BRAIN. Broad Research in Artificial Intelligence and Neuroscience
ISSN: 2068-0473 | e-ISSN: 2067-3957
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2023, Volume 14, Issue 1, pages: 138-156 | https://doi.org/10.18662/brain/14.1/411
Submitted: February 9th, 2023 | *Accepted for publication:* February 14th, 2023

Psychological Defenses of Students in the Process of Experience of Time

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Abstract: *Experiences of person reveal his/her real-life relationships. Process of change of problematic relationship of students through psychological defenses is also experienced. Objective: distinguish characteristic time experiences of students due to systematic use of psychological defenses in the organization of life. Hypothesis: for student's systematic use of psychological defenses for solving problems with high probability is associated with expressed experiences of violation of the integrity and disintegration of duration of the performed processes of vital activity. Methods. 139 randomly selected students were subjects (aged: Me=19.00; min=17.00; max=26.00). The following standardized methodologies were used to collect empirical data: questionnaire "Life Style Index" (R.Plutchik, G.Kellerman); Freiburg Personality Inventory (FPI, Form B); scale of subjective control of R.Baumeister; scale "competence in time" from text of self-actualization (E.Shostrom); methodology "Scale of time experience" (A.A.Kronik, E.I.Golovaha). Results: Completeness of experience by the subjects of the current moment implies a high stability of their personal organization and is associated with experiences in the current time of speed, limitation, diversity, and is also associated with the psychological defenses of substitution and regression. For subjects with reduced stability of personal organization there is a higher tendency to use such psychological defenses: substitution; regression; compensation; denial of reality. The defensive mechanisms of substitution and regression are associated with the experience of time as spasmodic and intermittent, in addition, substitution is associated with the unpleasant experience of time, and regression with its organization and fragmentation. Conclusions. Use of students of psychological defenses of replacement and regression, which limit and distort perceived information, is accompanied by experience of time as a fractioned, fragmented sequence of actual changes in a meaningful process.*

Keywords: *duration; time sequence; stability of personal organization; adaptation; state of flow; personal features.*

How to cite: Plokhikh, V., Yanovskaya, S., & Bilous, R. (2023). Psychological Defenses of Students in the Process of Experience of Time. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 14*(4), 138-156. https://doi.org/10.18662/brain/14.1/411

Introduction

In critical circumstances of life, human experiences become more expressive, vivid, rich, strong. At the same time, relationships are experienced not only with the influencing stressors, but also with the duration of continuing stressful state filled with activity. In a tense state, usually with negative emotions, a person often has the impression of a slowdown in time passing, which affects the accuracy of estimates of the duration of processes, the possibility of timely performance of actions (Strelkov, 2001). The use of adaptive measures, which can also include psychological defenses, helps to relieve negative emotional stress and change the state of the psyche and body. At the same time, the adaptive process inevitably affects the experience of time passing.

For students, the system of life and professional experience is actively filled, formed and only acquires a certain stability, while passing regular checks for adequacy to the high requirements set. In the educational process, numerous additional stressors of the organization of life are currently being added to the expected examination tests (remote work, performing bigger quantities of written tasks, testing online etc.). In order to counteract adverse circumstances and to maintain the necessary high self-esteem, self-respect, health and general positive attitude, students often use psychological defenses in order to adapt (Di Giuseppe et al., 2020; Plokhikh et al., 2021; Plokhikh, 2022). At the same time, experiences of the flow of time accompanying the activation of defense mechanisms can be superimposed in various ways on the temporal structure of the learning process oriented toward the professional future, and not always have a favorable effect on learning motivation.

One of the most important relationships of a person to time is defined as the experience of time. The content of this concept can be considered based on a general idea of what is meant by the concept of "time", and from the very essence of the relationship between a person and reality.

In most philosophical concepts, time is considered as a kind of synthesis of a meaningfully defined duration and a linear sequence of transitions of events in the continuum "past-present-future" (Gaidenko, 2006; Strelkov, 2001). At the same time, the procedural disclosure of some existence in the actual environment and in its specific dynamics is defined as duration. In the unfolding of the ongoing process of existence, with its integrity and continuity, prehistory of past incarnations due to some causes,

specific manifestations in the present, possible future realizations up to the foreseeable moment of completion, can be revealed to the appropriately tuned consciousness (Jullien, 2001). A person is noted to precisely experience the duration (continuing) of the process in its real and imaginary realizations (Strelkov, 2001).

In research of E.I.Golovakha and A.A.Kronik experience of time is viewed from the point of view of casual-target concept of psychological time (2008). The authors defend the point of view that a person experiences in the very duration of time his/her actually significant cause-and-effect relationships with reality in their structural interconnection. However, if we consider these causal-target relationships from the point of view of the organization of a continuing process, then they act as a logical regular linking of the initial and final boundaries of the process. In other words, in the causal-target concept of time, duration is also experienced, but more in relation to one's own boundaries. The emphasis on the boundary states of the process incarnations leads to understanding its composition as a linear temporal sequence of successive events.

A temporal sequence is an identified according to certain characteristics (including characteristic experiences) regular or random alternation of realizations of a continuing process (Gaidenko, 2006). Evaluation of this alternation, when correlating it with the chosen measures and using the appropriate means, in fact, makes it possible to measure time. At the same time, temporary standards of memory can also act as measures of time, the update of which in the corresponding mental schemes and based on the experiences of a continuing process can give fairly accurate estimates of the course of physical time (Plokhikh et al., 2022).

Taken out of context the duration of the current process is rather not experienced, but traced (contemplated). The experience in a person appears from the relations in which the process of life activity realized by him/her is included.

A living person is in numerous relationships with nature and society and these relationships in various forms can be realized both in the case when a person is aware of them and unconsciously. According to J. Nutten's model of motivation based on relationships, a person's motivations for some activities are generated by his/her numerous relationships with reality (Nutten, 2004). These relations are characterised by their specific content, the degree of subjective significance, and the scope of what is happening. The parties of such relations are not static, but constantly change directionally or accidentally. Here we should also take into consideration the point of view of S.L. Rubinstein on psychological as a process and as an

activity (Rubinstein, 2003). At the same time, the activity is considered by the author as a specific process through which a certain relation of a person to reality is realized. On the other hand, nature and society are also filled not with instantaneous flashes of phenomena, but with ongoing processes that correlate with each other at different levels of the structure of reality. As a consequence, a person experiences a continuing actual process of mental organization both in relation to the desired (mental scheme) and in relation to significant processes of natural and social reality.

The specificity of procedural relations in a natural way determines the uniqueness of the experiences of the flow of time. At the same time, a lot depends on the subjective significance of the relationship, the person's inclination for them, and on the conformity of the corresponding implementations. Particularly vivid experiences of the flow of time arise in extreme cases of the circumstances of the performance of any activity. Such as in an activity aimed at solving a rather complex, fascinating task, under favorable circumstances and in full accordance with requirements put forward, the subject may experience a state of flow (Csikszentmihalyi, 2015; Isham et al., 2019; Lavoie et al., 2022). Characteristic for such a state is the fullness of living the moment, the experience of joy, inspiration, lightness, satisfaction with what is happening. Along with this, the state of flow is associated with strong internal motivation, with a high level of development of performing automatisms and self-efficacy, with the resistance of the mental organization to the influence of destabilizing and, especially, stress factors (Isham & Jackson, 2022; Mao et al., 2020; Shepherd, 2022).

In the case of an expressed mismatch in the actual basic relationship in the "man-environment" system, the free flow of psychological time in the process of activity is violated. In an extremely destructive variant of the development of stress, the flow of psychological time for the subject practically stops or even "falls apart" (Strelkov, 2001; Taylor, 2010). In the constructive case of overcoming stress (eustress), the subject, through volitional concentration of attention and concerted efforts, manages to update not only available resources, but also the hidden potential of life activity. Such update can determine the general coordination of tasks with the requirements and processes adopted on the basis of a distinguished social relation (system-forming factor), and lead not only to an effective solution of the problem, but also to an achievement a higher degree of expressiveness of a state of flow. The latter is well illustrated by examples in sports, in activities in special and extreme conditions (Antonini et al., 2022; Cheban et al., 2020; Gould et al., 2009; Strelkov, 2001).

With the loss of stability of the mental organization due to significant impacts, the removal of emotional stress that threatens the integrity of the body and psyche quite often occurs automatically through the activation of psychological defense mechanisms (Granovskaya & Bereznaya, 2020; Plokhikh, 2022; Plokhikh et al., 2021). However, psychological defenses in some way limit, distort, block a powerful flow of information that is significant for the full elimination of an actual problem. The latter not only contributes to the weakening of the information reinforcement of stressful experiences, but also fundamentally limits the ability of the subject to identify the main problematic relationship of the current situation, to form the appropriate attitude and determine the necessary actions. Because of active use of psychological defenses, the efforts of the subject cannot be quite adequate. And such inadequacy, having as its premise mental instability, limited understanding of what is happening, the specifics of the implementation of psychological defense mechanisms, is inevitably superimposed on the experiences of the subject in the ongoing process of overcoming stress (Cramer, 2003; Ozoh, 2015).

The educational activity of students is usually well structured, long-term, information-rich and focused on future self-realization in professional activities (Hulias & Hoian, 2022; Plokhikh, 2022; Popovych & Blynova, 2019). In this process, the planned solution of more or less complex educational tasks alternates with forced distractions to the general organization of the life process, to rest. At the same time, in situations out from learning context, the learning attitude of students should be present in a hidden form, linking the entire learning process in a continuous, integral duration. The learning activity itself presupposes that the student has a high level of responsibility, self-organization and self-control, which allows timely and fully updating the educational environment, strengthening the internal motivation of learning, activating the formed system of professional experience and the required intellectual resources. In case of a situational inability to have a full-fledged attitude towards effective learning, but if it is necessary to achieve sufficiently high performance, students often use inadequate means and methods to achieve the desired result (for example, cheating, prompting, plagiarism (Ianovska et al., 2016). Such inadequate self-realizations can also be considered as a training-specific variant of using psychological defenses.

Q. Tang and J. Peng (2022) declare that students when using psychological defenses have an intention to correct his/her psychological needs and reach improvement of psychological health. Chuyko et al. (2022), after confirming the connection between personality coping strategies and

psychological defense mechanisms, showed that in the context of the COVID-19 pandemic, a mutually reinforcing effect of coping and defensive methods for human adaptation is manifested. In research of V. Negrii (2014), M. Ozoh (2015), H. Shuldyk (2017), A. Waqas et al. connection between mechanisms of psychological defenses and academic success of students was analyzed. It was revealed that students use defense mechanisms in order to hide their inadequacy in the implementation of educational activities and get a sense of managing the learning process. It was also stated that decrease of academic success is connected with use of so-called primitive defense mechanisms (Negrii, 2014; Ozoh, 2015; Shuldyk, 2017; Waqas et al., 2015).

Naturally, alien inclusions in the educational process in the form of various protective mechanisms violate its intended free implementation. And if the use of defense mechanisms by students becomes systematic, the ongoing educational process becomes filled with many contradictions and inconsistencies between the expected and the actual, and eventually it becomes a problematic one. The appearance of problems that violate the basic relationships of life is not always perceived by students, but, due to its significance, it manifests itself in experiences in a specific way, affects the motivational structure of the learning.

The *goal* of the study is to highlight the characteristic experiences of time by students in connection with the systematic use of psychological defenses in the organization of life.

Tasks of research:

1) Justification of the possibility and determination of the specifics of a full-fledged living by students of the current moment in the process of life.

2) Identification of the characteristics of the experience of time by students in connection with personal prerequisites for the use of psychological defenses.

3) Identification of the problematic characteristics of the experience of time by students in connection with the systematic use of psychological defenses.

The *hypothesis* of the research is that for students, the systematic use of psychological defenses in solving various problems is highly likely to be associated with expressed feelings of integrity violation, desintegration of the duration of the realized life processes.

Methods

139 students took part in the empirical research (age: *Me*=19.00; *min*=17.00; *max*=26.00). The design of research involved determining the intensity of manifestations of psychological defenses in the subjects and identifying personality characteristics that predispose to the systematic update of the defensive response. Also, the predominant experiences of the subjects in relation to time passing and the moment of the present in the process of life organization were determined.

The psychological defenses of the subjects, which allow them to relieve emotional stress and thereby maintain the stability of the personal organization to significant influences, were diagnosed using the questionnaire "Life Style Index" (R.Plutchik, G.Kellerman). In this questionnaire, the intensity of the use of the following psychological defenses by the subjects was determined: denial of reality, compensation, reactive formations, substitution, regression, projection, rationalization, displacement.

The mental states and personality characteristics of the subjects were determined, which significantly predetermine the stability or instability of a personal organization to significant influences. For indicated goal we used Freiburg Personality Inventory (FPI, Form B), with the help of which the following important for research characteristics were diagnosed: balance, neuroticism, spontaneous aggressiveness, reactive aggressiveness, depression, irritability, shyness, emotional lability. Taking into account the fact that the stress resistance of a personality is determined by its ability to self-regulate and, accordingly, to self-control experiences, mental operations and behavior, the R. Baumeister scale of subjective control was used in the empirical study.

The predominant experiences of the subjects of time passing in their life were considered in two aspects. The first aspect is connected with the experience by the subject of the fullness of living the current moment, taking into account the circumstances included in this moment from the past and the outcomes of its possible extension into the future. To some extend as an indicator of such intence full-fledged experience of the moment of the present, the result is considered on the scale of "competence in time" from the personality self-actualization test (E. Shostrom). The second aspect is the subjects' actual assessments of the experiences of individual characteristics of the flow of psychological time. To solve the second task, we used the "Scales of experience of time" built according to the method of semantic differential (A.A.Kronik, E.I.Golovaha). The scales used the following pairs

of opposite characteristics of experiences: flows slowly - flows quickly; empty - filled; stretched - compressed; smooth - spasmodic; pleasant - unpleasant; monotonous - diverse; unorganized - organized; whole - fragmented; continuous - discontinuous; unlimited is limited. The degree of expressiveness of the characteristics increased on a scale from the center to one side and the other by one of three levels. The subject indicated his/her decision by highlighting one of the scale values. In subsequent calculations, the entire scale was considered as increasing from left to right from 1 to 7.

For the quantitative analysis of empirical data, the statistical package IBM SPSS Statistics 20 was used. Cluster analysis (k-means method), correlation analysis according to Spearman (*Rs*) was performed, the Mann-Whitney U-test was used to compare sample data. The use of cluster analysis made it possible to single out two subgroups of subjects in the group, distinguished by the stability of their personal organization (subgroup 1 - n=60; subgroup 2 - n=79). The research procedure involved comparing the results of subgroups in terms of significant indicators.

Results

For a group of subjects, a correlation analysis of the connections of competence in time (as an indicator of the completeness of living the current moment) with indicators of individual experiences of time made it possible to identify significant feedbacks with experiences of speed (*Rs=-.188; p=.027*), limitedness (*Rs=-.265; p=.002*), as well as a tendency - wholeness (*Rs=.143; p=.093*) and diversity (*Rs=.157; p=.064*), in time passing. Regarding psychological defenses, it was found out that competence in time is correlated inversely with replacement (*Rs=-.185; p=.029*) and regression (*Rs=-.216; p=.011*).

Since psychological defenses are activated in case of a threat to the stability of a personal organization as a result of stressful influences, for a group of subjects, the relationship of competence in time with the diagnosed indicators of such stability was determined: self-control (Rs=.173; p=.041) and balance (Rs=.428; p<.001). According to the parameters of self-control and balance, using cluster analysis, the group was divided into two subgroups. In subgroup 1 (n=60) there were subjects with increased self-control (Me=45.00; min=39.00; max=57.00) and balance (Me=6.00; min=1.00; max=10.00), in subgroup 2 (n=79) there were subjects with reduced self-control (Me=34.00; min=22.00; max=39.00) and balance (Me=5.00; min=1.00; max=9.00). Comparison of subgroups according to the presented indicators revealed a significant superiority of students of

subgroup 1 (indicators: self-control - U=1.00 at p <.001; balance - U=1728.00 at p=.005). At the same time, according to the indicator "competence in time" in subgroup 1 (Me=9.50; min=2.00; max=15.00), in comparison with subgroup 2 (Me=8.00; min=1.00; max=16.00), there is also an obvious advantage (U=1619.50; p=.001).

The subgroups were compared according to the intensity of various experiences of time passing, according to the possibilities of updating psychological defenses (table 1), as well as according to the expressiveness of stable personal properties and states of the subjects (table 2). Along with this, in subgroup 2, in comparison with subgroup 1, a more intensive (at the trend level) use of defensive rationalization was found (U=1969.00; p=.085).

Table 1. Statistical comparison (Mann-Whitney U-test) of indicators of experience of time and psychological defenses in subgroups 1 (n=60) and 2 (n=79)

Sub-group	Statistical parameter	Time experience indicators			Psychological defenses			
		slowly-quickly	monotonous - diverse	whole - fragmented	denial of reality	substi-tution	regre-ssion	compen-sation
1	*Me*	5.00	6.00	3.00	.45	.15	.32	.40
	min	1.00	2.00	1.00	.09	.00	.00	.00
	max	7.00	7.00	6.00	.91	.80	.71	.90
2	*Me*	6.00	5.00	3.00	.55	.30	.47	.60
	min	1.00	1.00	1.00	.18	.00	.12	.00
	max	7.00	7.00	7.00	1.00	.80	.82	.90
	U	1853.00	1870.50	1858.50	1791.00	1392.00	1199.50	1708.50
	p	.024	.030	.027	.013	<.001	<.001	.004

Table 2. Statistical comparison (Mann-Whitney U-test) of indicators of expressiveness of personality characteristics and states in subgroups 1 (n=60) и 2 (n=79)

Sub-group	Statistical parameter	Personality characteristics and states						
		Neuroticism	Spontaneous aggress-veness	Reactive agressi-veness	Depression	Irritability	Shyness	Emotional lability

1	*Me*	5.50	5.00	4.00	5.00	5.00	6.00	5.00
	min	1.00	1.00	.00	.00	.00	.00	1.00
	max	16.00	9.00	9.00	9.00	8.00	9.00	10.00
2	*Me*	7.00	7.00	6.00	7.00	7.00	6.00	7.00
	min	1.00	1.00	1.00	.00	3.00	.00	.00
	max	16.00	10.00	9.00	11.00	11.00	10.00	13.00
	U	1784.00	1538.50	1510.00	1120.00	1357.50	1835.50	1201.50
	p	.012	<.001	<.001	<.001	<.001	.021	<.001

Earlier presented direct correlation between indicator of competence in time and indicator of stability of personal organization is also accompanied by its inverse connections with characteristics and states of destabilizing mental state: neuroticism (*Rs=-.343; p<.001*), depression (*Rs=-.534; p<.001*), irritability (*Rs=-.266; p=.002*), shyness (*Rs=-.333; p<.001*), emotional lability (*Rs=-.468; p<.001*). Connections between problematic personality characteristics and states with psychological defenses (table 3) and experience of time (table 4) were also defined. At the same time defensive rationalization is connected only with neuroticism (*Rs=.183; p=.031*). Furthermore, neuroticism is connected with unpleasant experiencing of passing of time (*Rs=,208; p=.014*), and reactive aggressiveness is connected with spasmodic experience of time passing (*Rs=.353; p <.001*).

Table 3. Statistical connections (according to Spearman) in subjects' group (n=139) of problematic personality characteristics and states of psychological defenses

Personality characteristics and states	Statistical parameter	Psychological defenses			
		Denial of reality	Substi-tution	Regression	Compensation
Neuroticism	*Rs*	.055	.459**	.470**	.256**
	P	.519	.000	.000	.002
Spontaneous aggressiveness	*Rs*	.076	.449**	.439**	.113
	P	.373	.000	.000	.184
Depression	*Rs*	.133	.559**	.577**	.327**
	P	.119	.000	.000	.000

Irritability	*Rs*	.175*	.637**	.622**	.360**
	P	.039	.000	.000	.000
Reactive aggressiveness	*Rs*	-.017	.398**	.388**	.229**
	P	.843	.000	.000	.007
Shyness	*Rs*	.142	.177*	.183*	.024
	P	.094	.037	.031	.779
Openness	*Rs*	219**	.422**	.363**	.221**
	P	.010	.000	.000	.009
Emotional lability	*Rs*	.076	.550**	.621**	.301**
	P	.371	.000	.000	.000

Note: * – $p < .050$; ** – $p < .001$.

Table 4. Statistical connections (according to Spearman) in subjects' group (n=139) between problematic personality characteristics and states of experience of time

Experience of time	Statistical parameter	Personality characteristics and states			
		Spontaneous aggressiveness	Depression	Irritability	Emotional lability
Quick	*Rs*	.192*	.108	.200*	.111
	p	.024	.208	.018	.193
Spasmatic	*Rs*	.279**	.175*	.334**	.147
	p	.001	.040	.000	.084
Compressed	*Rs*	.176*	.052	.118	.089
	p	.039	.544	.165	.298
Unpleasant	*Rs*	.052	.281**	.122	.235**
	p	.541	.001	.154	.005
Diverse	*Rs*	-.040	-.174*	-.075	-.192*
	p	.636	.041	.379	.024
Fragmented	*Rs*	.197*	.168*	.271**	.196*
	p	.020	.047	.001	.021

Note: * – $p < .050$; ** – $p < .001$.

Statistical connection of above-analysed indicators of intensive use of psychological defenses (see table 1) and indicators of experience of time (table 5) was defined.

Table 5. Statistical connections (according to Spearman) in subjects' group (n=139) between intensive use of psychological defenses and experience of time

Psychological defenses	Statistics parameter	Experience of time						
		Quick	Filled	Spasmatic	Unpleas-ant	Organised	Fragmen-ted	Disontinuous
Substitution	*Rs*	.007	-.007	.179*	.183*	-.102	.142	.198*
	p	.937	.936	.035	.031	.233	.095	.019
Regression	*Rs*	.174*	-.017	.255**	.048	-.186*	.289**	.167*
	p	.041	.846	.002	.573	.028	.001	.050
Rationaliza-tion	*Rs*	.096	.151	-.017	-.172*	.291**	-.085	.021
	p	.263	.075	.841	.043	.001	.320	.806

Note: * – $p < .050$; ** – $p < .001$.

Discussion of results

During research of Plokhikh (2022) in a group of 42 subjects there was no connection determined between competence in time and indicators of stability of personal organization. However, there was an argumentation that such connection would be natural. In this research already in a group of 139 subjects, the above assumption was confirmed: competence in time is directly related to the stability of a personal organization. It is in the selected subgroup 1 that the subjects more resistant to stressful influences have a significantly higher degree of living and compliance with the current moment, in comparison with subgroup 2. The completeness of living the moment of the present by the subjects of subgroup 1 naturally manifests itself in their individual experiences of time passing (see table 1). In this case, the moment of the present is experienced as more integral, diverse and with rather slow changes.

The above identified effects are approaching the characteristics of the state of flow as a full-fledged, consistent in terms of significant relations of the subject inclusion in the activity being performed (Csikszentmihalyi, 2015). In the same way we can talk about some approximation of the state of the subjects of subgroup 1 to the state of altered consciousness with "immersion" at a favorable moment of performance of a meaningfully defined duration of a holistic expedient process (Jullien, 2001).

Special attention should be dedicated also to the experience of the subjects of the slow time passing noted in connection with the competence in time. Here one should consider the experience of time as an experience of a discrepancy between the dynamics of organized mental activity and the dynamics of external directional changes (Nutten, 2004; Strelkov, 2001). In this scenario, the deceleration of time relative to its usual or required course, which seems to the subject mainly in terms of the intensity of external changes, is associated with the speed and volume of mental transformations of information (Taylor, 2010). The languid inactive expectation of the desired event causes the activation (often spontaneous) of intellectual activity with experiences of the slow time passing. And, in the contrary, concentration on an impending unwanted event fetters thought, and time "flies" at the same time. In a state of strong enthusiasm for activity, in a flow state for a subject, physical time can generally "stop" (Csikszentmihalyi, 2015; Lavoie et al., 2022). In the latter case, the boundaries of the mental scope of the ongoing moment of a meaningfully realized process are significantly expanded. As a result, all structural connections of various stages in the sequence of changes in the process monitored or implemented in the actions are opened for free meaningful access to the attention of the subject: from the initial situation to the final effective completion (Plokhikh et al., 2022; Strelkov, 2001). On the other hand, violation of the completeness and integrity of the lasting moment is accompanied by the appearance in the subjects of experiences of limitedness, fragmentation, monotony. These effects give the right to also talk about the probable fettering of the activity of mental activity of students (Shepherd, 2022).

The decrease in the stability of the personal organization in the subjects is accompanied by appearance and consolidation of problematic states and properties as a result of stressful influences of various intrapersonal contradictions (see table 2). Such problematic states and properties in the study were: neuroticism, aggressiveness, depression, irritability, emotional lability, and shyness accompanied by anxiety and self-doubt. With an increase in the expressiveness of most of the indicated problematic states and properties, the possibility of a full-fledged living of a lasting moment, represented by the "competence in time" parameter (in the above-mentioned results), decreases in the subjects. But along with the decrease in the stability and integrity of the personal organization caused by fixed contradictions, adaptive mechanisms are also updated to support current life processes. At the same time, the advantages of successfully selected means and methods of adaptation reflect the features of the functional insufficiency of the mental system in overcoming the

contradictions that have arisen. Psychological defenses act as singled out adaptive means blocking undesirable manifestations of problematic states and personality traits in this study, as well as in other works (Granovskaya et al., 2020; Di Giuseppe et al., 2020; Ozoh, 2015; Plokhikh, 2022; Plokhikh & Suponeva, 2021).

The analysis of the obtained results shows that the increase in expressiveness of problematic states and properties in the subjects is significantly and multifacetedly associated with an increase in the intensity of the systematic use of the following psychological defenses: denial of reality, compensation, and, especially, substitution and regression (see table 1 and table 3). Both problem states and psychological defenses significantly limit, reorient the process of information processing in a tense environment into a stereotypical desirable implementation option (Granovskaya et al., 2020). At the same time, the involuntary selection and fragmentation of the flow of significant information largely blocks the ability for the subject to determine the main relationship, the meaning of the current moment, and limits the access to singling out of the integral duration of the process being performed.

Indicated characteristics of the involuntary activation of psychological defenses are clearly manifested in individual experiences of time passing. When the problematic states and properties increase, the subjects experience the acceleration of changes in the environment, the abruptness and tension of temporary transitions, fragmentation of the content and information depletion of successive manifestations of the current moment (see table 4). Similar effects are observed in relation to the relationship of experiences of time with the psychological defenses of substitution, regression and rationalization (see table 5).

Within the general overview of the results, the subjects' experiences of time passing differ slightly in connection with defensive rationalization. The actualization of rationalization mechanisms, unlike other psychological defenses, is accompanied by experiences of some organization, pleasantness, and even fullness of the current time (see table 5). This effect is quite understandable from the point of view of the concept of E.I. Golovakha and A.A. Kronik as a positive result of the successful implementation of the cause-and-purpose relationship according to the current circumstances (Golovakha et al., 2008). However, even in this case, the essence of the relations under consideration of the systematic use of psychological defenses and the experience of time passing does not fundamentally change. Defensive rationalization promotes situational fragmentation of information about the current moment.

At the same time, a person involuntarily focuses on the information that corresponds to a decrease in high mental stress and does not threaten a painful aggravation of contradictions for an unstable world perception (Granovskaya et al., 2020). Acceptable information for a personal organization is logically built and formed into a sequence of judgments that justify the limited analysis and decisions in the current situation. This also justifies the deviation from establishing of the main relationship in the tense system "man - environment" and, in fact, deviation from the full solving of problem of getting out of a stressful state. That is why the inclination to use defensive rationalization in a context of a reduced resistance of the personal organization to stressors, identified at the level of the trend among the subjects of subgroup 2, also looks non-random (see table 1).

The characteristics of the experiences of time passing by the subjects revealed in the empirical study in connection with the intensity of the systematic use of psychological defenses have a general significance. Such meaning refers to the formation of the temporal structure of the life realizations of the individual in the aspect of solving the problems of continuity and discreteness, of the whole and parts. For the organization of psychological time, the solution of these problems is expressed in achieving the necessary consistency of the duration of the subject's actions with the planned sequence of their step-by-step implementation in reality.

The experience by the subjects of fragmentation, conciseness, spasmodicity of psychological time (see table 1 and table 5) corresponds to the splitting and fragmentation of the duration of the process of implementing the main relationship in a tense situation in the "man-environment" system. Such result fully corresponds to the note of M. Csikszentmihalyi that stress disrupts the state of flow, that is, the state of the optimal mode of free and consistent with the actual conditions implementation of a continuing action (Csikszentmihalyi, 2015). At the same time, the fragmentation, splitting in stress of the integral duration of action is not just a transition to an organized sequence of necessary implementations. As a result of such a splitting, the most significant connections defined by the main sense-determining relation, constituting the duration of the process being implemented, are violated, and in the sequence of required implementations, the most remote connections covering the conditions for generating a continuing process with its expected resolution are violated. But it is precisely the experiences of these cause-and-purpose relationships in the conclusions of E.I. Golovakha and A.A. Kronik act as experiences of psychological time (Golovakha et al., 2008). The split and fragmentation of

these relations introduce the emotional specification we identified in the study as the experiences of time by the subjects.

The revealed characteristics and tendencies in the experiences of time by the students in the research in connection with the use of psychological defenses contradict the essence and direction of educational activity. Students are required to have practical consistent differentiation of the processed information and its inclusion in a full-fledged structure of past experience with a mindset for reproduction in future professional activities. In contrast, involuntary fragmentation and fragmentation of the flow of psychological time narrow the scope and integrity of the subject's rational perception of the significant past, present and possible future. Together with the experience of the collapse of time passing, the students in the research lose the clarity of distant targets in the future, the availability of the necessary information in memory, and the focus of dedication to achieving security and convenience in the present narrows down (Plokhikh, 2022).

Conclusions

1) The fullness of students' living of the current moment of life activity is connected with the stability of the personal organization to significant influences and is accompanied by experiences of the flow of time together with its plans of the past, present and future, in its slow continuous transitions, in its appearing limitless and diversity of changes.

2) The expressed update of students' psychological defenses aimed at denying reality, substitution, regression, compensation, is connected with the instability of their personal organization to significant influences and the formation of problematic states and personality traits with possible manifestations of neuroticism, aggressiveness, depression, irritability, uncertainty, emotional lability.

3) Manifestations of problematic states and personality traits of the students in the research are accompanied by experiences of disintegration, fragmentation, tension, monotony of the current moment, impressions of accelerated transitions between time plans of the past, present and future. At the same time, there is a predominant orientation of students to the temporal sequence with violations in the allocation of semantic (causal-target) systemic relationships between its distant components.

4) For students in the research the experience of the flow of time as a fragmented, fragmented sequence of actual changes in a significant process with an accompanying narrowing of the idea of the unfolding duration of this process is associated with pronounced inclinations to implement

psychological defenses of substitution and regression, which impose significant restrictions and distortions on the processing of perceived information. Along with this, protective rationalization, which orients the subject to a logically sequentially built fragmentary consideration of a holistic process with a distraction from contradictory circumstances, is accompanied by experiences of the flow of time as organized and pleasant.

Regarding possibilities for further research, the following should be noted. The systematic update of psychological defenses by students, associated both with the instability of their personal organization to the influence of the increasingly complex aspects of modern educational activity, and with their problematic experiences of disintegration, fragmentation, tension, monotony of the current moment, requires performing of special psycho-correctional work in the student environment, taking into account individual sets of psychological defenses and singularity of experiences of time.

Source of Funding. No financial or material support was received in conducting this research or in preparing this manuscript.

Conflicts of interest. The authors declare no conflict of interest.

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