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Students' Self-esteem and Self-attitude as Factors Influencing the Experience of Cognitive States during an Exam

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Abstract

The study is devoted to self-regulation of various individual psychological parameters in the context of secondary and higher education. The role of the "self" system in the process of formation and stabilization of personal psychological comfort remains undeniable. One of the psychological and pedagogical problems in assessing students' knowledge within the framework of a current educational process and, especially during an examination period, is high stress due to information and psychological overload. In particular, exam stress affects cognitive performance of students, and this, in turn, can significantly influence the outcome during examinations.

This article describes a study of the impact of self-esteem of psychological characteristics (directly related to perception, understanding, memorizing of new information in the context of the educational process) and factors of self-attitude (as structures of human Self-system) on students' memories of cognitive and emotional states experienced during the examination process.

During the study, testing and questioning methods were used. The results of the study indicate the existence of certain general psychological mechanisms of the impact of the Self-system structures on the regulation of cognitive and emotional states of students in a situation of knowledge assessment. The results can be useful in developing more effective ways to test the quality of knowledge among high school and university students, without the threat of experiencing stress that harms both psychological and physical health. The results of the study can be used as an addition to already existing theoretical data in the field of self-regulation of cognitive and emotional states. They can also serve as the basis for the development of practical recommendations for students to more successfully pass the examination tests, taking into account individual psychological characteristics.

Keywords: cognitive states, students, exam, self-esteem, self-attitude, relationship.

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Introduction

The problem of overcoming exam stress, which is both a psychological and pedagogical issue, has probably existed since examinations appeared. The future of not only applicants entering a particular educational institution, but also students who have already entered a university, largely depends on the success of passing exam tests. Successful education at a higher educational institution and getting high exam results are the factors which help to increase self-esteem of a future specialist, improve general psychological health and create a constructive self-image providing confidence in one's own competitiveness in a chosen professional sphere.

The range of possible spheres which influence the general affective and cognitive state of students seems as vast as their own individual psychological characteristics. It is known that there is always a part of subjectivity in assessing any life situation by a person. As a result, excessively stressful matter for one student may not cause destructive stress-related feelings in another. The general psychological approach allows us to detect mechanisms that can influence stress resistance of a particular subject in a particular situation of educational activity. This approach is used to study a structure of the correlation of mental states and experiences (which arise in the process of cognitive activity, in particular, in the process of learning), and individual psychological characteristics of student's personality.

The subjective perception of an exam is certainly the leading factor affecting a general mental state of a student. But one cannot ignore external objective conditions, such as a general context of the examination test. So, for example, if we talk about passing a Unified State Exam (USE) by high school students, then in this situation there is more uncertainty in the future, in comparison with an exam situation at a university, when a person has already become a student. Firstly, high school students, passing the USE, are not yet sure whether they get the results necessary for entering an educational institution which they have chosen. Moreover, some school graduates cannot decide on their future profession until the end of the school year and pass the exam as required. Secondly, the assessment of the ESU results is not connected in any way with the personality of a particular teacher, since the assessment is set by an expert commission. On the contrary, a university student has already decided on his professional path and each exam is perceived by him not only in connection with the complexity and content of educational material under study, but also with the personality of a teacher, since usually an exam is taken by a teacher who was previously giving this study course.

Each success or failure during the examination tests become a part of a personal life experience. This experience also affects further perception of exams and assessment situations, and influences the level of

stressfulness of further exams. Fear of knowledge testing, and expectation of one's own negative experience in the future have a devastating effect on psychological and physical health. Previously outlasted negative experience arises diffidence and, as a result, suppression of constructive cognitive and emotional experiences. The result of all this is a decrease in the quality of results during the next examination, which adds negative memories to personal experience, which contribute to a formation of a self-image of a loser.

Thus, speaking about exams, we assume that successful or unsuccessful experience in passing exam tests can affect both students' self-esteem of their individual psychological characteristics and certain parameters of self-attitude. But, to a much greater extent, in our opinion, the way how a high school student or a university student perceives an exam and passes it is influenced, vice versa, by previously formed self-esteem and self-attitude, since in adolescence these are already quite stable personality characteristics.

The general psychological problem of the formation of a correlation structure between characteristics of a Self-system (self-esteem and self-attitude) and an affective-cognitive sphere of experiences during exams may be of interest not only to psychologists; the same attention can be paid to disclosure of certain mechanisms that can improve the quality of passing exams. This problem also directly affects teachers and physicians, since it is teachers who exercise control of knowledge acquisition by students and are interested in their good preparation. As for physicians, they often face the need to provide assistance to those who have experienced severe stress.

Purpose and objectives of the study

The purpose of the study is to conduct a comparative analysis of students' memories on a manifestation degree of the affective-cognitive sphere characteristics of experiences in various exam situations; the purpose is also to identify significant differences in a structure of correlations between the characteristics of students' self-esteem and self-attitude and their memories of previously experienced cognitive states in the context of the proposed situations. The hypothesis is the assumption that there are significant differences both in a manifestation degree of the affective-cognitive sphere characteristics (depending on a recalled exam situation), and in the structure of correlations between cognitive states and components of the Self-system that we are studying.

Literature review

Awareness by scientists of the need for a thorough study of the conditions experienced by people in the process of cognitive activity has appeared a long time ago. If we talk about the works of Russian scientists,

then Levitov (1964) considered this problem in the middle of the 20th century. Currently, many foreign and Russian researchers are engaged in cognitive states study. Among Russian researches, the works of Morosanova, Kondratyuk, Gaidamashko, and Voytikova (2018) are widely known. The monograph by Prokhorov (2012) is devoted to the phenomenology and self-regulation of cognitive states. The works of an entire scientific team of the Department of General Psychology of Kazan Federal University are devoted to studying the underlying mechanisms of self-regulation of mental states (Prokhorov & Yusupov, 2016; Valiullina & Chernov, 2017; Yusupov, Prokhorov, & Chernov, 2019; Prokhorov, Chernov, & Yusupov, 2019; Valiullina, 2019).

Within the framework of the Prokhorov's concept it is proposed to consider cognitive states as a general background of cognitive activity (Prokhorov, 2012). Cognitive states contribute to the structuring of the perception processes and awareness of an educational situation where there occur acquisition, perception, analysis and assimilation of new information. A number of cognitive states are also actualized during assessment of the quality of new information acquisition. It is known that emotional experiences accompany any cognitive activity of a person. This is especially true for stressful situations, for example, such as assessment of the quality of information acquisition during a study process. That is why inextricably linked emotional and cognitive aspects of experiences which occur during a learning process are often called an affective-cognitive sphere of experiences.

According to Leontiev (1983), when speaking about the personality of a human, scientist, foremost, imply the ability to live through one's own "Self". "Self" is considered as a center of self-awareness and self-regulation. Without "Self", the process of comprehension the world is impossible. "Self" is an extremely complex holistic system. The concept of "Self-system" is often used in modern scientific literature as a synonym for "Self-concept." Agapov (2013) considers the Self-concept as "an integrative system of personal semantic education, which includes, in generalized quality (at different levels and in varying degrees), the integral of personal basic life attitudes and specific ways of their realization, expression and manifestation".

There is large number of studies devoted to the research of the Self-structures of a subject. Self-esteem and self-attitude, along with other structural personality formations are components of a Self-system. This is noted by Borozdina (1992) and later Bolotova (2006), assuming that self-esteem, as well as self-image and self-attitude, is only a part of a holistic Self-system.

Self-esteem, along with knowledge about oneself, includes assessment of one's own abilities, behavior in various situations and moral qualities. Zakharova and Tagieva (1986), considering self-esteem as a complex system design, speak of its multi-level hierarchical structure.

Astretsov (2015) mentions that numerous studies of self-attitude have not yet led to creation of an integrated approach that could combine all studies on this problem into a single entity. One of the first Russian psychologists interested in the problem of self-attitude was Stolin (1983). Following him, Pantileev (1993) distinguished self-attitude as a kind of a personal generalized feeling addressed to oneself (to one's own "Self"). In our research, to study the characteristics of self-attitude, we used a self-attitude test questionnaire by Stolin and Pantileev (Glukhanyuk, 2005).

The general psychological approach to study characteristics of cognitive and emotional states experienced during educational activities and their correlations with various aspects of self-esteem and self-attitude allows us to detect different psychological mechanisms. Those mechanisms, influencing the studied structures of the Self-system, bring a change to a quality of examination results by self-regulation of affective cognitive sphere of experiences.

Methodology

The second-year students of the Institute of Philology and Intercultural Communication, Kazan Federal University, took part in the study. A total of 80 people were interviewed. All of them completed two questionnaires. The first questionnaire contained a list of cognitive and emotional states – 31 positions in total. The list of conditions included in the study is presented below (Table 3). The following indicators were attributed to cognitive states: 1, 2, 3, 4, 5, 7, 8, 10, 11, 26. In addition, 16 criteria were selected to be included in the questionnaire for self-assessment of personal characteristics (Table 2). Finally, the students' self-attitude was also studied using a test questionnaire by V.V. Stolin and S.R. Pantileev (Table 1). The tables below show the indicators of the study with the assigned serial numbers.

Table 1. Characteristics of self-attitude

32	multi-faceted self-attitude	35	expected positive attitude from
33	self-respect		others
34	self-sympathy	36	self-interest

Table 2. Psychological and physical characteristics necessary for successful training

37	mental abilities	45	responsibility
38	memory	46	determination
39	creativity	47	diligence
40	learning abilities	48	optimism
41	awareness	49	physical health
42	sincerity, openness	50	emotional health
43	patience	51	conviction of the need for a good education
44	independence	52	communication skills

To fill out the first questionnaire, students were asked to recall their personal experience and assess the degree of manifestation of cognitive and emotional states in three situations. The first situation is a Unified State Exam (USE), which should be taken by all high school students who have received secondary education. Students were asked to recall their conditions during this examination. The second situation is an exam at the university during an examination period, notably the exam which is perceived by students as easy, because educational material is not difficult to study or an examiner is a "kind person". The third situation - also an exam at the university during an examination period, but the exam which is perceived as complex, more stressful, because an examiner is considered to be "too strict and bitter-ender", or the amount of educational material for preparation is huge and difficult to understand. Students had to indicate the manifestation degree of the proposed conditions on a twelve-point scale (the more points are given, the more expressed the indicated condition is).

The second questionnaire consists of a list of various psychological characteristics and a point regarding self-assessment of physical health - 16 positions in total (Table 2). Students were also asked to evaluate own degree of expression of these characteristics on a twelve-point scale. But the context of various situations was not taken into account during self-assessment of these individual psychological characteristics.

Results

Empirical data are presented in tables (Tables 3-12).

Table 3. Comparative analysis of quantitative values of the affective-cognitive sphere indicators in students' experiences during various exam situations (with the Student t-criterion)

№		X-mean 1 situation	X-mean 2 situation	X-mean 3 situation	t 1 situation/ 2 situation	t 1 situation/ 3 situation	t 2 situation/ 3 situation
1	**thoughtfulness**	9.14	8.27	9.52	2.38*		-3.97***
2	**concentration**	9.39	8.19	9.78	3.31**		-4.66***
3	**enthusiasm for the examination process**	8.79	8.83	8.61			
4	**insight, sudden understanding**	8.13	7.61	7.09		2.79**	
5	**self-assurance (self-confidence)**	7.39	9.86	5.83	-7.50***	4.90***	12.55***
6	*surge of energy*	5.99	8.69	5.73	-5.98***		6.47***
7	**doubts in the answer correctness**	8.06	4.35	6.04	6.97***	4.10***	-3.52***

8	**misunderstanding of the question content**	4.91	2.78	4.97	4.80***		-5.70***
9	stupor	5.39	2.69	4.92	5.71***		-5.23***
10	**distraction**	5.31	3.27	5.12	4.47***		-4.21***
11	**boredom**	6.44	3.84	5.83	5.73***		-4.42***
12	disappointment	5.39	2.29	5.22	7.86***		-7.19***
13	*interest*	6.09	7.97	5.75	-5.06***		5.99***
14	*joy*	4.58	9.32	3.52	-10.84***	3.35**	13.09***
15	*pride*	6.01	6.64	4.86		2.57*	3.86***
16	*happiness*	4.95	7.55	3.77	-5.15***	3.44***	7.23***
17	*calmness*	4.21	9.30	3.81	-11.16***		11.27***
18	*surprise*	5.08	5.56	4.27		2.39*	2.73**
19	*curiosity*	5.44	6.31	5.08	-1.99*		3.13**
20	chagrin	5.69	1.95	5.55	9.31***		-9.00***
21	anger	4.43	1.55	4.18	6.71***		-6.15***
22	disgust	4.74	1.49	4.14	7.51***		-6.80***
23	contempt	3.97	1.53	3.71	6.21***		-6.02***
24	fear	8.04	3.26	8.16	10.36***		-12.34***
25	insult	3.82	1.88	4.45	4.34***		-6.21***
26	**disbelief in own abilities**	7.34	3.31	7.23	8.65***		-9.78***
27	guilt	4.77	2.01	3.49	5.91***	3.17**	-3.72***
28	repentance	3.97	1.91	3.19	4.66***	2.26*	-3.44***
29	distancing	6.01	2.74	5.68	7.53***		-6.95***
30	despair	5.71	2.30	5.65	7.64***		-7.66***
31	vexation	5.25	1.79	4.71	8.19***		-7.04***
	t≥1.992 p≤0.05 (*)			t≥2.624	p≤0.01 (**)	t≥3.423	p≤0.001 (***)

Also, various degrees of expression of cognitive and emotional experiences are reflected in the figures (Figures 1-3).

An analysis of the obtained data allows us to notice significant differences in manifestation degree of a number of cognitive states studied in various exam situations (Fig. 1). Among the cognitive states in whole, the most intense are thoughtfulness (X mean ≥ 8), concentration (X mean ≥ 8) and enthusiasm for the examination process (X mean ≥ 8). In case of an easy exam at the university, self-confidence is expressed very strongly (X mean = 9.86), and in a situation of passing USE, doubts in the answer correctness is strongly expressed (X mean = 8.06). It is interesting that the intensity of experiencing doubts in the correctness of solving the problem is much higher in the first situation than in the third one (a difficult exam at a university). However, self-confidence in the first situation is higher than in the third.
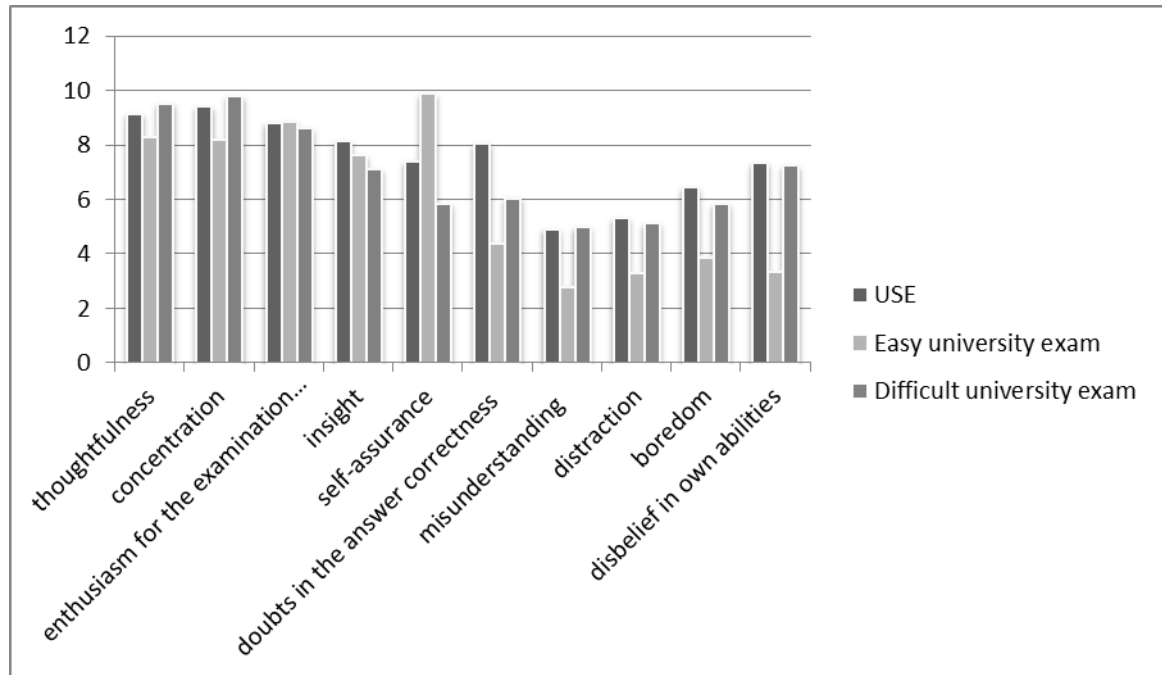
Figure 1. Manifestation degree of cognitive states in situations: "USE", "Easy university exam" and "Difficult university"

It is not surprising that in the second situation all emotionally colored experiences are more intense (Figure 2). Speaking about the first and third situations, then the process of passing the USE brought more joy, pride, happiness and surprise according to the memories of students, in comparison with a difficult university.

When it comes to negative emotionally colored experiences, we see that students experience fear much more strongly and, quite naturally, that all negative experiences are very little expressed in the second situation, when the exam seems easy. There are significant differences between the manifestation degree of guilt and repentance in the first and third situations. Students recall the USE as a situation that provokes these experiences to a greater extent.

In addition to a comparative analysis of the data (with the Student t-test,) a correlation analysis was carried out, which made it possible to compare the structure of correlations between the indicators of cognitive and emotional states, self-esteem and self-attitude in the three studied situations (Tables 4-12). P-values of

correlation are as follows: R≥0.22, p≤ 0.05; R≥0.29, p≤ 0.01; R≥0.37, p≤0.001. The tables show only correlation relationships with a high level of significance and only between the states and structures of the Self-system. Describing the correlation patterns, we remember that in reality there are reliable correlations both between the cognitive states themselves and between the characteristics of self-esteem and self-attitude. But considering the aim of the study, we describe only presented in the tables.
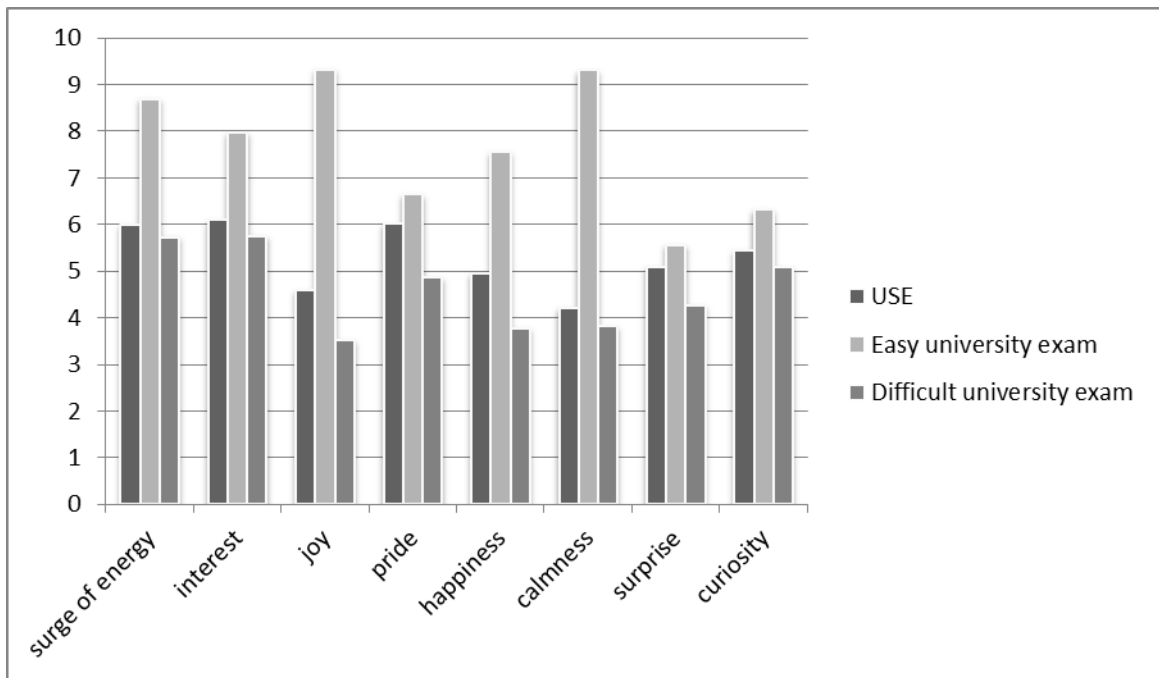

Figure 2. Manifestation degree of positive emotionally colored experiences in situations: "USE", "Easy university exam" and "Difficult university exam"
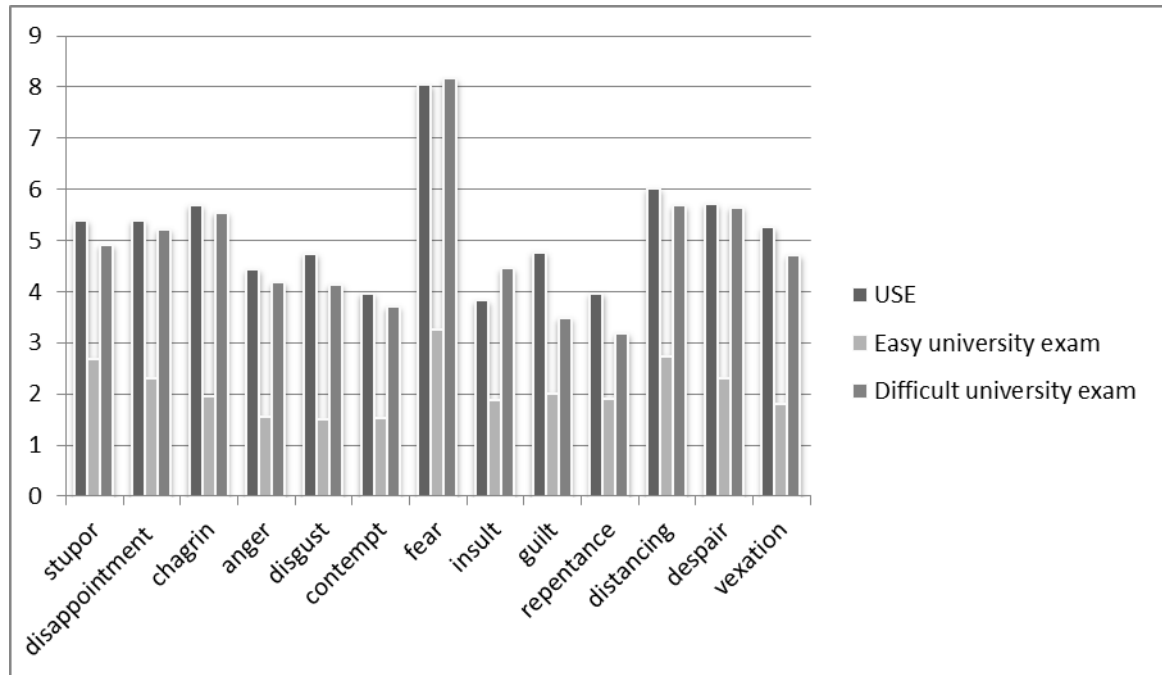
Figure 3. The severity of negative emotionally colored experiences in situations: "USE", "Easy university exam" and "Difficult university exam"

Thus, the state of thoughtfulness (1) in the first and third situations has direct correlations with the characteristics of self-attitude (Table 4). In the first situation, this state is affected by multi-faceted self-attitude (self-attitude in general) (32), self-respect (33) and expected positive attitude from others (35), while in the third situation there is a dependence only on expected positive attitude from others (35). In the second situation, the state of thoughtfulness does not correlate with self-attitude. There are differences in correlation of thoughtfulness with the characteristics of self-esteem: in the first situation a high self-esteem of learning abilities (40), optimism (48) and emotional health (50) intensifies a state of thoughtfulness; in the second situation, an increase in the state of thoughtfulness is associated with a high self-esteem of determination (46), diligence (47), emotional health (50) and communication skills (52); in the third situation, thoughtfulness directly depends on high self-esteem of mental abilities (37), learning abilities (40) and diligence(47).

Table 4. Correlation between the state of thoughtfulness and characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
1-32	0.31**	1-46	0.38***	1-35	0.32**
1-33	0.37***	1-47	0.31**	1-37	0.32**
1-35	0.32**	1-50	0.36**	1-40	0.46***
1-40	0.45***	1-52	0.31**	1-47	0.30**
1-48	0.32**				
1-50	0.31**				

The state of concentration (2) in the first situation is directly correlated to self-interest (36) (Table 5). In addition, there are direct connections with the self-esteem of learning abilities (40), openness (42), responsibility (45), and diligence (47). In the second situation, concentration is directly related only to self-interest (36) and self-esteem of emotional health (50). In the third situation, there is a direct correlation of concentration with several indicators of self-attitude: multi-faceted self-attitude (32), self-respect (33), expected positive attitude from others (35), self-interest (36).

Table 5. Correlation between the state of concentration with characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
2-36	0.30**	2-36	0.35**	2-32	0.38**
2-40	0.38***	2-50	0.36**	2-33	0.29**
2-42	0.37***			2-35	0.36**
2-45	0.131**			2-36	0.35**
2-47	0.42***			2-40	0.46***
2-48	0.33**			2-47	0.30**
2-49	0.34**				

The state of enthusiasm for the examination process (3) in the first situation has a direct correlation with the expected positive attitude from others (35), as well as direct correlation with self-esteem of learning abilities (40), openness (42), diligence (47), optimism (48), emotional health (50) (Table 6). In the second situation, enthusiasm has direct correlation with multi-faceted self-attitude (32), expected attitude from others (35), self-interest (36), as well as with the self-esteem of diligence (47), emotional health (50), conviction of the need for a good education (51), communication skills (52). In the third situation, enthusiasm is directly correlated to multi-faceted self-attitude (32), expected attitude from others (35), self-esteem of creativity (39) and learning abilities (40).

Table 6. Correlation between the state of enthusiasm for the examination process with characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
3-35	0.40***	3-32	0.31**	3-32	0.30**
3-40	0.38***	3-35	0.36**	3-35	0.35**
3-42	0.31**	3-36	0.36**	3-39	0.31**
3-47	0.40***	3-47	0.31**	3-40	0.31**
3-48	0.42***	3-50	0.33**		
3-50	0.42***	3-51	0.30**		
		3-52	0.29**		

The state of insight (4) both in the first and third situations does not have significant correlation values with the characteristics of self-attitude. In the second situation, this condition generally has no significant correlation values with self-esteem indicators (Table 7). In the first situation, there is direct correlation with the self-esteem of learning abilities (40), responsibility (45), diligence (47), emotional health (50), and communication skills (52). In the third situation, insight depends directly on self-esteem of learning abilities (40), diligence (47), and conviction of the need for a good education (51).

Table 7. Correlation between the state of insight, sudden understanding and characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
4-40	0.32**			4-40	0.32**
4-45	0.30**			4-47	0.30**
4-47	0.38***			4-51	0.30**
4-50	0.32**				
4-52	0.34**				

Self-confidence has a very large number of direct significant correlation values in all three situations (Table 8). However, it is, still, to a greater extent, in the first and then in the third. All indicators of self-attitude are directly related to self-confidence in the first situation. The following characteristics of self-esteem do not correlate with self-confidence: self-esteem of memory (38), creativity (39), awareness (41), openness (42), independence (44), and responsibility (45). In the second situation, the number of correlation values of self-confidence with other characteristics is significantly reduced: only multi-faceted self-attitude (32), self-respect (33), and expected attitude from others (35). There is also direct correlation with the self-esteem of learning

abilities (40), patience (43), optimism (48) and emotional health (50). In the third situation, all indicators of self-attitude are associated with self-confidence, with the exception of the expected attitude from others (35). There are also direct correlation values with self-esteem of mental abilities (37), learning abilities (40), optimism (48), physical health (49), emotional health (50) and communication skills (52).

Table 8. Correlation between the state of self-assurance (self-confidence) and characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
5-32	0.51***	5-32	0.34**	5-32	0.34**
5-33	0.40***	5-33	0.33**	5-33	0.34**
5-34	0.41***	5-35	0.29**	5-34	0.29**
5-35	0.41***	5-40	0.39***	5-36	0.30**
5-36	0.34**	5-43	0.30**	5-37	0.38***
5-37	0.36**	5-48	0.40***	5-40	0.38***
5-40	0.50***	5-50	0.34***	5-48	0.33**
5-43	0.36**			5-49	0.32**
5-46	0.32**			5-50	0.39***
5-47	0.47***			5-52	0.46***
5-48	0.52***				
5-49	0.39***				
5-50	0.56***				
5-51	0.34**				
5-52	0.56***				

The state of doubt in the answer correctness (7) in the first situation has inverse significant correlation with multi-faceted self-attitude (32), self-respect (33) and self-interest (36) (Table 9). No significant correlation values with self-esteem were found. In the second situation, doubts do not correlate with self-esteem and self-attitude. In the third situation, there is an inverse correlation with self-respect (33) and self-esteem of memory (38).

Table 9. Correlation between the state of a doubt in the answer correctness and characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
7-32	-0.32**			7-33	-0.33**
7-33	-0.34**			7-38	-0.29**
7-36	-0.31**				

The state of misunderstanding of the question content (8) does not have significant correlation in either the first or second situation, while in the third situation there are a number of inverse correlation values with self-attitude - with multi-faceted self-attitude (32), with self-respect (33), with self-interest (36). There are also inverse correlation values between self-esteem of memory (38) and emotional health (50) (Table 10).

Table 10. Correlation between the state of misunderstanding of the question content and characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
				8-32	-0.31**
				8-33	-0.31**
				8-36	-0.29**
				8-38	-0.29**
				8-50	-0.32**

The state of distraction (10) in the first and second situations does not have correlation with self-attitude, while in the third situation there is an inverse correlation with multi-faceted self-attitude (32) (Table 11). In the first situation, distraction has an inverse correlation with self-esteem of mental abilities (37), in the second situation, with self-esteem of independence (44). In the third situation, there are several inverse correlation values with indicators of self-esteem - with mental abilities (37), with memory (38), with learning abilities (40), with determination (46).

Table 11. Correlation between the state of distraction and characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
10-37	-0.30**	10-44	-0.40***	10-32	-0.36**
				10-37	-0.34**
				10-38	-0.43***
				10-40	-0.34**
				10-46	-0.29**

Only one cognitive state we are studying has no significant correlation with self-esteem and self-attitude in all three situations – a state of boredom (11).

The state of disbelief in own abilities (26) in its meaning is the opposite of self-confidence (5) (Table 12). Therefore, it is not surprising that it has a lot correlation values, like self-confidence, but they are inverse (Table 12). So, in the first situation, all the characteristics of self-attitude have inverse correlation values with disbelief in own abilities. In addition, there is inverse correlation with self-esteem of mental abilities, learning abilities (40), emotional health (50) and communication skills (52). In the second situation, there is inverse correlation with all the characteristics of self-attitude except for self-sympathy (34), and there is also inverse correlation with self-esteem of learning abilities (40). In the third situation, there is inverse correlation with all indicators of self-attitude, except for the expected attitude from others (35) and with a self-esteem of learning abilities (40), determination (46), emotional health (50) and communication skills (52).

Table 12. Correlation between the state of disbelief in own abilities and characteristics of self-esteem and self-attitude in exam situations

R1 USE		R2 Easy university exam		R3 Difficult university exam	
correlation	R1	correlation	R2	correlation	R3
26-32	-0.30**	26-32	-0.31**	26-32	-0.31**
26-33	-0.30**	26-33	-0.35**	26-33	-0.31**
26-34	-0.33**	26-35	-0.34**	26-34	-0.34**
26-35	-0.30**	26-36	-0.40***	26-36	-0.30**
26-36	-0.35**	26-40	-0.34**	26-40	-0.37***
26-37	-0.33**			26-46	-0.36**
26-40	-0.36**			26-50	-0.44***
26-50	-0.48***			26-52	-0.34**
26-52	-0.35**				

Conclusion

As expected, in the course of our study statistically significant differences were found both in the degree of manifestation of various indicators and in the structure of correlation between the characteristics of affective-cognitive experiences and indicators of self-esteem and self-attitude in all three situations. It is worth noting that the difference between the second situation, when the examination for students seems easy, and the first and third situations, when the USE and the university exam seem difficult, is quite logical. But significant differences between the first situation and the third indicate the effect of the context of the situation on general psychological mechanisms which reduce or, conversely, increase the strength of experiences of certain cognitive states.

The exam, which is perceived by students as easy, is accompanied by a high level of positive emotional experiences such as a surge of energy, joy, calmness, interest and even happiness. The dominant emotion in both the first and third situations is fear.

Cognitive states also manifest themselves differently depending on situations. So, in the second situation (easy exam), preference in students' memories is given to experiencing self-assurance (self-confidence), while thoughtfulness and concentration are more expressed in two other stressful situations. During the USE, students note a high degree of doubt in the answer correctness, while a difficult university exam is not associated with a strong experience of doubt.

Speaking about the possible psychological mechanisms, which actuation could improve the quality of exam answers, we consider the following in the case of our study: significance of self-attitude and self-esteem of characteristics, which are important for study, in formation of favorable cognitive states during examination. In different exam situations, the influence of self-attitude and self-esteem turned out to be different, which is consistent with the previously formulated hypothesis.

When it comes to students' memories of their experience in passing the USE, it is revealed that self-attitude in general primarily has a direct impact on the state of thoughtfulness, self-confidence, doubts in the answer correctness and disbelief in own abilities. Consequently, a general improvement in self-attitude activates thoughtfulness and self-confidence, at the same time reduces doubts and disbelieves in own abilities. Considering the stressed situation of a difficult university exam, then improving self-esteem, in addition to enhancing self-confidence, noticeably activates the state of concentration and enthusiasm for the examination process, while reducing the experience of misunderstanding the content of the question and distraction. In a situation of an university easy exam, improvement of self-attitude generates, first of all, self-confidence and enthusiasm for the exam. It is interesting that the characteristic of self-sympathy in this case does not affect the studied cognitive states in any way.

Speaking about indicators that have the greatest number of significant correlation values, calling them systemically important, then, mentioning characteristics of self-attitude, we can pay attention to the indicator of multi-faceted self-attitude in the third situation, when students talk about a difficult university exam. Multi-faceted self-attitude has slightly less correlation values in the first and second situations, but in general, it can be said that self-attitude plays an important role in the process of experiencing cognitive states during different examination situations.

Regarding the indicators of self-esteem, we can mention that in the first and third situations, self-esteem of learning abilities is systemically important. In the first USE situation, self-esteem of diligence, optimism, and emotional health also have many connections. In the second situation, self-esteem of emotional health is also of great importance.

Study data also indicate that in all three situations, the state of self-confidence and a state of disbelief in own ability foremost depend on self-attitude and self-esteem. In the third situation, when an exam at a university seems very difficult, the state of misunderstanding of the question content and the state of distraction also strongly depend on self-attitude and self-esteem.

During the research, we obtained the following data:

   - results of manifestation degree of cognitive and emotional states;

   - results on the structure of correlation between states and characteristics of self-attitude and self-esteem of qualities, useful for training.

The obtained results confirmed our assumptions about the existence of statistically significant differences depending on the type of examination situation and depending on the subjective perception of this situation by students. In practical terms, the data obtained can be useful for the development of psychological and educational technologies of works with high school and university students in order to improve the quality of exam results considering the contest of a situation and individual and psychological characteristics of students.

Acknowledgements

References

Agapov, V. S. (2013). Systematic study of the self-concept of a subject in Russian psychology. *Acmeology, 1*(45), 27-30.

Astretsov, D. A. (2015). Methodological approaches to the study of self-attitude in psychology. *Theoretical and experimental psychology, 8*(1), 62-78.

Bolotova, A. K. (2006). The development of self-identity: time aspect. *Psychology Issues, 2*, 19-26.

Borozdina, L. V. (1992). What is self-esteem? *Psychological journal, 13*(4), 99-101.

Glukhanyuk, N. S. (2005). *Workshop on psychodiagnostics: a training manual*, Moscow: Publishing house of the Moscow Psychological and Social Institute.

Leontiev, A. N. (1983). *Selected psychological works*. Moscow: Pedagogika.

Levitov, N. D. (1964). *On the mental states of a person*. Moscow: Prosveshcheniye

Morosanova, V. I., Kondratyuk, N. G., Gaidamashko, I., Voytikova, M. (2018). Self-regulation and personality traits in overcoming acute and chronic stress. *The European Proceedings of Social & Behavioural Sciences EpSBS*, 460-470.

Pantileev, S. R. (1993). *Methodology for the study of self-attitude*. Moscow: SMYSL.

Prokhorov, A. O., Chernov, A. V., & Yusupov, M. G. (2019). Mental regulation of mental states: a structural and functional model. Cognitive studies: Emergence and complexity, cognitive practices. *Materials of the VIII international interdisciplinary conference, 8*, 53-62.

Prokhorov, A. O., & Yusupov, M. G. (2016). Dynamics of cognitive conditions of students in the process of solving challenging tasks. *Scientific Notes of Kazan University. Series: Humanities, 158*(4), 967-979.

Prokhorov, A. O. (2012). *Self-regulation of mental states: phenomenology, mechanisms, patterns*. Moscow: PER SE.

Stolin, V. V. (1983). *Self-identity*. Moscow: Moscow State University.

Valiullina, M. E. (2019). The Impact of Academic Motivation, School Anxiety and Self-Reflective Awareness on the Experience of High School Students' Cognitive States. *ARPHA Proceedings, 1*, 1469-1478. doi.org/10.3897/ap.1.e1394

Valiullina, M. E., & Chernov A. V. (2017). Study motivation, reflection, emotional and cognitive states in the perception of training situation. *National Academy of managerial staff of culture and arts herald, 4*(2), 260-264.

Yusupov, M., Prokhorov, A., & Chernov, A. (2019). *Cognitive states and mental mechanisms of their regulation. XVI European congress of psychology*. Moscow: MSU named after M.V. Lomonosov.

Zakharova, A. V., & Tagiyev, G. B. (1986). Self-esteem as a factor of psychological readiness for schooling. *New studies in psychology, 1*(34), 41-43.