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IRSTI 14.29.09

UDC 159.94:376

<https://doi.org/10.52269/NTDG2542149>

STRESS TOLERANCE IN THE PROFESSIONAL ACTIVITY OF A SPECIAL EDUCATION TEACHER

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This article presents the results of a study examining the specific expression of stress tolerance in special educators. The issue of stress tolerance arises in the professional work of special educators, as they must address professional challenges in constant contact with children with disabilities, psychophysical disorders, and learning and socialization difficulties. Therefore, “stress tolerance” takes on particular significance. An analysis of theoretical sources allowed us to identify the characteristics, structural components, and psychological resources of special educators' stress tolerance. The insufficient study of the specific expression of stress tolerance in special educators was noted, demonstrating the relevance of scientific research and the relevance and importance of this research. In this study, “special educator's stress tolerance” was examined as an integrative characteristic manifested in the activation of psychological resources aimed at preventing professional impairments.

The study involved 50 special educators working in organizations for children with special educational needs. The study utilized diagnostic methods (Stress Diagnostics by A.O. Prokhorov; Multilevel Personality Questionnaire “Adaptability” by A.G. Maklakov, S.V. Chermyanin; and the “Coping Behavior in Stressful Situations” by S. Norman, D.F. Endler, D.A. James, M.I. Parker (adapted by T.A. Kryukova) to identify prevailing levels of stress resistance in the experiment participants. The study utilized mathematical and statistical data processing methods to identify statistically significant indicators of the presence of a relationship between the level of stress resistance, its structural components (emotional, behavioral, and cognitive), the severity of adaptive characteristics, and behavior strategies in stressful situations in special educators.

Key words: stress, stress tolerance, professional activity, special education teacher, adaptability, coping behavior, neuropsychic resilience skills, special education.

**АРНАЙЫ БІЛІМ БЕРУ ПЕДАГОГЫНЫҢ
КӘСІБІ ҚЫЗМЕТТЕГІ СТРЕССКЕ ТӨЗІМДІЛІГІ**

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Манасбаева А.А. – педагог-зерттеуші, Қостанай облысы әкімдігінің Білім департаментінің ерекше білім беру қажеттіліктері бар балаларға арналған «Балабақша – мектеп – мектеп-интернат» арнайы кешені, Қостанай қ., Қазақстан Республикасы.

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Бұл мақала арнайы педагогтардың стресске төзімділік деңгейінің ерекшеліктерін зерттеу нәтижелерін сипаттауға арналған. Зерттеу арнайы педагогтардың кәсіби қызметтінде стресс деңгейінің жоғарылау мәселесі туындастынын атап көрсетеді. Өйткені арнайы педагог үнемі психофизикалық дамуында әртүрлі бұзылыстары бар, оқу мен әлеуметтеннеде елеулі қыындықтарға тап болатын ерекше білім беруді қажет ететін балалармен тұрақты байланыста болып, алуан түрлі кәсіби міндеттерді шешуғе мәжбур. Теориялық дереккөздерді талдау бізге арнайы педагогтардың стресске төзімділігін сипаттамаларын, құрылымдық компоненттерін және психологиялық ресурстарын анықтауға мүмкіндік берді. Сонымен қатар, арнайы педагогтардағы стресске төзімділіктің көріну ерекшеліктерінің жеткілікте деңгейде зерттелмегендегі анықталып, бұл мәселенің ғылыми тұрғыдан өзекті екенін, зерттеуге деген сұраныс пен маңыздылығын көрсетеді. Бұл зерттеуде «арнайы педагогтың стресске төзімділігі» кәсіби бұзылулардың алдын алуға бағытталған психологиялық ресурстарды белсендіруде көрінетін интегративті сипаттама ретінде қарастырылды.

Зерттеуге ерекше білім беру қажеттіліктері бар балаларға арналған арнайы ұйымдарда жұмыс істейтін 50 арнайы педагог қатысты. Зерттеу диагностикалық әдістерді қолдану арқылы жүргізілді («А.О. Прохоровтың «Стресс диагностикасы»; А.Г. Маклаковтың, С.В. Чермяниннің «Бейімделушілік» көлденеңгейлі тұлғалық сауалнамасы; С.Норманнның, Д.Ф. Эндлердің, Д.А. Джеймстің, М.И. Паркердің «Стрессстік жағдайларда мінез-құлықтың сәйкестігі» (Т.А. Крюкованың бейімделген нұсқасы) және экспериментке қатысуышылар – арнайы педагогтардың стресске төзімділігінің басым деңгейлерін анықтады. Математикалық және статистикалық деректердің өңдеу әдістерін қолдана отырып жүргізілген нәтижелерді талдау арнайы педагог-практиктердің стрессстік жағдайлардағы стрессстік төзімділік деңгейі, оның құрылымдық компоненттері (эмоционалдық, мінез-құлықтық және когнитивтік), бейімделу сипаттамаларының ауырлығы мен мінез-құлық стратегиялары арасындағы байланыстың статистикалық тұрғыдан маңызды көрсеткіштерін көрсетті.

Түйінди сөздер: стресс, стресске төзімділік, кәсіби қызмет, арнайы білім беру мүгалимі, бейімделу, күресу мінез-құлқы, нейропсихикалық төзімділік дағдылары, арнайы білім беру.

**СТРЕССОУСТОЙЧИВОСТЬ В ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ
ПЕДАГОГА СПЕЦИАЛЬНОГО ОБРАЗОВАНИЯ**

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Данная статья посвящена описанию результатов исследования специфики выраженности стрессоустойчивости у специальных педагогов. Исследование подчеркивает, что в профессиональной деятельности специальных педагогов возникает проблема выраженности стресса, так как специальному педагогу приходится решать разнообразные профессиональные задачи в условиях постоянного контакта с детьми с ограниченными возможностями здоровья, имеющих различные нарушения психофизического статуса, значительные сложности в обучении и социализации. В связи с этим, «стрессоустойчивость» приобретает особое значение. Анализ теоретических источников позволил определить особенности, структурные компоненты и психологические ресурсы стрессоустойчивости специального педагога, а, также, отметить недостаточ-

ную изученность проблемы специфики выраженности стрессоустойчивости у специальных педагогов, что свидетельствует об актуальности научного поиска, востребованности и важности исследования. В данном исследовании «стрессоустойчивость специального педагога» рассматривалась как интегративное свойство, проявляющееся в активации психических ресурсов, направленных на профилактику нарушений в профессиональной деятельности.

Участниками исследования стали 50 специальных педагогов, работающих в специальных организациях для детей с особыми образовательными потребностями. Исследование проводилось с использованием диагностических методик («Диагностика стресса», автор А.О. Прохоров; Многоуровневый личностный опросник «Адаптивность», авторы: А.Г. Маклаков, С.В. Чермянин; методика «Совпадающее поведение в стрессовых ситуациях», авторы: С. Норман, Д.Ф. Эндер, Д.А. Джеймс, М.И. Паркер (адаптированный вариант Т.А. Крюковой) и выявило преобладающие уровни стрессоустойчивости у участников эксперимента – специальных педагогов. Анализ результатов, проведенный с помощью методов математической и статистической обработки данных, показал статистически значимые показатели наличия взаимосвязи между уровнем стрессоустойчивости, ее структурными компонентами (эмоциональным, поведенческим и когнитивным), выраженностью адаптивных характеристик и стратегиями поведения в стрессовых ситуациях у специальных педагогов-практиков.

Ключевые слова: стресс, стрессоустойчивость, профессиональная деятельность, педагог специального образования, адаптивность, копинг-поведение, навыки нервно-психической устойчивости, специальное образование.

Introduction. The teaching profession is one of the stressful professions. This is especially true for special education teachers of specialized institutions.

Jari J. Hakanen, Arnold B. Bakker, Wilmar B. Schaufeli, Christina Maslach and others have noted in their studies that special education teachers are among the professions most susceptible to stress, with their work requiring significant emotional and energetic expenditure. These authors' research has shown that high levels of stress can lead to burnout when teachers perceive professional demands as exceeding their resources and ability to cope [1, 2].

Research by M. Williams and I. Gersch showed that special education and mainstream school teachers face different types of stressors. Secondary school teachers experience greater stress due to time constraints, while special education teachers experience greater stress due to resource constraints. Furthermore, the resource constraints in mainstream schools are attributed to the stress of teachers supporting students with special educational needs. Furthermore, compared to other professions, teachers face greater emotional demands, and educating students with special educational needs imposes additional demands [3].

Kiel Ewald, Heimlich Ulrich, Markowitz Reinhard and Braun Annika conducted a study in the German education system, including student teachers ($N = 333$) from special needs areas, including learning disabilities, intellectual disabilities, emotional/social disorders, and sensory impairments (hearing, speech, or language impairments). The study found that special education teachers have difficulty coping with professional stress and workload [4].

In recent years, interest in teachers' job stress has increased in the educational community. Antoniou A.-S., Efthymiou V., Polychroni F., Kofa O. studied the relationships between job stress and self-efficacy of primary school teachers working in general and special education schools, primarily in Athens, Greece. They concluded that specific stress factors for teachers include government and school administration policies, time pressure and student character, improving student achievement, resources and equipment, and parental and community support. Individual variables were also shown to influence teacher stress and self-efficacy [5].

In many countries, including Finland, special education teachers play a central intermediary role in the development of inclusive education practices in schools and classrooms, providing support to both students and teachers. This increases the risk of their overwork, cynicism towards the teaching community and/or inadequacy in the relationship between students and teachers. For example, a study conducted by Soini T., Pietarinen J., Pyhälö K., Jindal-Snape D., Kontu E. made it possible to better understand the relationship between the symptoms of emotional burnout experienced by special education teachers and their development; and, also, to study the perception of the working environment by a teacher depending on time. The longitudinal study included two measurements (in 2010, $n = 760$ and in 2016, $n = 485$). The results show that the inadequacy experienced by special education teachers in student-teacher relationships predicted teacher exhaustion, cynicism towards the teaching community, and inadequacy in student-teacher relationships 5 years later. Moreover, the supposed good working environment for teachers predicted a decrease in cynicism towards the teaching community 5 years later [6].

Hopman, J.A.B., Tack, N.T., van der Ende J., Breeman L.D. studying the role of teacher-student relationships and self-efficacy in connection with destructive classroom behavior and emotional exhaustion, reviewed the work of 98 teachers from fourteen Dutch special education schools for teenage students with mental disabilities. They found that dealing with destructive behavior in the classroom can be one of the

most visible sources of stress experienced by teachers: teachers working with students who exhibit chronically defiant behavior due to mental disabilities are vulnerable to developing stress symptoms. And, also, one of the reasons for susceptibility may be that teachers of special schools are not only exposed to stressors specific to a particular population, for example, such as daily exposure to high levels of destructive behavior demonstrated by students with special needs, but also face stressors that are known to create stress on all teachers, including high demands and lack of resources. The degree to which teachers experience stress as a result of working with students with special educational needs varies from teacher to teacher. However, they all need to develop stress resistance [7].

The problem of stress has always aroused great interest among scientists and practitioners, linking fundamental and applied research. Extensive scientific experience on the problem of studying and dealing with stress has been accumulated abroad (V. Wundt, W. James; R. Yerkes, J. Dodson; W. Cannon; T. Cox, K. McKay; R. Lazarus; R.B. Maimo; D. Mechanik; G. Se-lie; Z. Freeman, etc.)

Well-known psychologists have dealt with this problem: V.A. Ababkov, V.V. Bodrov, A.V. Waldman, M.M. Kozlovskaya, A.A. Viru, T.S. Kabachenko, G.I. Kositsky, V.M. Smirnov, Yu.V. Shcherbatykh and others. Despite the presence of a significant number of works that reveal the psychological problems of stress and stress tolerance of a teacher, there are still many questions related to understanding the specific features of stress tolerance of "special teachers" in the process of their professional activities.

As G. Selye notes, stress (from the English stress – pressure, pressure, pressure; tension) is a non-specific (general) reaction of the body to an impact (physical or psychological) that violates its homeostasis, as well as the corresponding state of the nervous system of the body.

Kabachenko T.S. refers to the causes of stress such factors as: work (poor working conditions, job dissatisfaction, a large amount of information, work, responsibility for career failures, etc.); role conflicts (combining the role of a mother and a successful businesswoman, the head may not enjoy authority, etc.); interpersonal relationships and family conflicts; psychological climate in the organization; socio-economic conditions; extreme situations [8].

In a general sense, stress is the body's response to adverse environmental changes. The following indicators are of great importance for the prevention of stress: lifestyle, work intensity, relationships between colleagues; condition, both physical and psychological; desire to cope with stress.

Zaritskaya A.Yu. believes that stress tolerance is a psychophysiological reaction manifested in a combination of physiological and psychological properties that allow adapting to a difficult situation, overcoming its negative factors, and helping to maintain the effectiveness of activities [9].

Stress tolerance is one of the main indicators of a teacher's professional qualities. In the works of N. E. Shchurkova, it is stated that the professional qualities of a teacher are a set of socio-psychological formations that have a factorial influence on the professional result of a teacher's activity [10].

Stress tolerance of a special teacher is one of the most urgent scientific and practical tasks, since this profession is classified as stressful, requiring a lot of energy, self-control and self-regulation from them.

Stress tolerance assessment indicators:

1. Perception of problematic situations
2. Professional adaptation
3. N. E. Shchurkova's self-realization [10].

A special education teacher must immediately perform several functions: a subject teacher, an educator, a class teacher, a circle leader, and sometimes a public figure, which subsequently leads to prolonged mental tension and fatigue. The purpose of the activity of a special education teacher is related to the elimination of problem areas in development and in practice, it is not uncommon that a specialist is not always able to help a child overcome difficulties, this leads to the fact that the specialist "gives up" and this is reflected in their competence and subsequently in the emotional sphere.

A special education teacher is part of a teaching staff, the peculiarity of which is the specifics of professional activity (in teaching and educating children with developmental disabilities). Among the features of the life of the teaching staff, it is also necessary to include the lack of time to perform certain types of pedagogical work. This is often the reason for overloading teachers, lack of necessary free time for professional growth, spiritual enrichment, which leads to stress, stressful situations, exhaustion of the body, exhaustion, irritability and ultimately leads to emotional burnout.

There are a number of professional stress indicators in the activity of a special education teacher:

- chronic psychoemotional activity: for special teachers, activity is associated with constant emotional reinforcement of communication and the peculiarities of the speech environment;
- increased responsibility, constant work in a control mode: empathy, empathy, responsibility for the upbringing, development and training of students, as well as constant self-control and purposefulness in activities prevail.
- psychologically difficult contingent – defectologists work with special children with mental, mental and physical disabilities.

- it is constantly necessary to confirm one's competence – a defectologist teacher is "in full view" of students, colleagues and parents and must always be impeccable in behavior and activity, even outside of work, while under stress

The stress resistance of a special education teacher is an important factor in ensuring the effectiveness and reliability of professional activity. Stressful conditions, in addition to the danger to physical and mental health, also significantly reduce the success and quality of work, increase the level of psychophysiological characteristics of activity, and may also have a number of unacceptable socio-economic and socio-psychological consequences: decreased satisfaction with professional activity, deformation of personal and psychological qualities of a specialist.

Thus, the problem of stress tolerance is one of the main problems of preserving and increasing the productivity of a special teacher in conditions of a sharp increase in workload and adverse conditions on personal health.

The issue of stress is of great interest to scientists and practitioners, linking fundamental and applied research. However, many questions remain related to understanding the specific characteristics of stress and stress resilience in special education teachers, as well as the challenges they face in their professional work.

Various scholars have identified many components of stress resilience or qualities associated with stress tolerance (e.g., tolerance, assertiveness, initiative, a desire for self-development, and communication skills). S.K. Bondareva and A.A. Derkach point to tolerance as a significant professional quality in preventing stress resilience. N.E. Vodopyanova highlights the ability to socially adapt, maintain significant interpersonal relationships, ensure successful self-realization, and achieve goals. E.S. Romanova emphasizes communication skills, psychological and emotional stability, tolerance and a non-judgmental attitude toward others, a desire for self-knowledge and self-development, and the ability to adapt problem-solving methods in accordance with changing environmental conditions.

Based on position of P.G. Ziberman that stress resistance is an integrative personality, the basis for determining the characteristics of stress resistance of special educators was a combination of emotional, cognitive and behavioral manifestations of mental activity [11].

All of the above studies are of great interest but do not provide a single, definitive answer.

In this regard, this study clarified additional information and tested **the hypothesis** about the existence of a relationship between the level of stress resistance, its structural components (emotional, behavioral, cognitive), adaptive characteristics and behavior strategies in stressful situations among special educators.

The present study aimed to analyze theoretical sources to determine the characteristics, structural components, and psychological resources of special educators' stress resilience; it also aimed to experimentally identify the level of stress resilience in practicing special educators. The following **research questions** were posed: 1. Is special educators' stress resilience a complex phenomenon, comprising three components: emotional, behavioral, and cognitive. What characteristics of these stress resilience components are observed in special educators in their professional activities? 2. What behavioral strategies do special educators demonstrate in stressful situations?

Based on these questions, the study was aimed at identifying the crucial role of stress resistance in the professional activities of special educators and clarifying the relationship between its key characteristics, based on which it would be possible to effectively build the process of its development in the future.

To achieve this goal, the following **objectives** were set:

- to define the concept of "stress resilience" and identify the characteristics, structural components, and psychological resources of stress resilience in special education teachers;
- to select diagnostic tools that meet the study's objectives and are relevant for testing the hypothesis;
- to analyze the obtained results for statistically significant indicators of the relationship between the level of stress resilience and its structural components (emotional, behavioral, and cognitive), the severity of adaptive characteristics, and behavioral strategies in stressful situations in practicing special education teachers.

The novelty of this study lies in its provision of additional information on the activation of individual psychological resources aimed at developing stress resilience in special education teachers during their professional activities.

Material and methods. The experimental study was conducted on the basis of special educational organizations in Kostanay. These institutions are medical and social institutions designed for permanent residence of children with disabilities from childhood aged 4 to 18 years in need of care, household and medical and social services, rehabilitation services, education, upbringing, social and labor adaptation.

The study involved 50 special education teachers with 10-15 years of experience in the profession.

Based on the understanding of the concept of "stress tolerance" as an integrative characteristic, the study used techniques to assess the level of stress resistance and its structural components: emotional, behavioral and cognitive. Methods were used for this purpose:

1. "Diagnosis of stress" (author A.O. Prokhorov), was used to identify the level of stress: the level of self-control and emotional instability in problematic situations. The questionnaire includes 9 questions. The participant of the study is asked to indicate the number of questions to which he agrees. When interpreting the results, 1 point is awarded to each "yes" answer, then their sum is calculated.

2. In order to study such indicators of stress resistance as maintaining the ability to socially adapt, significant interpersonal relationships, and successful self-realization, the Multilevel Personality Questionnaire "Adaptability" (authors A.G. Maklakov, S.V. Chermyanin) was used in the study. The questionnaire is aimed at studying various aspects of adaptation and includes scales: "Neuropsychic stability", "Personal adaptive potential", "Communicative abilities", "Moral normativity". The basic scale "Personal adaptive potential" provides information about behavioral regulation, communicative potential and differentiates the study participants according to the degree of resistance to the effects of psychoemotional stressors. The technique also makes it possible to identify people with a high degree of tolerance to stress factors.

3. To assess life style and coping behavior in stressful situations, the methodology "Coping behavior in stressful situations" was used (author S. Norman, D.F. Endler, D.A. James, M.I. Parker (adapted version by T.A. Kryukova). This technique is designed to differentiate the dominant strategies for overcoming stressful situations. Coping strategies are focused on solving a problematic situation, on emotions and avoidance.

Results and discussion. The study clarified that stress is a process of interaction with the environment that makes it difficult to actively respond and adequately overcome stress, and an emotional reaction to certain events (stressful experience) that disrupts human adaptation, depleting resources. Therefore, the study studied the features of stress manifestations, the level of stress tolerance among teachers of special education. The study of stress tolerance of special education teachers was based on the idea of the peculiarities of stress tolerance as a set of emotional, cognitive manifestations of mental activity.

The data obtained using the method "Diagnosis of stress" (author A.O. Prokhorov) showed that the respondents were distributed by levels of stress resistance as follows: respondents with a low level of stress resistance (38%) predominate, 34% of respondents were identified with an average level, 28% of respondents were identified with a high level of stress resistance. Teachers of special education, who had a high level of resistance to stress, were characterized by the ability to adapt to the situation, calmly treat losses, demonstrated tolerance towards others and a tendency to compromise.

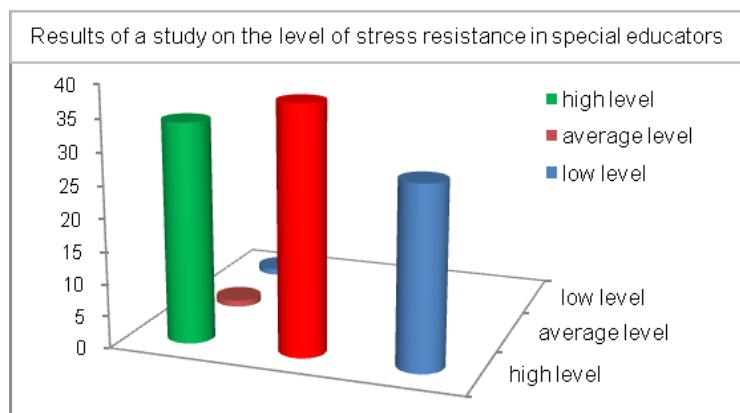


Figure 1 – Levels of stress resistance in special educators.
"Diagnosis of stress", author A. O. Prokhorov

A further comprehensive assessment of stress manifestations using the "Stress Diagnostics" method (author A.O. Prokhorov) revealed that respondents with a low level of stress resistance exhibit a high rate of behavioral (87% of respondents), and cognitive (67% of respondents) manifestations of stress. The use of mathematical and statistical data processing methods (Student's T-test) revealed a direct correlation between the level of stress resistance and the presence of a range of different stress manifestations (Table 1).

Table 1 – The relationship of stress resistance indicators and its components among teachers of special education

Indicators	stress tolerance	the cognitive component	The behavioral component	the emotional component
stress tolerance	1	0,283*	0,341*	0,333*
the cognitive component	0,283*	1	0,550*	0,621*
the behavioral component	0,341**	0,550**	1	0,603**
the emotional component	0,333**	0,621**	0,603**	1

* $p < .001$.

Marking in the table of the numerical index ** means that the significance level of the correlation coefficient is $p < 0.01$, that is, a high level of significance. That is, the research data suggest that the high severity of various manifestations of stress in special teachers with an insufficient level of stress resistance makes it necessary to rely on the comprehensive formation and development of appropriate structural components of stress resistance in the work to improve it.

These data in the table show that special educators with low stress tolerance demonstrated significant stress in response to a strong or prolonged stress stimulus simultaneously at the emotional, behavioral, and cognitive levels.

Therefore, given the high severity of various manifestations of stress in special educators with insufficient stress tolerance, it is necessary to further rely on the comprehensive development of the corresponding structural components of stress tolerance, as assessed using the "Diagnosis of Stress" test (author A. O. Prokhorov).

As a result of the study of the adaptive potential of special teachers using the questionnaire "Adaptability" (authors: A.G. Maklakov, S.V. Chermyanin) It turned out that the majority of respondents (59%) demonstrate a high level of adaptation; 23% of respondents showed an average level and 18% of respondents have a low level. The data obtained made it possible to consider the relationship between the level of stress tolerance and adaptability of special education teachers: practitioners with high and medium levels of adaptability, in the majority (82%) demonstrated high and medium levels of stress tolerance. The presence of such indicators, in our opinion, is associated with the ability of practitioners to assess the occurrence and development of stress, and accordingly resist it (cognitive component).

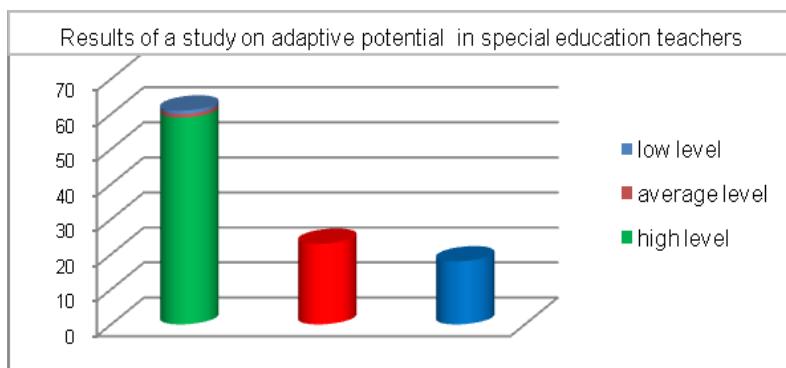


Figure 2 – A study of adaptive potential of special education teachers "Adaptability",
by A.G. Maklakova and S.V. Chermyanina

The conducted research has shown that stress tolerance is interrelated with adaptability, which is based on the following adaptive potentials: neuropsychic stability, communicative abilities, moral normativity. The results of the study revealed a positive correlation between stress resistance and adaptive potential. The study of the characteristics of the adaptive resources of the presented category of participants allows us to conclude that stress, as a situational state, does not always disrupt adaptation; repeated stress can lead to adaptation due to the mechanism of desensitization (habituation).

Table 2 – The relationship of stress resistance indicators and its components among teachers of special education

Indicators	stress tolerance	Aspects of personal adaptive potential		
		Communication skills	Moral normativity	Neuropsychic stability
stress tolerance	1	0,456**	0,343*	0,378**
Communication skills	0,456**	1	0,832**	0,805**
Moral normativity	0,343*	0,832**	1	0,713**
Neuropsychic stability	0,378*	0,805**	0,713**	1

** $p < .01$.

The presence of an optimal level of adaptation in a person implies that he is able to adequately perceive the situation and give it an objective assessment. Due to these mechanisms, the adaptive potential can be used as a resource to increase stress tolerance. Confirmation of the dependence of the possibility of resisting stress on the general level of intellectual development and relevant knowledge can be found in the works of F.B. Berezin, L.I. Wasserman, V.L. Marishchuk [12,13,14].

The study of psychological defense mechanisms also revealed the specific preferences of special educators with different levels of stress tolerance.

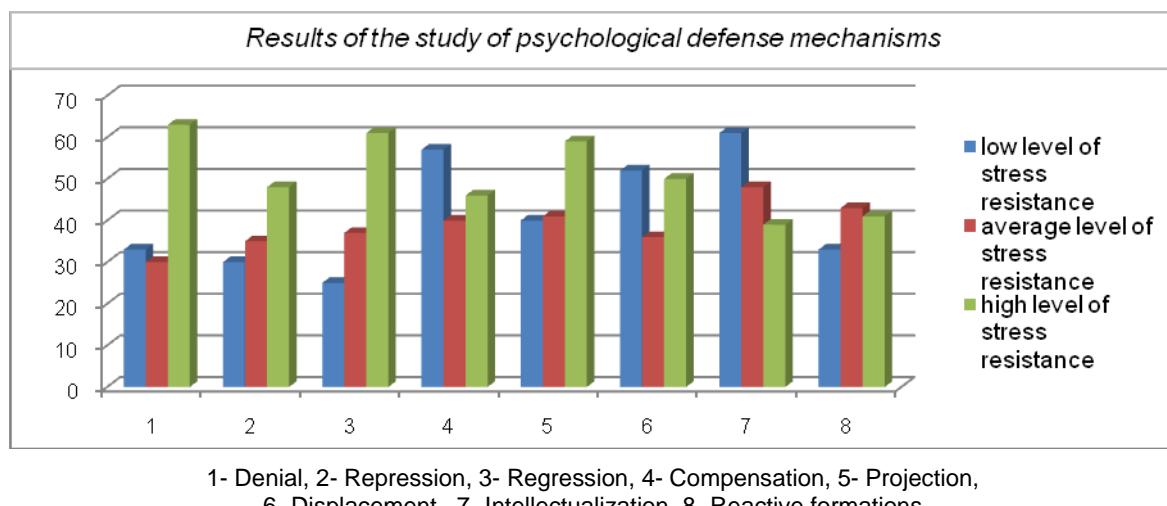


Figure 3 – Results of research on psychological defense mechanisms of special educators with different levels of stress resistance

The results of the study of psychological defense mechanisms have shown that teachers of special education with different levels of stress resistance have special needs in their use. For example, study participants with low stress tolerance actively used ineffective forms of psychological protection: denial, projection, regression. The effect of denial is manifested in a decrease in the number of consciously recorded, recognized as accomplished, events, ensuring the absence of information in the subject's memory about those events that generate a state of anxiety. A person denies the very fact of the existence of frustrating or alarming circumstances, which are sometimes quite obvious to others, or tries to get rid of stressful experiences by unconsciously distorting and displacing them from the sphere of his consciousness.

The mechanism of action of projection, as one of the forms of psychological protection, manifests in relieving tension, eliminating feelings of frustration, lowering the level of self-confidence, and eliminating low self-esteem. The study participants with a low level of stress tolerance, when using this protective psychological mechanism, do not sufficiently demonstrate the ability to take into account objective factors and objectively perceive situations and children with special needs, which was expressed in attributing feelings, thoughts and actions to others, on the one hand, positive, socially approved, capable of elevating the person oneself; on the other hand, negative (sarcasm, hostility, shifting blame, responsibility); and, also attributing aggressive intentions to children, colleagues, parents in order to be in the role of "victim".

As K. Fopel notes, regression, as a desire to avoid anxiety by reverting to earlier stages of development, can be difficult to differentiate by its severity [15].

Study participants (both with low and high levels of stress tolerance) had both low and high levels of regression. For the study participants, this type of psychological defense allowed them to replace subjectively more difficult tasks with simpler and more accessible ones.

Special education teachers who showed a high level of stress tolerance in the study used such types of psychological protection as intelligence, projection, compensation, and substitution. Compensation can serve as a manifestation of a mechanism for obtaining satisfaction in other spheres of life, for example: family, hobbies, social activities, etc.

The results of the study show that substitution, as a type of psychological protection, is expressed in special teachers with high and low levels of stress tolerance. In study participants with high levels of stress resistance, substitution is used to defuse suppressed emotions or relieve tension by interacting with non-dangerous or more accessible objects. For patients with low stress tolerance, substitution is not a successful and situation-solving mechanism, does not lead to relief, and does not relieve a state of severe stress.

Intellectualization is more pronounced in the group of stress-resistant and adaptable respondents. It allows you to realize and use only the information that makes your own behavior seem well controlled and does not contradict objective circumstances.

Thus, these types of psychological protection play the role of adaptive restructuring of perception and assessment of what is happening in situations when a person cannot cope with stress and adequately respond to a feeling of anxiety caused by internal or external conflict.

In her study, E.I. Kasyanova explained that these types of psychological defense share a number of common properties. They are activated in situations of stress and conflict to reduce emotional tension and protect against behavioral disorganization. If a person uses defenses unconsciously, in large quantities, and chooses predominantly immature forms, this can lead to distortion, denial, or falsification of reality [16].

Psychological defense mechanisms can act as a psychological resource to enhance adaptation by reducing anxiety levels.

At the same time, the protective function realized with the help of these mechanisms acquires a special protective significance: defending themselves, people reserve resources available to them, strive to reduce direct or indirect losses. There were no pronounced features and significant differences in the use of psychological defenses among the study participants.

Coping strategies are a key resource, the activation of which, in combination with psychological protection and adaptation resources, can provide a steady increase in stress resistance.

The results of a study using the "Coping behavior in stressful situations" methodology (author S. Norman, D.F. Endler, D.A. James, M.I. Parker (adapted version by T.A. Kryukova) showed that special education teachers with a low level of stress resistance actively use such behavioral strategies as denial, projection, regression [17].

Teachers of special education who have a high level of stress tolerance are more likely to use such behavioral strategies as: intellectualization, projection, compensation, substitution. In general, a study of the choice of behavior strategies by special educators in a stressful situation showed that 29% of respondents use task-oriented coping, 43% use emotions, and 28% use avoidance. That is, we see that only a third of the subjects use effective coping strategies aimed at solving problems.

Data analysis also showed that respondents with low stress tolerance preferred coping strategies aimed at emotions and avoidance. That is, these respondents, in order to relieve or reduce psychological stress, use behaviors associated with emotional discharge in their professional activities, or do not recognize the presence of a problem, avoiding it, feel insecure in their own abilities.

The choice of an avoidance strategy may be influenced by a high level of stress, the duration of its action, the uncertainty of the forecast of the situation and the negative experience of solving problems in the past; a high level of anxiety, low self-esteem, subjectively high significance of the event.

Respondents with a high stress tolerance index had prevailing strategies, that is, their choice of behavior was aimed at solving problems, including professional ones. This makes it possible to neutralize stress-related tension through a change in the subjective assessment of the situation and a corresponding change in the level of control. The strategy is based on making a decision about a positive change in the situation and perceiving it as a problem that needs to be solved. This group of study participants was focused on understanding the situation, actively responding to it and achieving the set goal. The choice of a strategy aimed at emotions was also present, but the content of emotions was different: they were aimed at managing emotional distress. The choice of an avoidance strategy by respondents with a high level of stress tolerance (6%) may be associated with a conscious assessment of the real situation as insurmountable, or as one that takes time to resolve. Increasing tension and anxiety put a person in front of the need to mobilize and develop a strategy to solve life's difficulties.

The problem is the lack of the ability to overcome stress in ways already known to man from behavioral experience, which disorients a person when choosing an effective coping strategy.

The obtained results are presented in Table 3.

Table 3 – Selection of coping strategies by special education teachers with different levels of stress tolerance

The level of stress resistance	The focus of behavioral strategies		
	Problem solving (29%)	Emotions (43%)	Avoidance (28%)
High level	17%	13%	6%
Average level	9%	11%	10%
Low level	3%	19%	12%

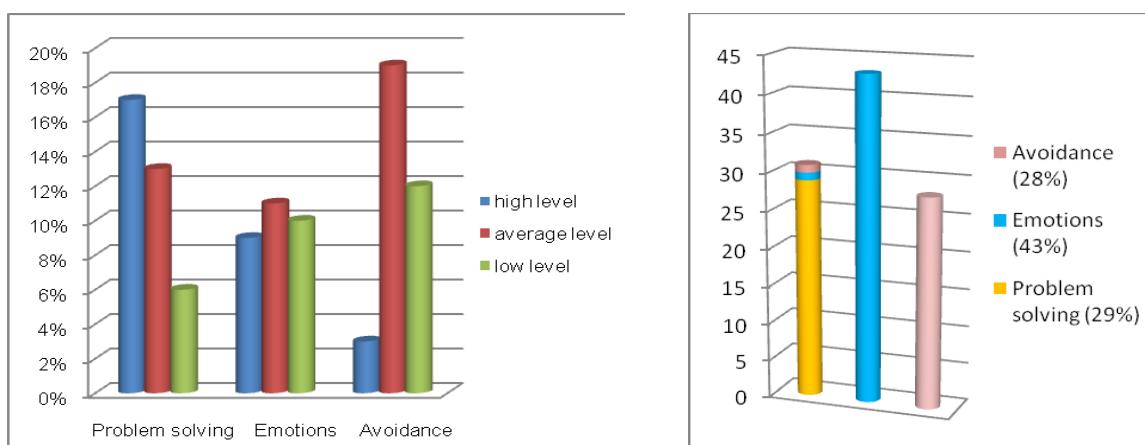


Figure 4 – Selection of coping strategies by special education teachers with different levels of stress tolerance

Coping strategies are a key resource, the activation of which, together with the resources of psychological protection and adaptation, can affect the increase in stress tolerance. The choice of an avoidance strategy (28% of participants) could be influenced by a high level of stress, the duration of its action, and negative experience of solving problems in the past.

A multimodal approach in choosing coping strategies was observed in 64.5% of respondents. This may indicate the flexibility of behavior in stressful situations in study participants with a high level of stress tolerance. In respondents with a low level of stress tolerance, this feature indicates a lack of awareness in choosing coping strategies and the absence of such an adaptive trait as selectivity.

Thus, a low level of stress tolerance is accompanied by multiple manifestations of stress in all components of mental activity, adaptation problems, a large number of defenses, and ineffective strategies.

High stress tolerance as a characteristic that reduces vulnerability to stress is the main criterion for the effectiveness of overcoming behavior and human adaptation to stressful situations. Low stress tolerance is a characteristic that expresses a person's lack of adequate reflection of the situation, mature defenses and effective behavioral strategies.

The analysis of all the data obtained in the experiment, characterizing the features of stress resistance of teachers of special education, revealed the need to improve this professionally significant quality. The study revealed that the majority of special education teachers (96%) experience stressful situations when working with special children.

Conclusions. Data obtained from a study of special education teachers' stress resilience and the specific severity of various stress manifestations in them confirmed the concept of stress resilience as a systemic, integrative characteristic.

The analysis of the data on the study of the characteristics of stress tolerance in teachers of special education revealed the need to improve this professionally significant quality. Stress in the professional activity of a special education teacher has specific features that affect labor efficiency. It has a cumulative, prolonged character, leads to the appearance of emotional burnout.

Stress resistance of teachers of special education as an integrated quality is determined by its practical provision in three structural components: the emotional component (neuropsychological balance, emotional balance); the behavioral component (striving for self-development and self-knowledge, assertive behavior, tolerance, communicative and interpersonal skills); the cognitive component (autopsychological competence, the ability to set goals and achieve results, develop skills to successfully overcome stressful situations).

The stress resistance of teachers of special education, being a comprehensive education, determines the level of functional reliability and regulation mechanisms. It manifests itself in the activation of the resources of the body and psyche aimed at preventing performance disorders and behavioral abnormalities.

High stress tolerance, as a characteristic that reduces vulnerability to stress, is an important criterion for the effectiveness of overcoming behavior and human adaptation to stress in a variety of situations. Low stress tolerance is a negative characteristic that expresses a person's lack of adequate reflection of the situation and effective behavioral strategies.

The study revealed that special education teachers working in medical and social institutions tend to have low and moderate levels of stress resistance.

A low level of stress tolerance is accompanied by multiple manifestations of stress in all components of mental activity, adaptation problems, and ineffective behavior strategies.

Special education teachers with a low level of stress tolerance demonstrated a high degree of overwork and exhaustion. They often lose their composure in a stressful situation and do not know how to control themselves. It is important for such people to develop self-regulation skills in their professional activities under stress.

For special education teachers with an average level of stress resistance, it was characteristic that they do not always behave correctly and adequately in a stressful situation. Sometimes they know how to keep their composure, but there are cases when minor events disrupt the emotional balance (the person "loses his temper").

The study revealed statistically significant indicators of stress resilience, its structural components, adaptive characteristics, and behavioral strategies in stressful situations in this sample of special education teachers.

Analysis of the study results allowed us to identify a group of special education teachers with low and moderate levels of stress resilience within this sample. These teachers require the activation of their adaptive resources, psychological defenses, and coping strategies to increase their stress resilience in their professional activities, as well as the development and improvement of the structural components of stress resilience: emotional and neuropsychic balance, proactivity, commitment to self-development, the ability to set goals and achieve results, tolerance, communication and interpersonal skills, and stress management skills.

The data obtained provide the basis for further systemic and integrative work. Overall, the potential of the experiment participants allows them to effectively adapt to stressful situations arising in their professional activities and can be used as a resource for increasing their stress resilience.

REFERENCES:

- 1 **Hakanen J.J., Bakker A.B., Schaufeli W.B.** **Burnout and work engagement among teachers.** *Journal of School Psychology*, vol. 43(6), pp. 495-513. <https://doi.org/10.1016/j.jsp.2005.11.001>.
- 2 **Maslach C., Schaufeli W.B., Leiter M.P.** **Job burnout.** *Annual Review of Psychology*, 2001, vol. 52, pp. 397-422. <https://doi.org/10.1146/annurev.psych.52.1.397>.
- 3 **Williams M., Gersch I.** **Teaching in mainstream and special schools: Are the stresses similar or different?** *British Journal of Special Education*, 2004, vol. 31, iss. 3, pp. 157-162. <https://doi.org/10.1111/j.0952-3383.2004.00347.x>.
- 4 **Kiel E., Heimlich U., Markowitz R., Braun A., Weiß S.** **How to cope with stress in special needs education? Stress-inducing dysfunctional cognitions of teacher students: the perspective of professionalization.** *European Journal of Special Needs Education*, 2016, vol. 31 (2), pp. 202-219. <https://doi.org/10.1080/08856257.2015.1125693>.
- 5 **Polychroni F., Kofa O.** **Occupational stress in mainstream and special needs primary school teachers and its relationship with self-efficacy.** *Educational Studies*, 2023, vol. 49(1), pp. 200-217.
- 6 **Soini T., Pietarinen J., Pyhältö K., Jindal-Snape D., Kontu E.** **Special education teachers' experienced burnout and perceived fit with the professional community: A 5-year follow-up study.** *British Educational Research Journal*, 2019, vol. 45(3), pp. 622-639. <https://doi.org/10.1002/berj.3516>.
- 7 **Hopman J.A.B., Tick N.T., van der Ende J., Breeman L.D. van Lier P.A.C.** **Special education teachers' relationships with students and self-efficacy moderate associations between classroom-level disruptive behaviors and emotional exhaustion.** *Teaching and Teacher Education*, 2018, vol. 75, pp. 21-30. <https://doi.org/10.1016/j.tate.2018.06.004>.
- 8 **Kabachenko T.S.** **Psichologiya v upravlenii chelovecheskimi resursami** [Psychology in Human Resource Management]. SPb.: Piter, 2003, 400 p. (In Russian).
- 9 **Zarickaya A.Yu.** **Stressoustojchivost' kak psihologicheskij fenomen** [Stress resistance as a psychological phenomenon]. *Sbornik statej mezhdunarodnoj nauchno-prakticheskoy konferencii «Vklad psichologii i pedagogiki v sociokul'turnoe razvitiye obshhestva»*, Kazan, OOO «OMEGA NAUKA», 2017, pp. 55-57. (In Russian)
- 10 **Shhurkova N.E.** **Pedagogicheskaya tehnologiya** [Pedagogical technology]. Moscow, Pedagogicheskoe obshhestvo Rossii, 2002, 224 p. (In Russian)
- 11 **Nalichaeva S.A.** **Psichologiya stressa** [Psychology of Stress]. Sevastopol, 2018. (In Russian)
- 12 **Berezin F.B.** **Psichicheskaya i psihologicheskaya adaptaciya cheloveka** [Mental and psychological adaptation of an individual]. Leningrad, Nauka, 1988, 270 p. (In Russian)
- 13 **Vasserman L.I., Shchelkova O.Yu.** **Medicinskaya psihodiagnostika: teoriya, praktika, obuchenie** [Medical psychodiagnostics: theory, practice, and training]. Moscow, Akademiya, 2004, 725 p. (In Russian)
- 14 **Marishchuk V.L., Evdokimov V.I.** **Povedenie i samoregulyaciya cheloveka v usloviyah stressa** [Human behavior and self-regulation under stress]. Saint Petersburg, Sentyabr', 2001, 260 p. (In Russian).
- 15 **Fopel K.** **Psichologicheskie gruppy': Rabochie materialy' dlya vedushchego** [Psychological groups: Work materials for the facilitator]. Moscow, Genesis, 2007, 211 p. (In Russian)
- 16 **Kasyanova E.I.** **Teoreticheskij analiz kommunikativnoj tolerantnosti** [Theoretical analysis of communicative tolerance]. *Ucheny'e zapiski ZabGU*, 2014, vol. 4(57), pp. 28-34. (In Russian)
- 17 **Brittle B.** **Coping strategies and burnout in staff working with students with special educational needs and disabilities.** *Teaching and Teacher Education*, 2020, vol. 87. <https://doi.org/10.1016/j.tate.2019.102937>.

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UDC 373.1

IRSTI 14.01.21

<https://doi.org/10.52269/NTDG2542160>

DIGITALIZATION OF THE EDUCATIONAL PROCESS AS A FACTOR IN THE DEVELOPMENT OF PROFESSIONAL COMPETENCE OF FUTURE EDUCATIONAL PSYCHOLOGIST IN KAZAKHSTAN

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This article addresses the challenges and prospects in training future educational psychologist within the context of digitalization in education. The study explores current theoretical perspectives on education's digital transformation and the professional skills needed for upcoming teacher-psychologists. It identifies the issues and essential competencies required for these professionals to thrive in a digitalized environment, as well as providing methodological recommendations for incorporating digital technologies into the training process of teacher-psychologists. The study found that students show a significant discrepancy between expectations and the quality of training provided in the field of digitalization, moreover, they need additional hours, practical exercises and specialized courses to improve their digital literacy and readiness to work in the conditions of digital transformation. The experts in their interviews point out that the digitalization of the educational process has a significant impact on the training of future educational psychologist and argue that students and current psychologists need to develop skills in working with digital tools, data analysis and digital content creation. Identify the main challenges and recommendations. On these conditions developed a methodology for the development of competencies in future educational psychologist, taking into account the digitalization of the educational process as a leading factor. The effectiveness of the methodology is confirmed by the results of the experiment, as in the experimental group there was a significant improvement in all the studied parameters that determine the level of professional competencies of future educational psychologist through the development of digital knowledge and skills.