

## ORIGINAL ARTICLE

# THE INFLUENCE OF UNHEALTHY NEUROTICISM ON THE PECULIARITIES OF PERSONAL DECISION MAKING

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**ABSTRACT**

**The aim:** To determine the influence of unhealthy neuroticism (the high level of personal neuroticism) on the properties of the decision-making process, to identify the differences in the decision-making process features of persons with high and low levels of neuroticism.

**Materials and methods:** A comparative design was used with two contrasting groups, which differed in the level of neuroticism. Causal relationships were defined using one-way analysis of variance (ANOVA). The methods «Diagnosis of the neurotic personality tendency» (L. Vasserman), «Diagnosis of decision-making features» (D. Myroshnyk, O. Savchenko), «Locus of control» (O. Ksenofontova) were used for diagnosis.

**Results:** It was identified that individuals with a high level of neurotic personality tendency have exhibited less self-control in the decision-making process ( $p < 0.01$ ), have formed a pessimistic expectations of the ways in which decisions should be fulfilled ( $p < 0.01$ ). A high level of neurotic personality tendency has occurred mostly in students with a high level of external locus of control ( $p < 0.01$ ), a low assessment of self-competence ( $p < 0.01$ ), low internality in the field of interpersonal relations ( $p < 0.05$ ), unformed willingness to overcome difficulties ( $p < 0.05$ ). The level of neuroticism is an important factor of the peculiarities of decision-making process (self-control ( $p < 0.001$ ) and optimistic expectations ( $p < 0.02$ )). The general level of internality has determined the level of neurotic personality tendency ( $p < 0.02$ )

**Conclusions:** Unhealthy neuroticism, which manifests itself in a high level of neurotic personality tendency, is a risk factor of mental health, and it prevents timely make appropriate decisions. The high level of external locus of control mediately (through increasing the level of neurotic personality tendency) affects the procedural and effective properties of the decision-making process.

**KEY WORDS:** mental health, neuroticism, unhealthy neuroticism, neurotic personality tendency, decision-making process, diagnosis of the neuroticism level, self-reflection, self-control, locus of control, personal expectation

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**INTRODUCTION**

In modern psychological studies, mental health is considered as the optimal state of personality life, which is characterized by activity, harmonious development, balance of various aspects and areas, the full expression of vital forces, etc. [1-3]. Mental health support, according to researchers D.V. Kolesov and D.D. Kolesov, has fulfilled itself through “health processes” (self-support and self-preservation), aimed at ensuring the “dynamic stability” of the personality functioning (stability of appearance, behavior, social relations, etc.) [2-16]. Among the personal risk factors for mental health, most foreign researchers have distinguished the level of neuroticism [7, 13, 14]. However, the correlation between neuroticism and indicators of mental health is not linear, as people with high neuroticism often show a high sensitivity to stressors and threatening situations, anxiety about their own health, which have a positive effect on their physical condition, because they control their behavior and seek medical attention in a timely manner [8, 9, 17, 18]. Modern studies have proved that there are two forms of neuroticism: healthy and unhealthy. Healthy neuroticism

is provided by a combination of high emotional excitability and high awareness, which are the positive factors in maintaining and promoting mental health. Unhealthy neuroticism has an adverse effect on the well-being and physical health of the individual due to inattention to their inner conditions, self-treatment, attempts to reduce the mental stress level treatment of alcohol and tobacco. The cause of unhealthy neuroticism is a low level of self-reflection, unformed personal ability to be aware of their own emotions, experiences and thoughts [10]. According to O. Savchenko, self-reflection expresses itself in ability “to develop understanding and interpretation of different life events” [15], which helps people to reduce an external and internal uncertainty in situation. The high self-reflection is the necessary condition for mobilization of necessary resources, maintenance of well-being and high performance, enhancing their activity at limited resource settings [15].

The form of unhealthy neuroticism expression is a high level of neuroticism as a pronounced predisposition to neuroses, functional disorders of mental activity caused by traumatic events. According to V. Mendelevich, the reasons of formed neurotic personality tendency are im-

mature personal protective mechanisms and inadequate anticipation of future results of their own actions [5]. Despite the numerous research works in this sphere of study the factors and conditions, which increase the level of neuroticism, inadequate attention of researchers was paid to study of key issues of changes in the characteristics of decision-making under the influence of an increase in the level of neuroticism. Does negative (unhealthy) neuroticism affect the procedural and effective aspects of decision making? We consider this issue is highly topical because obtained results can help to find a way out of the vicious cycle: “increasing neuroticism – experiencing health problems – trying to solve problems – getting stuck in decision-making – increasing neuroticism”.

The high level of neuroticism affects all areas of personality. In the emotional sphere, we can observe high excitability, which is manifested itself in anxiety, irritability, experiencing high inner tension. Egocentric orientation, which expresses in hypochondriac fixation on somatic sensations, excessive attention to shortcomings and problems, prevails in the motivational sphere of personality. The thoughts that relate to the negative course of events, overestimation of past failures and underestimation of the probability of future success dominate in the cognitive sphere. In the behavioral personal sphere, the individual shows lack of initiative, passivity, social cowardice, dependence on others. Obviously, such patterns affect the decision-making process. The impact may affect the procedural properties, such as: consistency, timeliness, efficiency, and effective aspects of the decision-making process (adequacy to the real conditions, complexity, probability of successful enactment, etc.).

## THE AIM

The aim of the study is to determine the impact of unhealthy neuroticism (high neurotic personality tendency) on the properties of the decision-making process, to differentiate the features of the decision-making process of people with high and low levels of neuroticism.

We assumed that a person with a high level of neurotic personality tendency will make decisions based on other people's opinions, so will demonstrate more dependent behavior, will inadequately assess the likelihood of its successful implementation in the future (excessively overestimate the probability of success or completely devalue it), will not adhere to a certain algorithm, and therefore demonstrate chaos and impulsiveness in decision-making, or, conversely, get stuck at the stage of the alternatives analysis.

## MATERIALS AND METHODS

The scheme of comparative study with contrast groups, which differed in the level of neuroticism, was chosen to test these hypotheses. The personal level of neuroticism was diagnosed using the method of “Diagnosis of the neurotic personality tendency” (L. Vasserman). The method

“Diagnosis of decision-making features” (D. Myroshnyk, O. Savchenko) was used to determine the procedural and effective aspects of decision-making process. It includes three scales suitable for diagnosing the specific features of the decision-making process: the level of self-control (ability to control negative experiences, regulate the level of affective arousal), optimistic expectations (belief in the feasibility of the decision, which reduces emotional stress, transforming it into operational tension, which helps a person work at a rapid pace, timely activate the necessary resources, adequately distribute attention, etc.), independence (confidence in the correctness of the decision, willingness to stand their ground under the influence and pressure of others).

The research involved 74 students of Kyiv National Economic University named after Vadym Hetman. They studied the different specialties (Economic, Management, Psychology) of different courses (first, second and third year of studying). The study was conducted online in April-May 2021, during a lockdown, hence in a condition of the social constraints caused by the COVID-19 epidemic. We assumed that social isolation would increase the neurotic personality tendency (the high level of neuroticism) due to the increase of adverse factors (experiencing one's own insecurity, social isolation, increased psycho-emotional and mental work load, etc.). However, the obtained results fully correspond to the nature of the normal distribution according to the single-sample Kolmogorov-Smirnov criterion ( $\lambda = 0.944$ ). Thus, we cannot report that the number of students with a high level of neurotic personality tendency increases in the sample. According to the level of neurotic tendency, two contrast groups of students were formed: with a high level of neurotic tendency (11 people, 14.9% of the total sample) and with a low level (18 people, 24.3%). The Mann-Whitney U-test was used to identify significant differences between the levels of expression of certain properties.

One-way analysis of variance (ANOVA), from the STATISTICA 13.0 package, was used to establish causal relationships. Additionally, the “Locus of Control” technique (O. Ksenofontova) was used to diagnose factors that could potentially determine the level of neurotic tendency. This method identifies 17 aspects of the locus of personal control, among which the most important for our study are the general level of internality, willingness to overcome difficulties, internality in the field of achievement and failure, competence and responsibility in the field of interpersonal relationships and others.

## RESULTS

The results of psychological diagnostics by the method “Diagnosis of decision-making features” are presented in table I.

According to the obtained results, students with a low level of neurotic personality tendency demonstrate a higher level of ability to regulate their emotions and behavior ( $Md = 5$ ) than individuals with a high level ( $Md = 2$ ). Making a final decision leads to calming, reducing the level of

**Table I.** Features of decision-making properties of students with different levels of neurotic personality tendency

Nº	Peculiarity	Median in the group with low level of neurotic tendency (N=18)	Median in the group with high level of neurotic tendency (N=11)	Empirical value Mann-Whitney U-test	Significance value (alpha level)
1	Self-control in the decision-making process	5	2	33.5	0.01
2	Optimism in the result expectation	4	2	42.5	0.01
3	Independence in the decision-making process	3	4	71.0	-

**Table II.** Differences in the level of internality in groups with different level of neurotic personality tendency

Nº	Property	Median in the group with low level of neurotic tendency (N=18)	Median in the group with high level of neurotic tendency (N=11)	Empirical value Mann-Whitney U-test	Significance value (alpha level)
1	General level of internality	27	23	47	0.01
2	The level of interpersonal competence	5	3	37.5	0.01
3	The level of internality in the field of interpersonal relations	10	8	50.5	0.05
4	The level of willingness to overcome difficulties	6	4	56.5	0.05

inner tension. As Yu. Glazunov notes, “every decision is aimed at relaxing the tension of a certain significant situation and the risk associated with it” [1]. However, the high level of neurotic personality tendency blocks an individual’s ability to quickly regulate level of inner over tension and feeling calm. The ability to self-regulate decreases as the person loses the ability to use “mental means of reflection and modeling of reality” [12]. Students with low level of ability to regulate their emotions structure their decision-making process in such a way that it lead to an increase the tension, as their thoughts about possible mistakes are activated, their negative expectations of failure are formed. Thus, a high level of inner tension prevents young people from controlling their negative experiences, normalizing their emotional state in a decision-making situation, they are stuck in the decision-making process for a long time because they cannot gather the necessary information, compare options and choose the best alternative.

As a result, people with a low level of neurotic personality tendency form more optimistic expectations about their ability to implement outcomes and achieve a positive result ( $Md = 4$ ). Young people with a high level of neurotic tendency, on the contrary, underestimate their ability to succeed ( $Md = 2$ ), they much more often focus their attention on adverse factors, on their own failures and mistakes of team members, they expect and therefore try to avoid criticism from others, afraid to get stuck in situation of choice, waste time, and therefore they can make reckless impulsive decisions.

It is interesting that the level of neurotic personality tendency did not affect such an aspect of the decision-making

process as dependence-independence of outcomes from the opinions of others. It can be assumed that independence-dependence is a factor, which determinates by personality’s properties; it is not affected by the level of emotional tension. We also suggested that the level of neurotic tendency depends on the dominance of external fundamental attitudes, such as: “I am not able to control the events of my life”, “My result depends on the coincidence of circumstances, the actions of others”, etc. Such mind-sets prevent individuals from quickly mobilizing efforts, structuring their activities. Activating of external attitudes leads to slowdown in the decision-making process, extreme increasing the tendency to procrastination. In order to test this hypothesis, we have diagnosed the property “internality – externality” by the method of “Locus of Control” (O. Ksenofontova) in groups of people with different level of neurotic personality tendency. The obtained significant differences are presented in table II.

The results show that our hypothesis has been confirmed. Indeed, students with a high level of neurotic tendency have a higher general level of externality ( $U = 47$ ;  $p < 0.01$ ) and a more pronounced externality in explaining events in the field of interpersonal relationships ( $U = 50.5$ ;  $p < 0.05$ ). Individuals with a low level of neurotic tendency show a more pronounced internal locus of control, demonstrate a greater willingness to take responsibility for the consequences of their actions, to rely on their own strength. Also, they appreciate their competence in interpersonal relationships more highly, perceive themselves as quite effective in forming and maintaining social contacts ( $Md = 5$ ), than people with a high level of neurotic ten-

**Table III.** The results of One-way analysis of variance (by factor of neurotic personality tendency)

Nº	Peculiarity of the decision-making process	F (empirical value)	p (significance value)
1	Self-control in the decision-making process	8.78	0.0004
2	Optimism in the result expectation	4.11	0.02
3	Independence in the decision-making process	1.44	0.24

**Table IV.** The results of One-way analysis of variance (by factor of the general level of internality)

Nº	Peculiarity of the decision-making process	F (empirical value)	p (significance value)
1	Self-control in the decision-making process	2.99	0.06
2	Optimism in the result expectation	2.99	0.06
3	Independence in the decision-making process	0.22	0.79

gency ( $Md = 3$ ). The consequence of higher competence ( $U = 37.5$ ;  $p < 0.01$ ) is the fact that students with a low level of neurotic tendency have much more formed willingness to overcome difficulties ( $U = 56.5$ ;  $p < 0.05$ ).

The results of One-way analysis of variance (ANOVA) have proved that the level of neurotic personality tendency can be considered as a factor that determines the features of the decision-making process. The results are presented in table III.

As we can see, the level of neurotic personal tendency determines the ability of a person to regulate their emotional state, normalize the emotional background by suppressing negative emotions, relaxation, switching attention to other objects ( $F = 8.78$ ;  $p < 0.001$ ). Also, the state of high neurotic tendency has a significant impact on the anticipative aspects of the decision-making process. Underestimation of the probability of success and overestimation of possible negative consequences have tendency to increase with growth in level of neurotic personality tendency ( $F = 4.11$ ;  $p < 0.02$ ). The results of One-way analysis of variance confirm that the level of neurotic tendency does not affect the orientation to others in decision-making. Thus, we can state that the decrease in mental health due to increased neurotic personality tendency affects the peculiarities of decision-making process: students find it more difficult to regulate their emotional state; they underestimate the likelihood of future success because their attention focuses only on expectations with negative consequences, opportunities for failure.

According to the results of One-way analysis of variance, which are presented in table IV, we can say that the general level of internality does not directly affect the peculiarities of the decision-making process, but the external locus of control may affect indirectly by increasing the level of neurotic personality tendency. In our research it was found that the level of internality has a significant effect on the level of neurotic personality tendency ( $F = 4.09$ ;  $p < 0.02$ ).

## DISCUSSION

Experiencing the state of stuck in the decision-making process increases the level of inner tension, which stim-

ulates the growth in feeling uncertainty in their ability to overcome this situation. People get the feeling that the situation is out of their control, that they cannot effectively manage the events of their life. Note that such thoughts lead to a state of functional deficit, described by H. Heckhausen. Functional deficit manifests itself in the experience of personal helplessness due to the recognition of own nonnormality (discrepancy between obtained results and certain standards), in feeling uncertainty in own ability to overcome a difficult task, in anticipation of failure [6].

The unwillingness of people with a high level of neurotic personality tendency to overcome failures and difficulties is explained by the anticipative concept of neurosis [5], according to which neurotic disorders are the result of inadequate mechanisms of anticipation, inability to effectively predict the results of their activity in uncertain situations, "unpredictable personality events" [4]. Inherently, it also affects the decision-making process, the situation of choice one among the set of alternatives, as the subjects have a reduced ability to form forecasts for the future and anticipate possible changes in operating conditions. V. Mendelevich notes that the function of anticipation is to reduce the level of situation uncertainty, which is realized through the activation of the intuitive prediction mechanisms. As the level of neurotic personality tendency increases, the ability to use intuitive mechanisms related to implicit learning, heuristic decision-making strategies and unarticulated knowledge is blocked. According to the theory of bounded rationality, in uncertain situations a person can make an irrational decision because he (she) does not know how to use their intellectual resources to the fullest. D. Kahneman and K. Stanovich have explained such incompetence with "cognitive laziness" [11] or "cognitive miser" [16]. Scientists have associated the personal reluctance to analyze the necessary information fully and to consider alternative scenarios events with a lack of critical thinking (non-acquaintance of the scientific thinking rules, logical reasoning principals). The reason of cognitive laziness can be in the inability to assess the correctness of reasoning and evidence, in the presence of certain defective patterns of behavior ("virus programs»). K. Stanovich has pointed out that such cognitive misers easily become objects

of other people's manipulation, because the bright labels are paid people's attention and give opportunities others "to hold the anchors in their hands" [16].

## CONCLUSIONS

Based on the obtained results of the study, we can argue that the increased level of neurotic personality tendency negatively affects the peculiarities of the decision-making process. As the level of unhealthy neuroticism increases, the individual's ability to regulate their own emotional state and behavior little by little decreases, and pessimistic predictions about the probable results of their actions stably increase. This creates a state of functional deficit, in which a person does not try to optimize their mental resources and makes decisions based on a simplified model of the situation. External locus of control is a factor that increases a neurotic personality tendency. The reason of forming of this propensity is the attitude, according to which person cannot control the events of their life, the outcomes of activity depend on a favorable coincidence, not on their efforts and competence. Such attitudes also limit a person's ability to find ways to overcome a difficult situation mobilize and update resources.

From the perspective of our research results, we can speculate that increased neurotic personality tendency contributes to a decrease in the ability to make rational decisions; the verification of this hypothesis will be the goal of our next scientific research.

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## Conflict of interest:

The Authors declare no conflict of interest.

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