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THE EMOTIONAL NATURE OF ADOLESCENTS' COGNITIVE ACTIVITY

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Abstract. The article discusses the emotional nature of cognitive activity. Experiments conducted with adolescents to clarify this issue are described. It is shown that during adolescence, cognitive processes that are not regulated by emotions cannot sustain their continuity for long periods. Researchers' approaches to this issue vary and these approaches clarify the connection between emotion and cognitive activity, highlighting its negative and positive aspects. Reviewing these studies enables the understanding of the emotional nature of cognitive activity in adolescents, as emotion serves as an essential and significant stimulus for cognitive activity. The article interprets the methods applied in age-differentiated groups of adolescents and their outcomes. Tasks given to participants reveal adolescents' ability to manage and regulate emotional influences in cognitive activity. It was determined that the primary causes of emotional arousal in adolescents' cognitive activity are related to the patterns of psychological age and individual characteristics. Nonetheless, social factors significantly affect their emotional domain. Interestingly, adolescents demonstrate their ability to acquire scientific knowledge in various subjects and solve complex tasks through summative assessments. However, they struggle to fully comprehend their individuality and personal qualities. They are not yet capable of sufficiently using their willpower to manage educational actions independently of emotional influences. These contradictions in the impact of emotional processes on cognitive activity create significant challenges for adolescents. All of these are associated with self-discovery and self-determination efforts arising from the age crisis, curiosity about new emotional impressions and instability in those interests. The article also identifies factors contributing to the lack of effective emotional regulation of adolescents' cognitive activity during the educational process. Examples include confusion in assigning and solving tasks, difficulties in comprehending tasks, recognizing new concepts and selecting necessary mental constructs. Other factors include the mismatch between self-assessment and academic evaluations.

Key words: educational activity, cognitive activity, assessment, emotion, willpower, motivation, self-regulation.

Introduction. The organization of adolescents' cognitive activity during the educational process is a complex issue both theoretically and practically. On one hand, the emotional state caused by the adolescent crisis and on the other, the encounter with new subjects and educational loads in school make this complexity even greater. For this reason, extensive research is dedicated to this problem in psychology. The purpose of this study is to identify existing difficulties and develop appropriate recommendations. For this purpose, various projective methods and survey tests were used in adolescent groups and the results were analyzed and summarized.

Degree of study of the problem. The problem addressed in the article has been studied from various aspects by researchers such as U. Neisser, R.S. Lazarus, R.J. Sternberg, A.A. Alizadeh, R. Jakobson, E.J. Kim, J. John, S.K. Park, N.Y. Karamova, A.N. Gusev, N.N. Volkova and others. These studies analyze the impact of sexual maturity, emotional tension and emotional safety in the educational environment on adolescents' cognitive activity. During the application of methods designed to study adolescents' emotional states in educational activities, it becomes possible to determine their emotional state and identify ways to reduce their tension.

Purpose and tasks. The purpose of the research is to study the content of emotions influencing adolescents' cognitive activity during the educational process organized with them. The tasks of the research include:

1) Studying the theoretical foundations of the problem;
2) Identifying emotional influences that can stimulate adolescents in cognitive activity;
3) Clarifying the positive aspects of these emotional influences;
4) Determining the content of the emotional environment that stimulates adolescents' cognitive activity during the educational process.

Methods. The research utilized theoretical analysis, tasks to determine the levels of emotional control over cognitive activity in adolescents during the solution of educational tasks, the "Determination of anxiety level" survey, Y.S. Ibadov's "Abstract compositions" test and B. Phillips' "School anxiety and emotional regulation of mental reasoning" tests.

Discussion. Although precise facts about the cognitive determinants of emotions have not yet been established, the idea that cognitive operations influenced by emotions and recorded in the brain are already emotionalized operations is widely accepted. For this reason, adolescents' cognitive activity is approached not only as the product of rational knowledge but also as a complex process influenced by emotions, directing their creative potential into this activity. This process can be described based on modern theories.

This phenomenon is known in NLP theory as "the release of tension from stress." In the school's physics curriculum, information about "Ohm's Law" is provided. The German physicist G. Ohm (1787–1854) experimentally proved that in a metal conductor (wire) without the involvement of any external force, the strength of the electric current flowing through it is proportionally distributed across the ends of the conductor: I = U/R, where I is the current strength, U is the electric voltage and R is the electrical resistance of the conductor. The essence of the law is as follows: every metal contains free electrons within it. These electrons have a resistance force against external influences. When an electric current is passed through the metal, the following occurs:

“1. Along with the current, an F electric force directed opposite to the force acting on the metal's electrons also affects them.

2. The free electrons within the metal move in the same direction as the current and the electric force.

3. As a result, not only the electric force applied to the conductor but also the free electrons move in the same direction as the current” (Amrahlı, 2009, p. 74–75).

In 1966, radio engineer H. Silva from Texas introduced this law into psychology, enhancing its practical achievements. Using Ohm’s law, the processes occurring in the human brain and mind during visualization were explained. The same law applies to the interaction between cognitive activity and emotions. Once a person begins to think and act based on those thoughts, emotions, as the locomotive of their internal energy, join this force and move alongside it.

To clarify the issue, let us focus on the theses of several cognitive theories about emotions. Cognitive theories of emotions elucidate how cognitive activity is emotionally regulated and the role of cognitive processes in the emergence of emotions. According to U. Neisser (Neisser, 1967, p. 351), R.S. Lazarus (Lazarus, 1991, p. 819-837), R. Jakobson (Jakobson, 1964, p. 21-42) and others, the integrative functions of adolescents' brain centers are responsible for attention, memory, emotion and, overall, the associative connections of cognitive activity. During psychosomatic and affective disorders, these connections weaken or are significantly disrupted.

A creative, heuristic, or emotional approach to cognitive activity does not diminish its seriousness. Renowned researchers confirm this as well. For example, R.J. Sternberg and K. Sternberg, researchers of cognitive activity, state: “Heuristics do not always lead to wrong judgments or poor decisions. Indeed, we use these mental shortcuts because they are so often right. Sometimes, they are amazingly

simple ways of drawing sound conclusions. For example, a simple heuristic, take-the-best, can be amazingly effective in decision situations" (Sternberq, 2012, p. 533).

A.A. Alizadeh (Alizadə, 2009, p. 576), M.P. Jakobson (Jakobson, 1964, p. 21-42), N.Y. Karamova (Kim, 2020, p. 121-130) and others pay special attention to the role of emotions in adolescents' educational activities. According to these researchers, the influence of emotions on adolescents' cognitive activity stems from the change in their leading activity. The transition of leading activity in adolescents to personal-intimate relationships strengthens the connection between cognitive activity and the emotional domain. N. Y. Karamova comments on the link between cognitive processes and the emotional domain in adolescents as follows: "The obtained results demonstrate the characteristics of the influence of emotional tension on the psychophysiological processes of healthy and oligophrenic adolescents depending on the level of individual personality development. Unlike healthy adolescents, oligophrenics do not develop a response reaction to emotionally tense situations. At the same time, the actualization of cognitive processes depends on individual characteristics and the level of mental development, as well as functional interrelations. The results prove that the actualization of cognitive processes depends on the optimal level of emotional tension" (Keremova, 2011, p. 4).

Deep analyses conducted by E.J. Kim, J. John, S.K. Park and others also examine these facts: "Despite significantly faster reaction times during the emotional empathy task, the adolescent group showed greater activity levels in brain regions related to emotional empathy when compared to the adults. Interpreting this finding requires the consideration of two points" (Kim, 2020, p. 121-130).

Although emotions are not regulated by cognitive components, they can be cognitive in nature in terms of content. For example, through the power of effort, the cognitive activity delayed under the influence of negative emotions can become reactivated. During decision-making, past impressions differ in their emotional tone along with other characteristics when selected from memory materials.

In many emotional-cognitive theories, the intensity and nature of the emotional state that arises during cognitive activity are also associated with empathy. The cognitive theory of emotions authored by M. Arnold and R. Lazarus provides a clearer explanation of this phenomenon. These theories show that, in many situations, emotions actually play the role of determinants of cognition and serve as intuitive evaluations. Like actions, emotions are also based on this evaluation. R. Lazarus does not view affective reactions merely as impressions. For him, emotion is more of a syndrome in nature. This syndrome encompasses three main groups of symptoms: subjective impressions, physiological changes and movement reactions. R. Lazarus believes that an emotional reaction reflects some syndrome, one of its components, or an internal stimulus. In this regard, two main theses are proposed in R. Lazarus's concept:

1) Not every emotional reaction fully expresses its content

2) The thought or knowledge expressed through an emotional state may not necessarily be the complete opposite of that emotion (Lazarus, 1991, p. 919-837).

Although the characteristics of such emotional states in adolescents are extensively explained, there are few effective and optimal ways to eliminate them. As emphasized in the approaches of P.M. Jakobson, a researcher of emotions during adolescence: "Of course, we are discussing only a small aspect of the problem here. Regarding behaviorism, the emotional reactions of humans are explained as being accepted based on their strength, organization, or disorganization. The adequacy of an emotional reaction is based on the precision of orientation in life circumstances" (Jakobson, 1964, p. 21-42).

The issue we aim to clarify here is to determine the psychological causes of inhibitory and distracting effects on adolescents' emotional-cognitive activity and to identify appropriate correction methods. For this purpose, in addition to traditional measurement methods, alternative approaches were also applied. To test these ideas experimentally, research was conducted using the following methodology.

Adolescents aged 10-13: Grades V-VII.

1. The "Abstract compositions" projective test
2. The "Determination of anxiety level" survey for adolescents
3. Tasks to determine levels of emotional control over cognitive activity in adolescents during the solution of educational tasks.

Adolescents aged 14-15. Grades VIII-IX.

1. The “Abstract Compositions” projective test.
2. Biman Phillips’ “School anxiety” test.
3. The “Emotional regulation of mental reasoning” test.

Since clarifying the emotional content of cognitive activity is challenging, we first turned to the methods of alternative psychology. Using Y.S. Ibadov's "Abstract compositions" test, we diagnosed adolescents' emotional-cognitive sphere. The test was developed by Y.S. Ibadov in 1999 with the help of a psychogram and successfully applied in schools in the Narimanov and Yasamal districts of Baku from 2001 to 2003. The essence and diagnostic and corrective significance of the test are extensively explained in the source.

Our primary goal in applying the test was to analyze the emotional state of the participants by examining the volume of colors and their interrelation in the compositions through laboratory analysis. The results of the participants involved in the testing were evaluated using a specially designed computer program. Through the application of the "Abstract compositions" test, it becomes possible to implement the psychoprophylaxis, psychodiagnostics and psychocorrection of artistic creativity abilities by properly directing mental energy. This includes studying the sensitivity and impact strength of emotions on the psyche, managing actions, properly directing activities, improving visual acuity, expanding the field of vision, strengthening visual memory, enhancing emotional resilience and developing abstract thinking and creative imagination. The "Abstract compositions" test was applied to all participants aged 10–15.

For now, we will analyze the results of adolescents aged 10–13. These results were summarized based on laboratory analyses and percentage indicators of colors. Let us examine the results of 10 participants selected from each age group. According to the results, adolescents aged 10–11 and 11–12 from School No. 285 predominantly chose warm colors. Although differences were minimal, pupils in grades V and VI were more likely to select yellow, red, light green, orange and pink when completing the test. In contrast, 12–13-year-olds showed a preference for cool colors at a rate of 3.92%.

We also compared the results with the adolescents' summative assessments. It can be stated that no clear correlation was found between the choice of colors in abstract compositions and grades in any age group. On the contrary, some adolescents with grades of 3 produced more meaningful and complex compositions than those with grades of 4 or 5. Such dependency was observed in gender differences, where girls showed a greater preference for warm colors compared to boys.

In the study, we aimed to determine whether adolescents' emotional states changed due to natural characteristics or educational situations. For this purpose, we conducted work based on the "Methodology for determining the emotional nature of adolescents' cognitive activity" in grades V and XI of both schools using a selected sample. Subsequently, we conducted the "Determination of anxiety level" survey to assess the emotional regulation of activity during the solution of educational tasks in grades V–VII. The results were summarized based on scores.

In both control and experimental groups, the highest anxiety level was recorded at ages 12–13: 38.09% in the control group and 33.33% in the experimental group. These are Grade VII pupils. It should be noted that in the experimental groups, the levels were the same for both ages 11–12 and 12–13. Considering that the testing was conducted during the second half of the academic year, this predominantly corresponds to the second phase of age 12. In developmental psychology, the most intense phase of the adolescent crisis coincides with ages 12–13. Therefore, the primary reason for the develop-

ment of anxiety at this level should be sought not in social factors but in the regularities of psychological age. The lowest anxiety level, on the other hand, was observed at ages 10–11, corresponding to Grade V. Since they are still in the initial phase of the crisis, these results are natural. Based on Table 3, we can observe the differences in the impact of anxiety on adolescents' cognitive activity by age.

During the research period, the pedagogical-psychological environment of the school was analyzed and it was determined that the main reason for this was related to social factors. Based on the tasks given to Grades V, VI and VII, we clarified the abilities of pupils to manage and regulate the influence of emotions in their cognitive activity during problem-solving.

Table 1

Results of the "Determination of anxiety level" survey by age

Ages	Levels							
	High Anxiety		Moderate Anxiety		Low Anxiety		Total	
Control classes	Person	Percentage	Person	Percentage	Person	Percentage	Person	Percentage
10–11 years – Grade V	5	25,00 %	11	55,00 %	4	20,00 %	20	100 %
11–12 years – Grade VI	6	31,57 %	10	52,63 %	3	15,78 %	19	100 %
12–13 years – Grade VII	8	38,09 %	10	47,61 %	3	14,28 %	21	100 %
Results by classes	19	31,67 %	31	51,66 %	10	16,67 %	60	100 %
Experimental classes								
10–11 years – Grade V	2	13,33 %	10	66,66 %	3	20,00 %	15	100 %
11–12 years – Grade VI	5	33,33 %	8	53,33 %	2	13,33 %	15	100 %
12–13 years – Grade VII	6	33,33 %	7	38,88 %	2	11,11 %	18	100 %
Results by classes	13	27,08 %	25	52,08 %	7	14,58 %	48	100 %
Overall results	32	30,47 %	56	53,33 %	17	16,19 %	105	100 %

Table 2

Levels of emotional control in cognitive activity among adolescents aged 10–13

Ages	Levels							
	High level of emotional control		Moderate level of emotional control		Low level of emotional control		Total	
Control classes	person	percentage	person	percentage	person	percentage	person	percentage
10–11 years – Grade V	7	35,00 %	8	40,00 %	5	25,00 %	20	100 %
11–12 years – Grade VI	6	31,57 %	9	47,36 %	4	21,05 %	19	100 %
12–13 years – Grade VII	7	33,33%	8	38,09 %	6	28,57 %	21	100 %
Results by classes	20	33,33 %	25	41,66 %	15	25,00 %	60	100 %
Experimental classes								
10–11 years – Grade V	5	33,33 %	10	66,66 %	5	33,33 %	15	100 %

Continuation of the table 2

11–12 years – Grade VI	4	26,66 %	5	33,33 %	6	40,00 %	15	100 %
12–13 years – Grade VII	5	27,77 %	5	27,77 %	8	44,44 %	18	100 %
Results by classes	14	29,16 %	20	41,66 %	19	39,58 %	48	100 %
Overall results	34	32,38%	45	42,85 %	34	32,38 %	105	100 %

In solving the tasks, the main requirement was to adhere to the set time and ensure accuracy. Adolescents aged 12 achieved the highest results in this task. It appears that their age allowed them to demonstrate their cognitive abilities in solving the given tasks. Although class differences were minimal, the results from the Jalair village school were still superior in certain respects.

Significant differences were identified between the anxiety levels and emotional control over cognitive activity in adolescents aged 10–13. According to the results of this task, the highest level of control was 33.33% at School No. 285, compared to 29.16% at the Jalair village school. However, the lowest level of control was 11% higher in the Jalair school. The moderate level was 3.57% higher at School No. 285. Interestingly, the academic performance of the control school had previously been lower in our studies.

Now, let us examine the emotional regulation of cognitive activity in adolescents aged 14–15 (Grades VIII and IX) using methods suited to their age levels.

3.1. Y.S. Ibadov's "Abstract compositions" projective technique.

According to the test instructions, a 50/50 ratio of warm and cool colors indicates harmony in the emotional sphere. If warm colors dominate, this reflects an abundance of positive energy (masculine energy), while a dominance of cool colors indicates an excess of negative energy (feminine energy). When both colors are balanced, the regulation of cognitive activity becomes easier. It is also noted that the quantity of colors does not necessarily correlate directly with adolescents' academic performance; it might or might not.

It is evident that adolescents with higher grades do not always exhibit moral, ethical, psychological, or other personal qualities in alignment with their scores. Here, the discussion revolves around the individual's inner harmony, life energy and the positive direction of their goals and thoughts. According to the test results, the outcomes for 14- and 15-year-olds were similar to those of 13-year-olds. They also showed a preference for cool colors. Girls predominantly chose warm colors, whereas differences in the preference for cool colors among 15-year-olds were 15.48%, mainly due to boys' results. As a result, the dominance of cool colors in adolescents was evident, with the following sequence of preferences: green, blue, purple, black and chestnut. In warm colors, the preferences were: red, yellow, orange and pink. The following observations were commonly noted:

1) Apathy, boredom and a search for distractions caused by unengaging educational conditions that failed to create a positive emotional mood (e.g., playing with phones or other devices, working on tasks from other lessons, chatting with peers, gazing out the window, resting one's head on the desk, arguing with the teacher and more).

2) Anxiety, confusion, shyness, anger and other emotional states arising from tense situations where role behaviors were not met.

Each of these emotional states creates various inhibitory challenges for adolescents' cognitive activity. In educational situations where motivation was lacking, problems were not clarified, hypotheses were not proposed and research questions were not addressed, the situation worsened. On the contrary, in lessons structured with interactive and creative methods, emotional comfort, security and initiative were observed. Activities such as asking questions, participating in discussions, searching

for solutions, proving the validity of their opinions and striving to achieve goals were more evident. These aspects were also reflected in the pupils' cognitive activity.

Such situations were partially observed in the Grade VI "a" class at School No. 285 and in Grades V and VIII at the Jalair village school.

3.4. Biman Phillips' "School Anxiety" test.

This test was developed to study the fear of school and the anxieties caused by school-related events in young and middle-school-aged pupils. It consists of 58 survey questions and can be conducted orally or in written form. Each question is answered with "Yes!" or "No!" If 50% of the responses do not match the key, it indicates heightened anxiety and if 75% or more responses do not match, it indicates a very high level of anxiety. Based on the results, the following factors contributing to anxiety are identified.

Table 3

Results of B. Phillips' "School Anxiety" test for School No. 285

No.	Factors	Grade VIII – 23 participants		Grade IX – 25 participants		Total – 48 participants	
		p.	%	p.	%	p.	%
1.	General anxiety related to school	0	0	2	8,00%	2	4,16%
2.	Social stress experienced at school	3	13,04 %	5	20,00%	8	16,66%
3.	Need for achievement	4	17,39 %	2	8,00%	6	12,50%
4.	Fear of being unable to express oneself	3	13,04 %	2	8,00%	5	10,41%
5.	Situations of knowledge assessment	3	13,04 %	4	16,00%	7	14,58%
6.	Fear of not meeting expectations	5	21,73%	3	12,00%	8	16,66%
7.	Weak resistance to stress	3	13,04 %	2	8,00%	5	10,41%
8.	Conflicts with teachers	2	8,69%	5	20,00%	7	14,58%
Overall anxiety		23	100%	25	100%	48	100%

Significant levels of anxiety were identified in participants from School No. 285 based on the results of B. Phillips' test. Various situations arising at the school caused anxiety in the majority of adolescents aged 14–15. Among the 48 participants, anxiety was recorded for 2 to 5 adolescents across different criteria for each of the 8 metrics.

Table 4

Results of B. Phillips' "School anxiety" test for Jalair village secondary school

No.	Factors	Grade VIII – 15 participants		Grade IX – 15 participants		Total – 30 participants		Overall results	
		p.	%	p.	%	p.	%	285	Jalair
1.	General anxiety related to school	0	0	0	0	0	0	4,16%	0
2.	Social stress experienced at school	1	6,66%	1	6,66%	2	6,66%	16,66%	6,66%
3.	Need for achievement	3	20,00%	4	26,66	7	23,33%	12,50%	23,33%
4.	Fear of being unable to express oneself	3	20,00%	1	6,66%	4	13,33%	10,41%	13,33%
5.	Situations of knowledge assessment	3	20,00%	2	13,33%	5	16,66%	14,58%	16,66%
6.	Fear of not meeting expectations	4	26,66%	5	33,33%	9	30,00%	16,66%	30,00%
7.	Weak resistance to stress	1	6,66%	2	13,33%	3	10,00%	10,41%	10,00%
8.	Conflicts with teachers	0	0	0	0	0	0	14,58%	0
Overall anxiety		15	100%	15	100%	30	100%	100%	100%

At School No. 285, the highest indicator was "Fear of not meeting expectations" (8 participants – 16.66%) and "Situations of knowledge assessment" (7 participants – 14.58%). The results of Jalair Village School were better than those of School No. 285. No cases of "General anxiety related to school" or "Conflicts with teachers" were recorded at Jalair Village School. The highest anxiety-inducing factors at this school were "Fear of not meeting expectations" (9 participants – 30%) and "Unfulfilled need for achievement" (7 participants – 23.33%). The lowest result was for the factor "Social stress experienced at school."

Subsequently, we compared the results of both schools (Figure 3.2.4). The figure clearly shows that stress factors and the anxiety arising from them were at a lower level in Jalair Village School. Overall, the factor that caused the highest anxiety among participants was "Fear of not meeting expectations" (16.66% at School No. 285 / 30% at Jalair School). This was followed by "Unfulfilled need for achievement" (12.50% at School No. 285 / 23.33% at Jalair School).

Interestingly, while adolescents prove their ability to acquire scientific knowledge in various subjects and solve complex tasks through summative assessments, they still struggle to fully understand their individuality and personal qualities, as well as to use willpower to manage their actions independently of emotional influences. These contradictions between volitional and emotional processes create significant difficulties for adolescents. This is associated with the self-searching and self-determination efforts arising from the age crisis, curiosity about new emotional impressions and the instability in those interests.

3.5. "Emotional Regulation of Mental Reasoning" test.

Participants carefully listen to reasoning and the conclusions derived from them. Some conclusions are correct, while others are incorrect. Participants must identify the correct and incorrect conclusions and record their answers on small cards provided to them. According to the rules, each participant in group testing is given one card. At the top of the card, participants write their first and last names and their class. Each answer is allocated one line. Corrections, rewriting, or erasing on the cards is not allowed.

Table 5

Assessment criteria for the "Emotional regulation of mental teasoning" test

Number of mistakes	Points	Emotional-logical levels of cognitive activity
0	5	High emotional-logical level of cognitive activity
2-3	4	Moderate emotional-logical level of cognitive activity
4-6	3	Low emotional-logical level of cognitive activity

Each task is allocated 10 seconds for consideration. The mental conclusions related to judgments 1, 3, 5, 7, 9 and 11 are incorrect, while all other mental conclusions are correct. The results are described in the table below. The results of the "Emotional regulation of mental reasoning" test indicate differences in percentage indicators between the two schools. Participants with a high level from School No. 285 were 7.5% higher than those from Jalair School. Conversely, in the moderate level, School No. 285 showed a 5.42% higher percentage. Those rated as weak were similar in both schools.

The results of the "Emotional Regulation of Mental Reasoning" test reveal that among 78 adolescents aged 14–15, 14 individuals (17.94%) either do not think at all or cannot think about the main ideas in the tasks given to them. Their mental constructions are poorly formed and emotional control over cognitive processes is weak. As a result, their emotional-logical level of cognitive activity was rated as "low."

For 39 individuals (50%), these processes were managed at a moderate level, while 25 individuals (32.05%) demonstrated a high level of control. If the participants had experience in effectively utilizing their internal capacities and regulating their cognitive activity emotionally, the results could have been even better.

Table 6

Results of the "Emotional regulation of mental teasoning" test

Schools	Classes	Emotional-logical levels of cognitive activity						Total	
		high		moderate		low			
		p.	%	p.	%	p.	%	p.	%
School No. 285	Grade VIII	6	26,08%	12	52,17%	5	21,73%	23	100%
	Grade IX	8	32,00%	13	52,00%	4	16,00%	25	100%
	Sum	14	29,16%	25	52,08%	9	18,75%	48	100%
Jalair Village School	Grade VIII	5	33,33%	7	46,66%	3	20,00%	15	100%
	Grade IX	6	40,00%	7	46,66%	2	13,33%	15	100%
	Sum	11	36,66%	14	46,66%	5	16,66%	30	100%
Total		25	32,05%	39	50,00%	14	17,94%	78	100%

The analysis allowed us to conclude that the regulation of adolescents' cognitive activity in the educational process significantly depends on the state of their emotional-volitional domain. This dependency is characterized by the fact that the majority of those rated as "low" also had poor academic grades. Delays in the development of their needs, lack of motivation in their activities and incompleteness in their cognitive activity were noted.

Conclusions. The primary challenges in the effective emotional regulation of adolescents' cognitive activity during the educational process arise from the weakness of key regulating factors—inclinations, needs and interests. Additionally, insufficient development of the emotional domain according to psychological age and difficulties in preventing anxiety and distress while performing tasks are among these factors. Another issue contributing to the ineffective emotional regulation of cognitive activity during the educational process is confusion experienced by some participants when tasks are assigned or solved, as well as difficulties in comprehending tasks, recognizing new concepts and selecting the necessary mental constructs. Furthermore, the discrepancy between self-assessment and academic evaluation was another reason complicating the emotional regulation of adolescents' cognitive activity. Based on the facts observed during the study, we believe it is necessary to explore the correlation of self-assessment with other indicators.

The dependency between adolescents' emotional state and the effective regulation of cognitive activity is influenced by numerous factors. The most significant include how emotionally stable and resilient adolescents are and how confident they feel about their social roles. Another key factor is their ability to regulate cognitive activity appropriately in relation to the requirements set by tasks. Additionally, the construction of high-level mental constructs within the cognitive domain is also essential. The emotional nature of adolescents' cognitive activity primarily manifests as an individual characteristic. This nature, on one hand, reflects their temperament type and on the other, the emotional tone of the cognitive system as a whole, combined with willpower, shapes the cognitive style in their activity.

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