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SUBJECTIVE RISK ASSESSMENT OF UNCERTAINTY AND DANGER SITUATIONS: DIAGNOSTICS, PSYCHOLOGICAL PREDICATORS AND AGE DYNAMICS

The article presents a questionnaire of subjective assessment of danger and uncertainty as a psychodiagnostic tool to determine the intolerance of risk. We characterize the convergent and discriminative validity of the method by determining correlations of tendency to risk indicators with indicators of subjective assessment of danger and uncertainty. The results of multiple regressions for indicators of subjective assessment of situations as uncertain and dangerous are set.

Keywords: subjective assessment of danger and uncertainty, tendency to take risks in the various spheres of life, psycho-diagnostic method, psychology of risk.

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СУБ'ЄКТИВНА ОЦІНКА СИТУАЦІЙ ЯК НЕБЕЗПЕЧНИХ ТА НЕВИЗНАЧЕНИХ: ПСИХОДІАГНОСТИКА, ПСИХОЛОГІЧНІ ПРЕДИКТОРИ ТА ВІКОВА ДИНАМІКА

В статті представлений опитувальник суб'єктивної оцінки ситуацій як небезпечних і невизначених як психодіагностичний інструментарій для визначення ступеня вираженості інтолерантності до ризику. Охарактеризовані конвергентна та дискримінативна валідність методики шляхом визначення кореляційних зв'язків показників схильності до ризику з показниками суб'єктивної оцінки ситуацій як небезпечних, так і невизначених. Показані результати множинного регресії для показника суб'єктивної оцінки ситуацій як небезпечних, так і невизначених.

Ключові слова: суб'єктивна оцінка ситуацій як небезпечних та невизначених, схильність до ризику в різних сферах життєдіяльності, психодіагностична методика, психологія ризику.

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СУБЪЕКТИВНАЯ ОЦЕНКА СИТУАЦИЙ КАК ОПАСНЫХ И НЕОПРЕДЕЛЕННЫХ: ПСИХОДИАГНОСТИКА, ПСИХОЛОГИЧЕСКИЕ ПРЕДИКТОРЫ И ВОЗРАСТНАЯ ДИНАМИКА

В статье представлен опросник субъективной оценки ситуаций как опасных и неопределенных в качестве психодиагностического инструмента для определения степени выраженности интолерантности к риску. Охарактеризованы конвер-

гентная и дискриминативная валидность методики путем определения корреляционных связей показателей склонности к риску с показателями субъективной оценки ситуаций как опасных и неопределенных. Показаны результаты множественной регрессии для показателя субъективной оценки ситуаций как опасных и неопределенных.

Ключевые слова: субъективная оценка ситуаций как опасных и неопределенных, склонность к риску в различных сферах жизнедеятельности, психодиагностическая методика, психология риска.

Introduction. In modern risk researches, the phenomena of predisposition and readiness to risk and to extreme behavior have been thoroughly studied, but the study of risk assessment factors was practically non-existent. Therefore, the **aim** of the study was to develop a situational test to determine the degree of uncertainty and danger of life situations assessment of individual, as well as the definition of age dynamics and psychological factors of subjective assessment of situations as uncertain or dangerous.

Discussion. Based on the V.A. Petrovsky's definition of risk, who interprets it as a "situational characteristic of the activity consisting in the uncertainty of its outcome and possible disadvantages in the failure", we consider to specify the essential nature of risk through the concept of uncertainty and danger [10]. According to the S. Ozhegov's dictionary, risk is "a possibility of danger and failure", "an action at random in the hope of a lucky result" [9]. Thus, the ambiguity of the interpretation of the term "risk", understood as the probability or possibility of consequences, the uncertainty and danger of the situation.

First of all, the risk implies a dangerous situation in which it is possible to quantitatively and qualitatively determine the degree of probability of a particular option, and operates in the presence of uncertainty, the need for selecting alternatives (including the denial of choice), to assess the probability of selected alternatives. A. Giddens believes that the concept of "danger" reflected risky action, the result of which may be favorable or threatening consequences [17].

The danger, on the one hand, is a component of risk and can be both realized or not; on the other hand, it is the influence of negative factors whose causes are external, for example, natural disasters [2]. Of course, an important first aspect of the phenomenon is that it is related to human activity and, therefore, has a direct bearing on risk. That is why the psychological determinants of awareness and assessment of the situation as a dangerous or uncertain are the subject of our study.

G. Solntseva understands risk as a decision to act in a situation, which is assessed by individual as dangerous, and also as the choice between possible options [13]. Traditionally it is accepted to distinguish the following types of

sources of danger on the peculiarities of their manifestation [11]: natural, man-made, ecological, biological and social hazards. In the monograph G. Solintseva and T. Kornilova [14] a classification of the danger sources (the random coincidence of circumstances and human action) is given. They propose to divide hazardous situations into accidents (occurring accidentally) and situations of risk (arising as a result of human actions).

Thus, danger is an objective category, which really exists outside the consciousness of a person and independently of his or her will. Psychological risk is always subjective, because it acts as a person's assessment of a deed, conscious choice, taking into account possible alternatives.

The risk is inextricably related to the daily activities of a person, his or her tendency to make various decisions. We often risk (as we make the decision to act in dangerous situations, and get into them – a compelled risk), since the action is necessary in the absence of complete and reliable information, possible influence of the external environment and occurrence of various kinds of undesirable situations, that is, in conditions of *uncertainty*.

It is necessary to highlight some of the most significant sources that contribute to the occurrence of uncertainty: 1) limited, insufficient material, financial, labor and other resources in the adoption and implementation of decisions; 2) the relativity of the process of human cognition of the surrounding reality; 3) impossibility of unambiguous cognition of the object; 4) relative limitation of conscious activity of individual, existing differences in psychological mindsets, ideals, intentions, assessments, stereotypes of behavior.

The sources of uncertainty, can be both external and internal in relation to the subject. According to the four-component model of uncertainty sources developed by A. Volkov, Yu. Mikadze and G. Sointseva, there are several sources of internal uncertainty associated with the cognitive and motivational component, the content of subjective experience, the operational component of the subject (plans, strategies and tactics) [12]. External sources of uncertainty include, first of all, informational and temporal uncertainty [15].

Informational uncertainty sources include objective deficits or excessive information, lack of time of receipt or updating of information, objective or subjective shortage of time in recognition, analysis and evaluation of information, subjective uncertainty, determined by semantic or pragmatic characteristics of information [16].

As O. Tyagunov notes, the situation that requires a decision from the subject is always characterized by uncertainty, and the procedure of choice is limited to the ways to overcome it. The author considers the following types of uncertainty: first, the uncertainty of the result, when alternatives to the choice and their probability are known; and, secondly, uncertainty caused by incertitude in the event when the probability of a result of an activity is unknown [15].

N.F. Naumova determines the subjective conditions that block the subject's ability to reduce the level of uncertainty, namely: the restriction of the "free" choice: the determination – the restriction to the past; teleology - restraining the future; irreversibility – the limitations of the present; consistency - limitation of logic; hierarchy – resource constraints; inequality is a limitation of quality [8].

In fig. 1 shows the results of the theoretical analysis of the factors of subjective assessment of the risk situation.

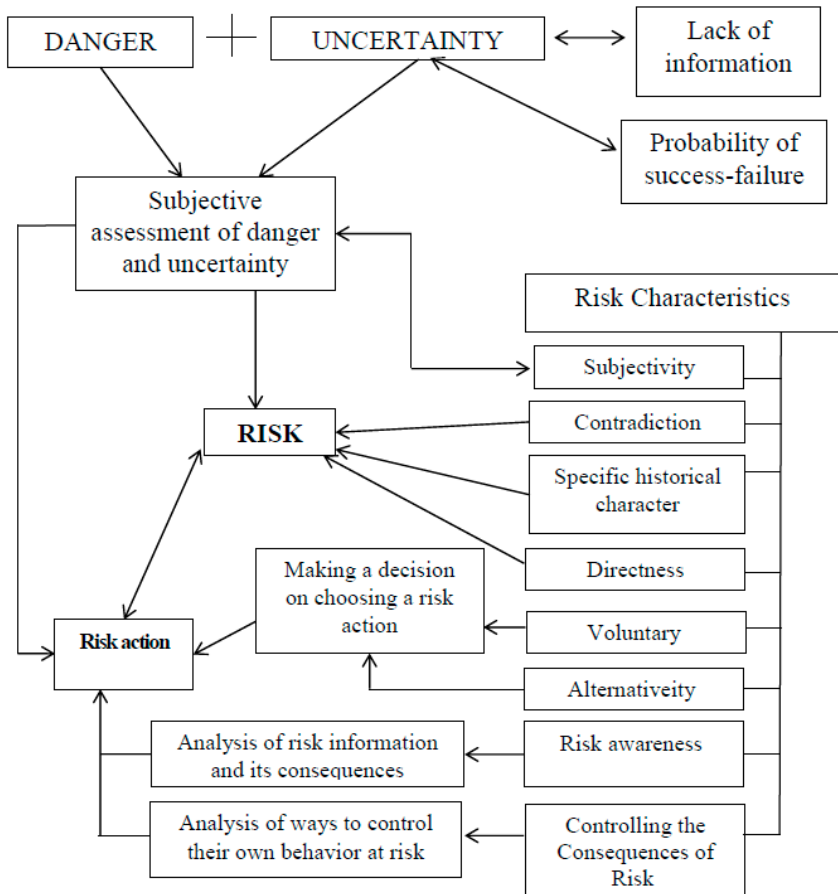


Fig. 1. Model of risk behavior, caused by a subjective situation as uncertain or dangerous.

The concept of risk is due to the essential characteristics of its phenomenon (subjectivity, contradictions, specific historical nature, directness, voluntariness, alternatives, awareness of risk, controllability of the effects of risk) and a subjective assessment of danger or uncertainty. A risky behavior of the individual is implemented on the basis of a decision to choose a risk action, as a result of the analysis of information about risk and its consequences, as well as through analysis of ways to control their own behavior in risk conditions. Consequently, the analysis of the psychological nature of risk behavior in general and of a certain risk action in particular is impossible without determining the factors of subjective assessment of the situation as uncertain or dangerous.

Research methods. To study the peculiarities of subjective assessment of situations as uncertain or dangerous, a questionnaire (situational test) was created. Test contains 10 situations to assess for the degree of uncertainty or danger on the Likert scale, where 1 – the situation is completely safe, it is certain enough and 5 - very dangerous and uncertain situation. The psychometric sample was 2685 people aged 14 to 60 years.

Checking the *reliability* of the questionnaire showed a high degree of internal consistency of the presented situations, which compiled its items. Cronbach's Alpha for the scale, which includes all 10 points, amounted to sufficient 0,793.

Retest reliability of the questionnaire. Re-testing of the sample (100 people) was conducted at intervals of 1 month. The correlation between the results of the first and second tests was at the level of $r=0,862$, which indicates a high retest reliability of the questionnaire.

Convergent and discriminatory validity of the situational test "Subjective assessment of situations as uncertain and dangerous" was verified by identifying correlations of the indicator of subjective assessment of situations as uncertain and dangerous with the indicators of risk tendency by O.P. Sannikova, S.V. Bykova questionnaire [12], and also by our original method [1], the indicators of propensity to extreme and risky behavior of M. Zuckerman's questionnaire [3] (convergent validity) and indicators of tolerance to uncertainty questionnaire (discriminant validity) [6].

There is no statistically significant relationships between tolerance to uncertainty and subjective assessment of situations of uncertainty and danger ($-0,04$, $p > 0,05$). A number of negative correlations have been established between subjective assessment of situations of uncertainty and danger and the search for acute sensations ($-0,11$, $p < 0,001$), intolerance of monotony ($-0,15$, $p < 0,001$), search of new experiences ($-0,14$, $p < 0,001$), non-adaptive striving for difficulty ($-0,13$, $p < 0,001$), predisposition to health risk ($-0,10$, $p < 0,001$), everyday life risk ($-0,14$, $p < 0,001$), area risk ($-0,12$, $p < 0,001$), communication risk ($-0,07$, $p < 0,01$), emotional ($-0,18$, $p < 0,001$), cognitive ($-0,09$, $p < 0,001$), con-

ative (-0,08, $p < 0,001$) and control and regulatory (-0,10, $p < 0,001$) components of risk tendency.

Construction of the standard scale. Table 1 presents descriptive statistics "Subjective assessment of situations as uncertain and dangerous". The marginal values for all scales are 25-39 points.

Table 1
Descriptive statistics of «Subjective assessment of danger and uncertainty Test»

Indicators	Mean	Min	Max	Std.Dev.
Subjective assessment of danger and uncertainty situations	32,49	10	50	7,70

The next task of our study was to determine the age-specific peculiarities of subjective assessment of situations of uncertainty and danger. Table 2 shows that there are age patterns of risk assessment.

Table 2
Indicators of subjective assessment of the situation as uncertain or dangerous

Indicators	Agegroups			H
	Adolescence (teenagers) (n=897)	Early adulthood, (n=939)	Middle adulthood, (n=849)	
Subjective assessment of danger and uncertainty situations	30,42±8,09	33,81±7,91	33,23±6,52	88,69***

***- $p < 0,0001$

At the stage of adolescence (12-19 years) the risk is assessed by the person as the least dangerous. The proposed 10 situations, which are determined by a high degree of uncertainty and danger, are judged subjectively by adolescents and young men as moderately threatening, dangerous and uncertain compared to the older age groups. Consideration of a life situation as uncertain, such as having a threat or negative consequences, is more characteristic of the period of adulthood. According to the results of the test, it has been shown that adolescents and young people are generally more tolerant of new, difficult or problematic life situations, and those situations that older age groups may regard as dangerous, for adolescents and young people, are generally more acceptable.

Indicators of subjective assessment of situations as dangerous and undefined at the stage of early adolescence are higher than at the stage of adolescence at a statistically significant level ($t = 9,04$, $p < 0,0001$). Consequently, 20-40-year-olds are characterized by a more cautious. Difficult life situations cause them greater anxiety, are evaluated more threatening than in adolescents.

There are no statistically significant differences in the indicators of subjective assessment of situations as uncertain or dangerous in older age groups ($t = 1,66$, $p = 0,09$). Consequently, the adults loses the ability to deal with risky situations more courageously and sensibly, becomes less easily integrated into them, becomes more balanced, rational, and cautious.

The next task was to analyze the results of multiple regressions for indicators of subjective assessment of situations as uncertain and dangerous.

A number of predictors of subjective assessment of situations as uncertain and dangerous are determined. The most influential here was the variable "Emotional component of risk tendency" ($\beta = -0,122$; $t = -5,417$; $p < 0,00001$). Risk situations, which are caused by a high degree of uncertainty and danger, are characterized by a high degree of influence on the emotional states of the individual. Emotional component of predisposition to risk as a dynamic characteristic of the individual, in turn, coloring the perception of risk situations, causes a subjective assessment of situations as uncertain or dangerous.

The second most significant predictor of subjective assessment of situations as uncertain and dangerous is intolerance of monotony ($\beta = 0,081$; $t = -3,687$; $p < 0,001$). Consequently, the intolerance of a monotonous way of life as a characteristic of a predisposition to extreme behavior affects tolerance towards risk situations.

Significant contribution of risk tendency in the interpersonal sphere was revealed in the subjective assessment of situations as uncertain and dangerous. Individual with a tendency to risk in the field of communication and interaction with others assesses the situation of life as more risky ($\beta = 0,078$; $t = 3,294$; $p < 0,001$).

The risk in the sphere of everyday life has a reverse effect on the subjective assessment of situations as uncertain and dangerous ($\beta = -0,049$; $t = -2,114$; $p < 0,05$). Consequently, higher tendency to risk in the everyday life sphere causes the greater underestimates the degree of danger and uncertainty in the life situation.

Non-adaptive striving for difficulty ($\beta = -0,054$; $t = -2,467$; $p < 0,05$) has a negative impact on the perception of risk situations. The more an individual aspires to difficult life situations, the less he appreciates the uncertainty and danger of such situations.

In general, the probability of a subjective assessment of situations as uncertain and dangerous can be predicted by the following regression equation:

Subjective assessment of danger and uncertainty situations = 42,58 + 0,17
Risk tendency in the interpersonal sphere – 0,40 Intolerance for monotony – 0,25
Non-adaptive striving for difficulty – 0,17 Risk tendency in everyday life – 0,14
Emotional component of risk tendency.

Conclusions. The subjective assessment of situations as uncertain and dangerous is characterized by the perception of life situations as uncertain and dangerous, manifested as intolerance to risk situations, the rejection and avoidance of such situations. The low subjective assessment of situations as uncertain and dangerous is positively associated with predisposition to risk and is due to its informative and formal-dynamic qualities.

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