physiological components (excessive weakness or drowsiness when changing time

frames such as time zone changes, time changes due to the time of year, headaches, migraines, body aches due to low physical activity, excess weight, etc.) (Herawati et al., 2019)

- low level and time management capabilities (Lovin & Bernardeau-Moreau, 2022) and other factors.



**Figure 1** – Stress levels (from low to high)

All of these manifestations of stress are noted in the reports of major international organizations such as WHO, OECD, and the United Nations, and they also note the significant impact of stress on various groups of the population, including students, who, as a special vulnerable category of the population, are particularly susceptible to stress and more often suffer from it alone, having difficulty with adaptation mechanisms. The WHO report, according to statistics, notes an increase in stress levels and its negative impact on mental health in the educational environment, this fact is associated with the difficulty of rebuilding the global community after the COVID-19 pandemic (World Health Organization, 2023). It is worth noting that even those people who did not become infected during the pandemic experienced significant psychological pressure on their bodies, news portals, closed access to live communication, visiting places with large numbers of people, and the requirement to quickly adapt to online communication at work, in education, and in self-realization processes. It was after the COVID-19 pandemic that a large “explosion” of panic attacks was recorded among the world's population, the echoes of which still haunt people.

At the World Economic Forum in 2023, the issue of the psychological well-being of society was also raised. Thus, one of the reports noted that mental health and stress are considered as a “global risk”

to society, therefore, a proposal was put forward to introduce systemic transformations in workplaces and educational organizations in order to create a favorable, sustainable environment to combat stress (World Economic Forum, 2023).

According to all the listed studies and reports at the global level, we can note that there is already a comprehensive understanding of the global impact of stress on various spheres of society, including the field of education, which highlights the importance of developing global efforts to more effectively overcome stress, work with it, and prevent its negative effects.

Noting the high public interest in stress in education, we conducted a study that includes an analysis of the causes and consequences of stress among first-year IT students. Students of IT specialties are those students who spend more of their time in online space and isolation, their active assignments are often associated with strict deadlines, low social and physical activity, problems with nutrition and self-knowledge (World Health Organization, 2023) in this regard, these students were of the greatest interest to us. on the study of stress factors among students. In this regard, the purpose of the study is to determine the stress level of students of IT specialties, with the further creation of ways to deal with stress and develop coping strategies for students to deal with stress at the university.

The analytical part of the study included an analysis of official documents, psychological, pedagogical, and sociological studies related to the possibilities of overcoming stress, the causes of its occurrence, and the consequences. At the same time, we analyzed the latest developments in dealing with stress in the field of education, examined the sources of information about stress for students in their information environment, community, and academic environment.

The next part of the study consisted of conducting an online survey using Google Forms, offline interviews, conducting classes and trainings in order to familiarize students with stress management methods, coping strategies, and creating a favorable environment for adaptation to new educational realities.

### Literature review

Stress is viewed differently in different industries, but in psychology there are a number of models that describe the algorithm of occurrence, content, consequences and various reactions of the body.

One of the first scientists to describe stress in psychology is Hans Selye, whose theory describes the body's responses to external stimuli that cause a special condition characterized as stress. According to the research of H. Selye should distinguish between three main stages of stress. The first stage or stage of anxiety occurs characterized by the activation of the physiological systems of the body responsible for the fight or flight of a living being, these reactions are due to the evolutionary process and are aimed at the possibility of survival. The second stage or stage of resistance is characterized by H. Sellye as attempts of the organism to adapt to external and/or internal stimulus causing stress. The third stage or stage of exhaustion, the most dangerous stage for both the physiological and mental capabilities of the body, is described as the stage of depletion of the body's resources, this stage can lead to various psychological, mental and/ or physiological diseases.

First-year students of IT majors, like all first-year students around the world, face a high academic load, including many assignments and new standards for the specialty they have chosen. Students of IT majors add programming classes with various programming languages, mathematics, higher mathematics, and working with AI technologies to all the stressful factors, and in all these activities, the slightest mistake in the code, task, or program made at the beginning or in the middle can reduce all efforts to "zero." It is for this reason that very often IT specialists need high concentration, special attention and perseverance. And in turn, concentration, attention, diligence are accompanied by anxiety, increased latent aggressiveness, and willingness to deny all their knowledge, and all of the above corresponds to the stage of anxiety according to H. Selye's theory. At the stage of anxiety, students become familiar with new specific subjects and master working with technical platforms. The body, at this stage, mobilizes resources (additional energy, concentration), trying to stabilize the psychological and physiological systems. However, given the long-term adaptation process of the first year, which lasts the first semester or trimester, recent events related to HEI enrollment, preparation for the UNT and its completion, students quickly fall into the second and third stages of stress.

However, having successfully overcome the first stage, the anxiety stage, by the middle of the academic year, students move into the resistance stage and adapt to the routine of the learning process with new standards and opportunities, but



maintaining high productivity requires significant efforts from them. These efforts lead to a stage of exhaustion during the exam period. So the multiple requirements for deadlines, exams, and lack of rest, as many students get various part-time jobs at once, causes fatigue, decreased motivation, and sometimes academic failure.

We can also talk about two states/effects of stress that positively or negatively affect the course of events. If the stress is minor or the stress process itself motivates you to further develop your capabilities and/or skills, this is referred to as a positive state of stress – eustress.

If, however, stress situations lead to a condition in which it is difficult for a person to find a relevant way to minimize negativity, this leads to negative stress on physiology and mentality, regardless of internal or external stimuli that cause stress. This process of negative effects of stress is highlighted by H. Selye as a distress.

R. Lazarus and S. Folkman consider stress as a result of interaction between a person and the environment, in which a person perceives the demands of the environment as threatening or exceeding his resources, factors suppressing his will and opportunities to overcome them. The researchers identified three types of assessments of stressful situations: loss or loss, perception of threat, and the definition of a task as a complex component of a person's life potential. The cognitive assessment process takes place in three stages.

The primary stage: the individual evaluates the situation according to the context – a threat to integrity, a challenge, or a loss of physical and/or mental stability. For example, a student who has moved to another city to study feels the loss of his former environment (friends, family, and a familiar life). There is a feeling of loneliness and isolation, and the motivation to learn decreases.

Secondary stage: a person analyzes his resources, skills, capabilities and abilities to overcome the current new situation, which is correspondingly difficult for him at the moment. An example would be that after moving in, freshman begin to analyze what they can do to better adapt, expand their opportunities, join new “companies”, discover their individuality, interest others in their personality, in this regard they sign up for intra-university activities, look for like-minded people, participate in the development opportunities offered.

The last, third stage: after the initial reaction and attempts to cope with the situation, a person can reconsider his perception of the event or his ability to

react to it, accept it or distance himself from it, try to change or overcome it in the presented form. After establishing new social ties, the student realizes that he/she can cope with the situation, reconsiders his/her initial reaction and accepts new circumstances, either leaves the university, transfers, moves again to the region from which he/she came, or falls into a state of inhibition reducing his/her interest in learning and socialization processes.

Since in this study we consider HEI students who train personnel in IT fields as the object of research, we identify a typology of stresses according to their specific activities. Thus, stress among IT students has a number of specific characteristics: firstly, they face intense mental stress associated with programming, solving complex algorithmic tasks and constant learning of new technologies; secondly, stress based on smart technologies; thirdly, social stress.

Academic difficulties are one of the most significant sources of stress for first-year students (Deb et al., 2015). In the course of analyzing existing research and data, we found that the digital workload negatively affects the mental well-being of students. At university, students face psychological difficulties such as technostress and exhaustion caused by digital overload. And coping strategies are often used to involve students in the learning process, which is directly related to the greater digitalization of their daily lives ((Tafesse, Aguilar, Sayed, & Tariq, 2024).

The new educational environment places high cognitive demands, such as the need to master complex disciplines (such as programming, discrete mathematics, and the theory of algorithms) that require advanced abstract thinking. Combined with the limited time to study the educational material, this leads to a high level of cognitive load and feelings of anxiety and insecurity. Lack of prior training or basic knowledge in some key areas can exacerbate stress, especially if the material is presented at an accelerated pace, such as at Astana IT University. At Astana IT University, training is carried out according to an accelerated program, students master the entire specialty program in three academic years, each year divided into three trimesters of 10 weeks each. Since the terms of study are accelerated, the workload of students at this university is higher than in identical ones, but with a generally accepted four- or five-year program. Another factor that we can pay attention to is the language of instruction at the university, the language of instruction at Astana IT University is English. Despite the fact that all university applicants have a high level

of knowledge, it is not the main, spoken, language of thought. In this regard, first-year students are in the constant process of translating the information they receive from one language to another. Since information is given very quickly, many do not keep up with teachers and experience difficulties, which they are most often afraid to admit, before learning the skill of automatic translation or before learning the skill of thinking in English.

The feeling of self-doubt, widely studied in the context of academic self-efficacy, becomes a significant stressor for students of IT specialties. The reason is both the general transition from a school environment to a university environment, and the specifics of professional training. Most students face the need to solve complex problems on their own, which is compounded by social comparisons with classmates with more advanced IT skills. This can reduce motivation and increase negative emotions such as feelings of helplessness, as well as cause avoidant behavior that negatively affects learning outcomes.

The problems of time management and prioritization are becoming critical for first-year students, especially in conditions of high academic workload and the presence of many additional requirements, such as course projects, practical assignments based on digitalization, and short-term deadlines. Students face the need to combine educational tasks with personal responsibilities and social activities.

Performing multiple tasks using gadgets at the same time can increase stress levels. A study by Lei Zhao (2023) showed that multitasking leads to cognitive overload and reduces productivity, which ultimately increases stress. The inability to organize time effectively leads to procrastination, decreased productivity, and increased stress, which impairs both academic and psychological adjustment. Such difficulties are often compounded by a lack of experience in self-planning during school years.

All these aspects are necessary conditions to take into account when developing research, support programs and adaptation strategies for students in order to minimize the impact of stimuli and increase the effectiveness of the educational process.

## Materials and methods

The study “The impact of stress on the adaptation of first-year IT students” was conducted to study the stress factors affecting first-year students at Astana IT University, as well as to analyze their

adaptation to a new learning environment. 125 first-year students out of 500 enrolled took part in the survey, whose answers allow us to identify the main causes of stress, their frequency, as well as the methods that students use to overcome emotional stress.

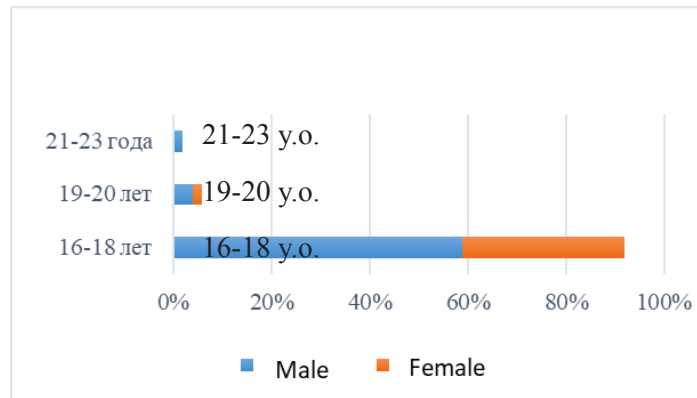
The main research method was a survey designed to identify the main sources of stress, causes, and methods of coping with stress. At the same time, a superficial analysis of the region of arrival (the region of residence before admission to university) was conducted. An additional research method was chosen to conduct in-depth interviews with 15 students from various fields of study.

The survey was conducted in an online format on the Google Forms platform. During the survey, consisting of six main points, respondents were asked to fill out general questionnaires and select those situations that cause stress, negatively respond to their ability to participate intensively in the learning process, assess the frequency of stress in learning activities and describe ways to overcome stress. From the proposed stress management options, the researchers selected the generally recognized, most effective ways for students to overcome stress: physical activity, communicating with loved ones online and/or offline, developing interests, social support for vulnerable segments of the population, etc.

## Results and discussion

The study was conducted in two stages. 125 first-year students of Astana IT University, such educational programs as Information Technology, Information Security, Communications and Communication Technologies, Electrical Engineering and Automation. Of the 125 study participants, 44 were female (35.2%), 79 were male (63.2%), and 2 people (1.6%) chose not to specify their gender.

The first question of the survey is related to the region from which students enrolled at Astana IT University. This question was included in the questionnaire in order to find out the relationship between the region and the stress level of first-year students, since the geographical location and communication opportunities in a familiar social environment can affect the degree of stress that students face when applying to university. Stress among first-year students is often associated with changes in their life position, distance from the primary social environment, loss of protection and financial stability provided by the students' parents.



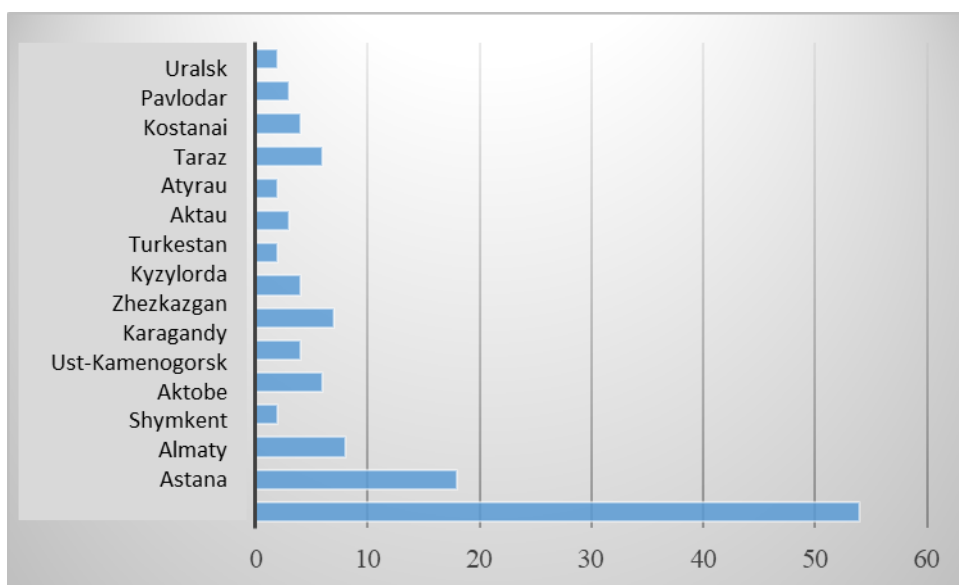
Gender/age	16-18	19-20	21-23
Male	76	2	1
Female	43	1	-

**Figure 2** – Gender and age of the study participants

Moving to a new city or campus requires students to adapt to a new physical and social environment. This may include mastering new requirements, finding a place to live, meeting new people and establishing new social connections, and being responsible for the financial component of their daily expenses. All new circumstances can cause a feeling of detachment, lack of need and lack of support, these feelings in their majority are the cause of the emergence and / or increase anxiety, which may be the cause or the first stage of stress according to the theory of G. Selye. New circumstances become a big obstacle that prevents stu-

dents from focusing on learning, as feelings of longing and lack of need can lead to inadequate perception of their social role in a new social group with new requirements, standards, rules, and values.

According to the responses received, the largest number of students who took the survey were from Astana (43.2%), Almaty (14.4%) and Shymkent (6.4%) (Fig. – 3). It is noteworthy that less than 3% of students represent the most remote regions (directly located far from the location of the university of study, in our study it is Astana), such as Aktau, Atyrau, Turkistan and Uralsk.



**Figure 3** – The region from which the study participants enrolled at the university

Regarding the results of the analysis of the frequency of stressful situations among first-year students, according to the study, the following features can be noted:

- 4 students (3.2%) noted that they never experience stress during their studies – the indicator is extremely low and probably reflects their high level of adaptability or resilience. However, in the process of interviewing students, a factor emerged that students may be ashamed to admit to their state of stress, and in the process of responding, they may have hidden or failed to understand that they are, are experiencing, or have experienced stress.

- 24 students (19.2%) indicated that they rarely encounter emotional stress, which indicates a fairly stable perception of learning loads, effective adaptation to new challenges and circumstances dictated by the academic environment.

- 35.2% of students experience it periodically. This may indicate specific moments of tension associated with certain situations in the learning process or social environment.

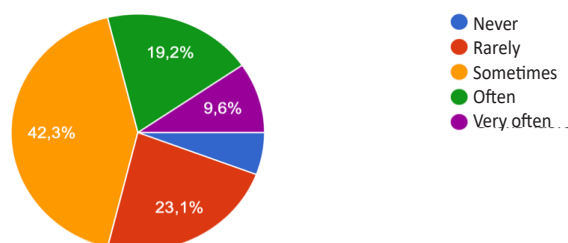
- 22.4% often face stress, attributing it to difficulties of adaptation, misunderstanding of new re-

quirements, new restrictions and constant emotional imbalance associated with “deadlines” in all areas of study. Another factor noted in the comments of first-year students is related to their misunderstanding that most of the first-year subjects are general education subjects with a large number of requirements for logical, theoretical, scientific thinking and the construction of their thoughts based on scientific theories.

- 6.4% of the respondents (8 people) are in constant emotional stress. These figures demonstrate the need for special attention to these students, since their state of stress, according to G. Selye’s theory, can be regarded as a state of the third level – exhaustion of the body, negative psychological and physiological effects at all levels of development, interaction, and learning.

Summarizing the results of this research issue, we can conclude that about 65% of students experience moderate to high stress levels. According to these data, it is important to focus on the implementation of psychological support programs and stress management methods to improve the well-being of first-year students.

Как часто вы испытываете стресс во время учебы?  
52 жауап



**Figure 4** – Purity of stressful situations at the university

The main question of the conducted research is the question of the causes of stress, about those situations and factors that cause stress in first-year students. Analyzing the results obtained during the survey, we can identify several key points that cause stress among students of IT specialties. First, the sources of stress for first-year students, whose school deadlines were monitored by school teachers, is precisely the skipping of deadlines. For this reason, due to the accumulated missed assignments, the study participants noted one of the most fre-

quent sources of stress – high academic workload. At the same time, the workload is associated with large amounts of tasks that require significant effort and time. Uncontrolled amounts of effort and time lead to feelings of overload and anxiety, especially if students, not feeling pressure from outside, and not yet realizing their own responsibility, do not monitor the time frame of assignments, the main opportunities for timely completion, and the consequences of late completion continue to wait for the control they have been accustomed to since school,



unconsciously, do not pay attention to assignments. Missing deadlines leads to stress, as meeting deadlines is critical in the IT sector, and late delivery of projects can affect academic performance and cause additional anxiety. This is a problem for 41% of the students surveyed.

The second reason identified during the survey is the change in social status, the transition from the status of a schoolchild to the status of a student. All students face the need to adapt to new requirements and the educational system, which is accompanied by psychological difficulties. This factor causes stress in 46% of the respondents. An additional concern is the lack of understanding of the material and the fear of getting low marks in exams, given the specifics of Astana IT University, where all classes are held in non-native English, plus, especially given the complexity of technical disciplines, students have a fear associated not only with obtaining information, but also with understanding terminology, the main areas of their specialties and specializations in general. This problem is noted by 28% of students.

Another source of stress noted by students is an inconvenient schedule. For example, the study par-

ticipants talked about long periods between classes, getting up early, or, conversely, late hours of classes, during which they could not schedule their personal time and personal interests, which included part-time work or socializing with friends outside the university. This source of stress is noted by 26% of respondents.

Difficult relationships with teachers and misunderstandings in the group can increase tension, especially if students have difficulty understanding complex topics or are unable to establish contact with classmates. Financial difficulties, such as having to pay for tuition or accommodation, are also a significant source of stress.

In addition, personal problems, such as family issues or difficulties in personal relationships, falling in love remaining at school, school friends enrolled in other universities, affect the psycho-emotional state of students, increasing stress in the educational process. Thus, students of IT majors face many factors that affect their stress levels, including academic workload, deadlines for completing assignments, relationships with teachers and classmates, as well as personal and financial problems.

**Table 1** – Causes of stressful situations

Change of social status (from schoolchildren to students)	36,80%
Disorientation (lost) at university	7,20%
An unfamiliar environment at the university	9,60%
The schedule is not convenient (early classes, late classes, long intervals between classes)	20,80%
Misunderstandings in the group (tense/difficult relationships with classmates)	9,60%
Skipping deadlines	32,80%
Skipping classes (due to illness, etc.)	6,40%
Large volumes of tasks	39,20%
Relationships with teachers	21,60%
Misunderstanding of the essence of the profession	16,80%
Financial difficulties	28,80%
Not understanding the material (fear of getting bad exam scores)	22,40%
Personal problems	12,80%

After identifying the causes of stress in the survey, we touched upon the methods that students independently use to overcome stress. According to stress management methods, 57% of respondents choose rest, including sleep, as a way to combat stress. This indicates that recuperation and rest play an important role in maintaining mental and emo-

tional balance. 48% of the study participants prefer to watch movies or TV series, which helps them temporarily distract themselves from academic and personal problems.

41% of students use games or hobbies, which is also an important way to relieve stress. This can include engaging video games, as well as various

creative activities, such as drawing or music, that help you switch and focus on something enjoyable. Communication with friends or family is one of the most popular, 40% of respondents choose it. The support of loved ones and the opportunity to discuss their experiences can reduce anxiety and strengthen a positive emotional state.

Another way to deal with stress is to use meditation and breathing exercises, which 24% of students pay attention to. These practices help reduce stress levels, improve concentration, and increase emotional stability. Among the less popular methods, requests for help addressed to teachers and/or psychologists can be noted, 11% of respondents choose it, which may indicate lack of accessibility or ignorance about the possibilities of support in the educational process, embarrassment, distrust, fear of self-discredit in the eyes of other students. While religious rituals (for example, prayer) are a way to cope with emotions and stress for 1% of students.

Thus, students use various approaches to overcome stress, with most of them preferring methods aimed at relaxation and emotional support, such as relaxing, communicating with loved ones, and watching movies.

## Conclusion

According to modern research, stress can have both negative and positive effects on students' adaptation processes. Negative stress often leads to decreased motivation, cognitive decline, and emotional burnout, while optimal stress levels can serve as an engine for successful learning and development.

In a rapidly changing technological environment, new living conditions in the social and physical component, students face unique challenges that require them to have a high degree of self-regulation and adaptability, for which they may not be psychologically prepared.

At the same time, the relevance of studying the impact of stress on the adaptation of IT students is determined by several key factors. Firstly, the modern realities of higher education, especially in the

field of information technology, are characterized by rapid changes in curricula and requirements for students. Complex technical disciplines, high competition, and the need for constant self-development create an environment in which students' stress levels increase significantly. Time limits for obtaining a specialty in IT sphere (3 years instead of the generally accepted 4 years), accompanied with high requirements of time limits, timely delivery of assignments, quick mastering of the received material.

Secondly, research shows that high levels of stress negatively affect students' cognitive functions, emotional state, and academic performance. Problems related to adapting to a new learning environment can lead to decreased motivation, poor health, and eventually to physiological illnesses, psychological depression, communication difficulties, and expulsions. Therefore, understanding the causes and consequences of stress becomes important for developing effective student support strategies.

Thirdly, in the context of globalization and digitalization of education, it is becoming relevant not only to study the stress factors themselves, but also to find ways to overcome it, adapting to the demands of the modern digital society. In the case of first-year students, great preference is given to online consultations, methods that they can use outside the time and physical framework (Okeke et al., 2018).

When analyzing the concepts of stress tolerance (Rizulla, 2020), where the most significant concepts and factors reflect awareness (Polyvyannaya, 2023), which is a condition for favorable opportunities to increase stress tolerance and stress coping among students. The conducted study "The impact of stress on the adaptation of first-year IT students" opens up opportunities to work with first-year students in order to adapt favorably, mitigate stress factors, and provide timely assistance both pedagogical and psychological. Thus, this study not only expands existing knowledge about the impact of stress on students, but also has practical significance for educational institutions seeking to create a more supportive and adaptive environment for IT students.

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