

Peculiarities of Self-Image Dependence of the Students with High Level of Neuroticity

Oleksandra KUZO¹,
Liubov KUZO²,
Olha ZAVERUKHA³

¹Ph. D. in Psychology, Assistant Professor, Lviv State University of Internal Affairs, Lviv, Ukraine, lesyabasyuk@ukr.net
<https://orcid.org/0000-0001-7028-7180>

²Ph. D. in Psychology, Associate Professor, Lviv State University of Internal Affairs, Lviv, Ukraine, kuzolyubov09@gmail.com
<https://orcid.org/0000-0003-1554-3262>

³Ph. D. in Psychology, Lecturer at the Department of Practical Psychology and Pedagogy, Lviv State University of Life Safety, Lviv, Ukraine, olichka.zaverukha@gmail.com
<https://orcid.org/0000-0003-2701-2215>

Abstract: *The article presents the authors' theoretical model of Self-image functioning with a peripheral part on the border of the relationship between the Self and the significant other person. An experimental study of the peculiarities of Self-image dependence is provided. The study involved 150 students of Lviv State University of Internal Affairs. Peculiarities of self-relation (dependence of the Self-image on significant other people) of students with high and moderate levels of neuroticism have been studied. The method of rapid diagnosis of neurosis (K. Heck; H. Hess), methods of self-assessment of mental states (according to H. Eysenck), author's experimental study of the "dependent" characteristic of the Self-image were used. Correlation analysis and Mann-Whitney comparative analysis were used for statistical data processing. As a result of the ascertaining experiment, it was found that the peripheral part of the Self-image of boys and girls with a high level of neuroticism (HN) is more dependent on the opinion of reference other people (unstable Self-image) than of persons with moderate neuroticism (MN) and this is accompanied by high levels of anxiety, frustration and rigidity. The hypothesis that students with a high level of neuroticism will more often depend on the opinion of significant others than students with a moderate level of neuroticism was confirmed. The studentship is a sensitive period for effective psycho-correctional influences in order to form a stable, positive and independent Self-image, and therefore, the quality use of psychological services of psycho-corrective influences can significantly affect well-being, learning and quality of life. The self-awareness of students with a high level of neuroticism should be considered both as the main object and as a fundamental support for psycho-correctional influence, and the resource of this influence should be sought in an adequate relationship.*

Keywords: *Self-concept; Self-image; high level of neuroticism; moderate level of neuroticism; students; institution of higher education.*

How to cite: Kuzo, O., Kuzo, L., & Zaverukha, O. (2020). Peculiarities of Self-Image Dependence of the Students with High Level of Neuroticity. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 11(4), 01-16.
<https://doi.org/10.18662/brain/11.4/138>

1. Introduction

The current socio-psychological conditions in Ukraine and in many other countries of the world, associated with the rapid pace of life, economic instability, political conflicts and the rapid outspread of COVID-19 are becoming increasingly critical and threatening to the psychological functioning. Today, the process of mass neurotization of the population no longer surprises anyone and is perceived, rather as a kind of lifestyle with an extraordinary level of emotional tension. According to European data, the number of patients with neuroses is 4-5 times higher than the number of other diseases, despite the fact that many disorders of the neurotic nature remain out of sight of neurologists (Semke, 2001). And this is not the latest data.

In such difficult conditions, special attention deserves the state of mental health of student youth, which is a special age and social stratum, characterized by an increased risk of mental health disorders caused by increased sensitivity due to age, high mental load, mental tension (Karpenko et al., 2012; Smith et al., 2017; Walker et al., 2017). The problems of students arise interest of contemporary researchers in various aspects (Tsilmak et al., 2020; Topuzov et al., 2020; Gonta & Bulgac, 2019; Voloshenko et al., 2020).

The phenomenological and syndromological basis of personal response to changing conditions of the social environment largely depends on the internal awareness, consistency, stability and integration of the individual (related to its Self-concept). Socio-economic instability largely becomes psychological instability. It has a particularly negative impact on the formation of young people, when seemingly regular age-related processes of mental integration lose their function. It is an indisputable fact, that mental and psychological health of student youth has a significant impact on their academic performance, job search and quality of life in general. And no matter how perfect the learning process is, it is largely the mental health of young people that determines how well it can be used. Therefore, the focus of our study is to identify the features of the Self-image stability under the influence of the referent others of boys and girls with high level of neuroticism.

2. Literature review

From a clinical point of view, Liedloff points out that the collective term «neurosis» includes a wide range of different psychological symptoms and diseases, when not only biological but also psychological and social laws

are violated (Liedloff, 1991). The issue of creating a basic contractual model that would facilitate the dialogue among experts on neurotic disorders remains relevant today (Wegemer, 2020; Simoncic et al., 2014). It is with the Self-concept that most experts in this field associate the basic defect in terms of neuroses (Adler, 2002; Horney, 1994; Rogers, 2012; Kohut, 2009; Kernberg, 2001; Zaharov, 2000; Mjasishchev, 2013; Kim et al. 2020; Basiuk, 2009; Jeronimus et al., 2013). However, their researches in most cases are based on the clinical position of the vision of neuroses. We will mainly use the concept of «neuroticism» (which is much broader than the concept of «neurosis» or «neurotic disorders» in the narrow clinical sense of these words) identifying it with «neurotic clients». There are few such studies today (Vinkers et al., 2014; Kopala-Sibley et al., 2020). Therefore, we shift our emphasis from medicine and symptomatic treatment to a more psychological sphere, where understanding the mechanisms of formation of personality traits can help to find the deep patterns of neuroticism.

Understanding the disease and the healing process as something that arises in interaction and communication with people is a leading position not only in the works by Sullivan (2000), but also Mjasishchev (2013), Kohut (2009) and others. The mechanisms of the «neurotic self-consciousness» formation become clear through the rejection of the true Self. Instead, Pseudo-Self emerges, whose relationship is built through clearly defined defensive strategies to avoid anxiety or maintain self-esteem, which is initially «defective». This can happen in quite different ways: analysis of problems without delving into them (rationalization, cynicism), symbiotic attachment to others to find early feelings of child safety or avoiding problems by escaping into disease, causing harm to others through their own tension (aggression) (Gelan, 2009; Popovici, & Buica-Belciu, 2013). Neurotic individuals are quite resourceful in finding similar ways to deal with anxiety and inability to make mature decisions (Liedloff, 1991). On the other hand, the decisions of neurotics are often quite effective, but require excessive waste of energy, which deprives them of interest in life, because the main task is still to overcome anxiety (Aldinger et al., 2014).

The origin of such mechanisms is rooted in early childhood and depends on the sensitivity or insensitivity of Self-objects (important figures for the child - mother and father or people who replaced them) to child's needs. Fighting for the love of important other people, the child is ready to give up their own needs and does so in a way parallel to the formation of Pseudo-Self (Kohut, 2009). Thus, interpersonal relationships form the basis of a neurotic process that can eventually be engraved in the Ego-syntonic

shell when the concept of «failed life» is formed (Pospelova, & Kosyanova, 2017; Ryum et al., 2014; Stan, 2015).

We can start talking about the clearly carved features of neuroticism from a young age, when the central psychological neoplasm is already a stable self-awareness and a stable self-image, when own model of personality appears, by which the attitude to oneself and others is marked (Cuperman et al. 2014). The **main task** of the article is: to trace the peculiarities of self-relation (dependence of the Self-image) from significant others of students with a high and normal level of neuroticism, that is to find out the features of the dynamic component of the Self-image, and its peripheral part.

The **hypotheses** are assumed that students with high level of neuroticism are more often tend to depend on the opinions of significant others than students with a medium and moderate level of neuroticism. Understanding the relationship between Self-image dependence and the level of neuroticism can be a professional tool in correcting the level of neuroticism, and thus improving the quality of life of student youth.

Based on the analysis, synthesis and generalization of the theoretical material, a theoretical model of the functioning of the Self-image with a peripheral part on the border of the relationship between the Self and the significant other was constructed (Fig. 1). The core part of the Self-image in this model includes what is inherent in all people and has the potential for development: the tendency to self-actualization, the desire for power (Maddi, 2002) and those innate characteristics that are called the constitution in the literature, as well as basic ideas about themselves, which are formed as a result of physical well-being or ill-being of the organism in the early stages of ontogenesis (Bodalev, 2000; Kernberg, 2001).

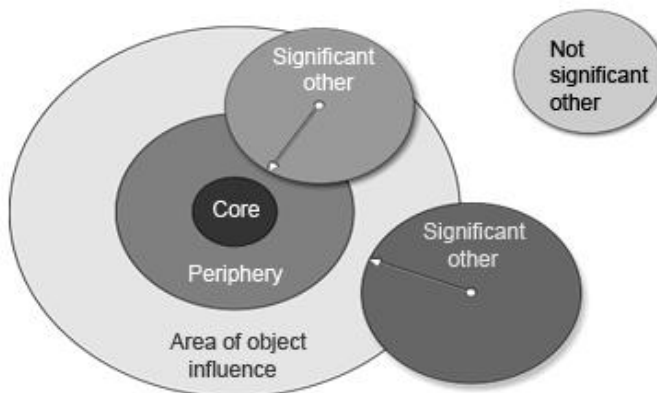


Fig. 1. Theoretical model of the functioning of the Self-Image with the peripheral part on the border of the relationship of Self - significant other.

Source: authors' own contribution

The peripheral part of the Self-image is called the zone that surrounds the core of the Self (as a source of basic self-awareness and personal integration) and is responsible for creative adaptation in reference relations. New experience enters here, identity is enhanced through this area, and behaviour is corrected. When a significant other fall into the zone of object influence, it can lead to changes in the peripheral part of the Self-image. A significant other is understood as a person with whom there is an emotional "intimacy", however, not only from the position of support ("Supporting figure", "Sympathetic") but also from the position of frustration ("Frustrating figure", "Antipathetic"). On the one hand, the peripheral part is the adaptation zone, and on the other – the site responsible for the level of neuroticism.

This model makes it possible to substantiate the concept of neuroticism, the stability of the peripheral part of the Self-Image, and genesis under the influence of relationships that are significant for boys and girls. The stability of the Self-Image (as a manifestation of the Self-concept) and the level of neuroticism may be in a certain relationship. Of special importance is the issue of identifying the features of the stability of the Self-Image of boys and girls with a high level of neuroticism.

Thus, the theoretical analysis of the problem allows to assert that the issue of the stability of the Self-concept requires a comprehensive study and is a matter of selected theoretical logic, an understanding of the age features of the formation of a personality, the strength of external interference and mental norms.

3. Research Methodology

Classical test methods and questionnaires only are not enough for a comprehensive study of neuroticism, since a neurotic has the ability to distort reality in his "neurotic way." There is a need to supplement test methods with projective techniques and competently designed experimental research.

A group of respondents. The study involved 150 students of Lviv State University of Internal Affairs, aged 18-21, including 45 boys and 105 girls. The interviewees studied at the Faculty of Psychology. On the basis of cluster analysis, 2 groups of subjects were singled out: boys and girls with a high level of neuroticism (HN); boys and girls with a moderate level of neuroticism (MN).

Below we propose to consider the **general scheme of our research** (abridged version):

Stage I – Initial measurements.

The technique for express diagnostics of neurosis K. Heck; H. Hess (Rajgorods'kij, 2001).

"Self-assessment of mental states" (according to Eysenck) – determines the level of anxiety, frustration, aggression, and rigidity (Rajgorods'kij, 2001);

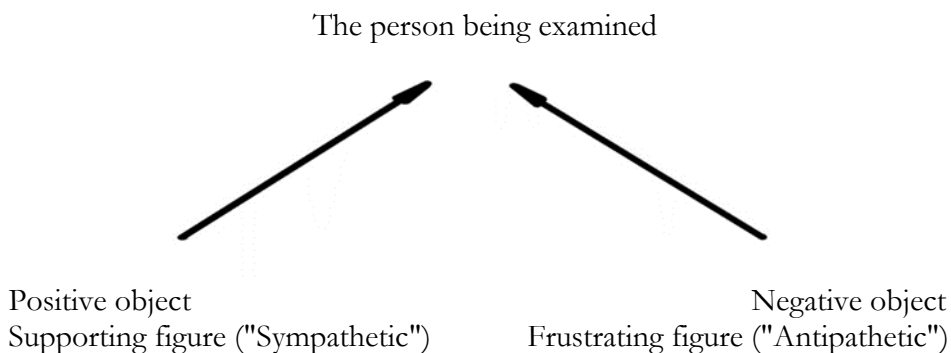
Stage II – Experimental study of "dependent" characteristics of the Self-Image (Exp. №1)

1) The respondents were offered the following instructions:

Remember your positive and negative traits. Rank them according to the suggested list. Put 1 point in front of the trait that is most inherent in you, 2 points – in front of the one that is slightly less inherent... and 17 – in the least inherent in you (Self 1).

2) The respondents chose two emotionally significant persons (the most pleasant and unpleasant of the group) and gave them a red (positive) and blue (negative) card.

3) Therefore, a triangle was formed, in which each subject had the opportunity to receive 2 feedbacks from important persons in the group (conventionally called "Sympathetic" S and "Antipathetic" A).



The selected persons made a personal portrait of the subject by ranking the same 17 features on separate cards. The respondents, having studied the "opinion of others about themselves", could express their comments and make adjustments, share their impressions through an emotional reaction.

4) At the end of the lesson, after the received feedback, the subject was given the task to re-evaluate himself/herself, ranking the above 17 features (Self 2).

The final card of the subject, after transferring all the data, is presented in Table 1.

Table 1. An example of the data obtained on the respondent X as a result of Exp. № 1

№	Features	Self 1	Red (S)	Blue (A)	Self 2
1.	Confiding	9	8	11	7
2.	Greedy	17	17	13	17
3.	Cheerful	5	4	17	8
4.	Indecisive	15	11	12	15
5.	Persistent	3	1	1	2
6.	Envious	16	16	9	16
7.	Sociable	6	3	15	6
8.	Shy	13	14	16	14
9.	Neat	4	9	8	3
10.	Vulnerable	7	15	7	11
11.	Anxious	14	12	6	12
12.	Brave	8	6	5	4
13.	Aggressive	12	13	14	13
14.	Careful	2	7	10	5
15.	Responsible	1	2	2	1
16.	Demonstrative	10	5	3	9
17.	Female (male)	11	10	4	10

We received similar results as a consequence of the Exp. №2 (after psychocorrective classes).

Stage III - Psychocorrective classes (training) (15 classes - 2.5 hours)

Stage IV - Final measurements:

- Method of express diagnostics of neurosis (K.Heck, H.Hess);
- “Self-assessment of mental states” (according to Eysenck);
- Study of the “dependent” characteristics of the Self-Image after training (**Exp. №2**).

In the present article the authors focus on the second stage of the study (although a comparison of the 1st, 2nd and 4th stages is involved). Correlation analysis and Mann-Whitney comparative analysis are used for statistical data processing. Initially, Spearman’s correlation was performed

for each student who was examined, as a result of which it became possible to obtain the following data: for example, Halia, 21.

Table 2. An example of the obtained correlations for a separate examined student before and after training ($p = 0.05$)

	Self 1	S	A	Self 2	Self 1a	S a	A a	Self 2a
Self 1	1,000000	0,776961	0,299020	0,921569	0,821078	0,825980	0,666667	0,769608
S	0,776961	1,000000	0,333333	0,852941	0,855392	0,794118	0,799020	0,857843
A	0,299020	0,333333	1,000000	0,468137	0,348039	0,406863	0,335784	0,372549
I2	0,921569	0,852941	0,468137	1,000000	0,794118	0,799020	0,767157	0,779412
Self 1a	0,821078	0,855392	0,348039	0,794118	1,000000	0,769608	0,718137	0,911765
Sa	0,825980	0,794118	0,406863	0,799020	0,769608	1,000000	0,772059	0,840686
Aa	0,666667	0,799020	0,335784	0,767157	0,718137	0,772059	1,000000	0,872549
Self 2a	0,769608	0,857843	0,372549	0,779412	0,911765	0,840686	0,872549	1,000000

Self 1- self-assessment of the examined before the influence of S and A (before the training);

S – evaluation of the examined by “Sympathizer” (before the training);

A – evaluation of the examined by “Anti-sympathizer” (before the training);

Self 2 – self-assessment of the examined after the influence of S and A (before the training);

Self 1a – self-assessment of the examined before the influence of S and A (after the training);

S a – evaluation of the examined by “Sympathizer” (after the training);

Aa – evaluation of the examined by “Anti-sympathizer” (after the training);

Self 2 a – self-assessment of the examined after the influence of S and A (after the training);

Those variants where significant correlations were observed were coded in 2, and those where correlations were not significant - in 1. Mann-Whitney comparative analysis allowed to observe the features of given

connections of students with high (HN) and moderate (MN) level of neuroticism.

4. Results

Studying the results of *the express diagnostics of neurosis method* (by K. Heck; H. Hess) confirmed the relevance of present topic. Among all the examined students, 43% had a high level of neuroticism HN (they got 20 or more points out of a maximum 40), which is quite high indicator in the formation of the risk group.

The results of the experiment showed that:

1) Self 2 correlates with Self 1 in cases where the level of neuroticism is lower. That is, regardless of “what others think of me - I have a clear picture of myself.” We can say that the self-Image of such students is independent, and self-attitude is steady. Accordingly, in those cases where there is a high level of neuroticism, Self 1 and Self 2 do not correlate, that is why, it can be stated that the primary “opinion about myself” has changed under the influence of “opinion about me” of important other people. Therefore, the self-image of such students can be considered dependent and unsteady (Fig. 3). The correlation of the level of neuroticism and steadiness of the self-Image is given in Fig. 2.

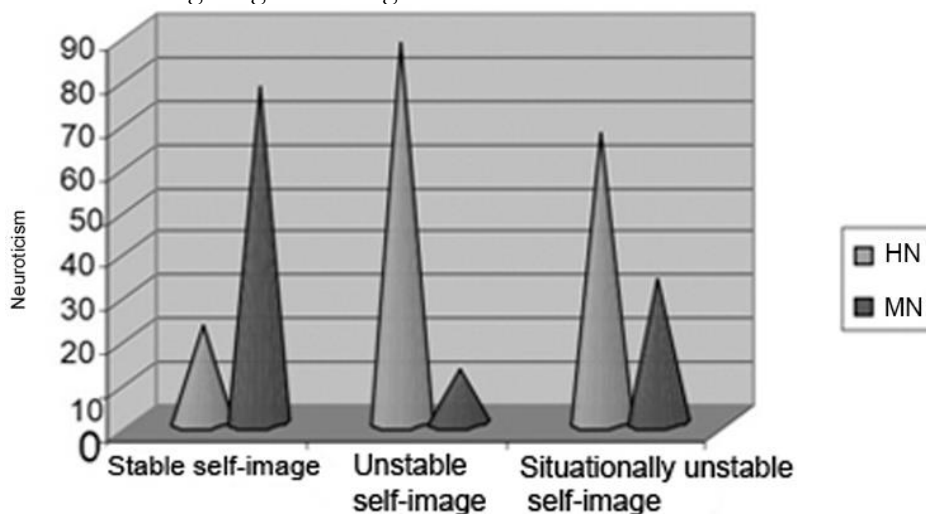


Fig. 2. The correlation of the level of neuroticism within the examined with a steady, unsteady (dependent) and contextually unsteady self-Image.

Note: HN - high level of neuroticism; MN - moderate level of neuroticism.

It should be noted that the group of subjects with a situationally unstable self-Image (6%) was not taken into account, as this included those

subjects for whom the self-Image is not stable, but is not dependent on the opinion of significant others. Their perception of themselves changed (no correlation was found between Self1 and Self2), but it is not known under the influence of which factors (because no correlations were found between Self-S and Self-A). This may be caused by poor motivation, inattention of the subjects, incomprehensibility of the instructions, or some other features. Situations and factors that may have influenced this group are outside the scope of our study and are not known to us. Note that when constructing Fig. 2. each group, and not all the examined boys and girls, was taken for 100%

2) Similar patterns of comparative characteristics are associated with anxiety, as there are significant correlations between anxiety and neuroticism ($r = 0.72$ whereas $p = 0.05$). That is, students whose level of anxiety is not high often remain of the same opinion, their self-Image is independent. Students with a high level of neuroticism are more likely to change their perceptions of themselves under the influence of significant others ($p = 0.05$) (Fig. 4). Therefore, anxiety can be considered as one of the important indicators of neuroticism, by recognizing and influencing to which level neuroticism can be changed.

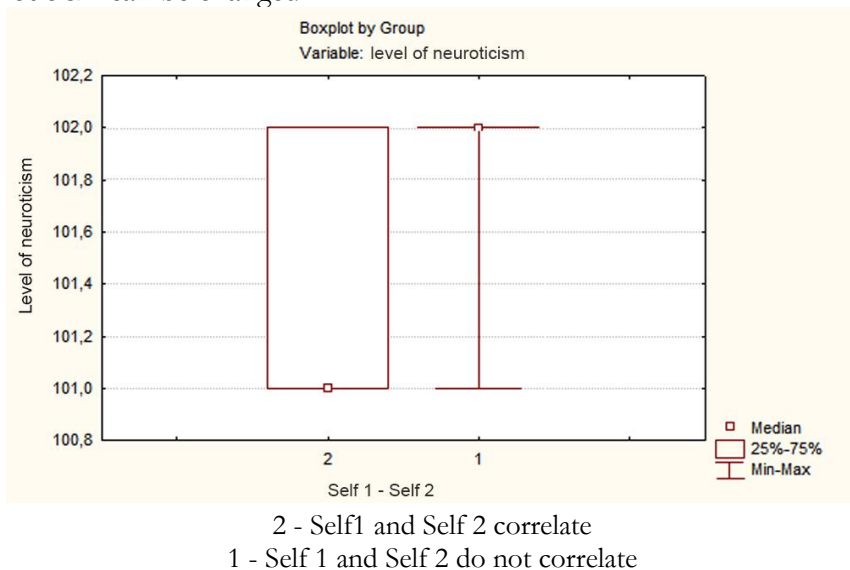


Fig.3. Comparison of the relationship Self 1- Self 2 of students with high level and moderate level of neuroticism (before training)

In addition, significant correlations were found between neuroticism and frustration ($r = 0.64$ at $p = 0.05$) and rigidity ($r = 0.49$ at $p = 0.05$).

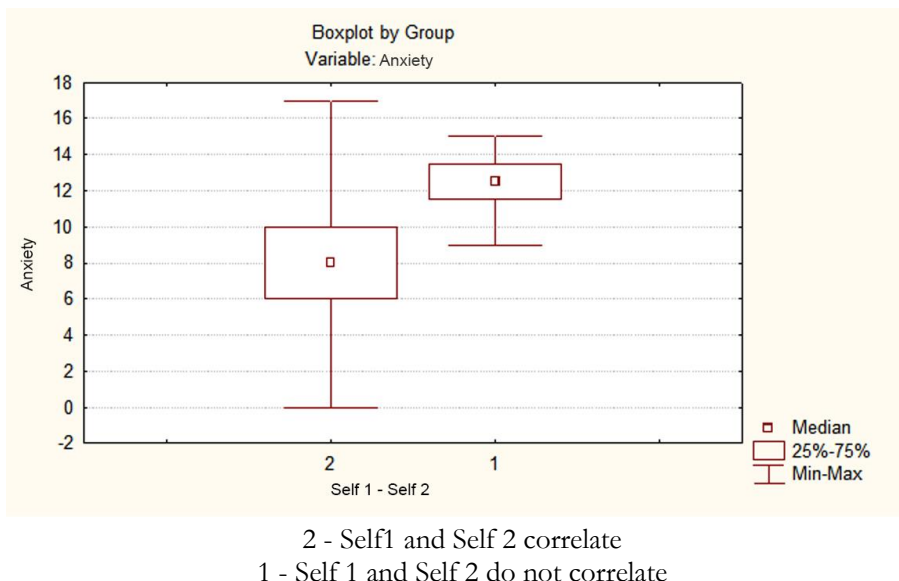


Fig.4. Comparison of the relationship Self 1- Self 2 of students with high and low levels of anxiety (before training)

3) It is quite interesting to trace the peculiarities of the influence of "Anti-sympathizer" (a person who was given a blue card as the least pleasant of the group) on students with different levels of neuroticism. It is worth noting that there are no statistically significant differences in this effect on people with high and moderate levels of neuroticism (that is, we cannot state that students with HN are more likely to change their perceptions of themselves under the influence of "Anti-sympathizer", or, conversely, with MN). However, it is easy to see that in cases when "Anti-sympathizer" has a statistically significant effect on Self1, the level of neuroticism after training changes in the direction of growth, but the level of aggression of those exposed to it is low.

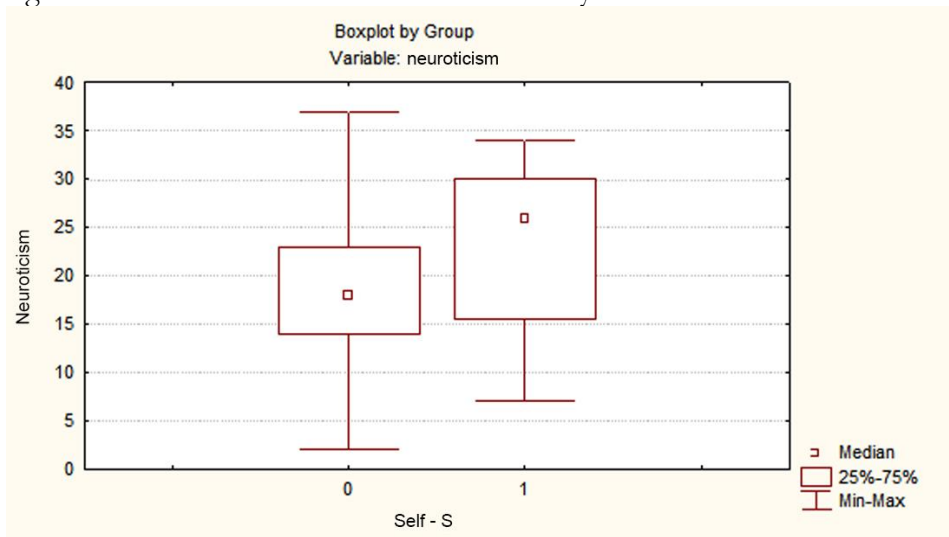
The explanation may be as follows: students with a low level of aggression are not able to resist the idea of "Anti-sympathizer", and therefore, the level of their neuroticism will increase (perhaps a negative emotional charge actualizes early internal conflicts, which exacerbate neuroticism).

However, it is noteworthy to note that in those cases when Self1-A correlates ("Anti-sympathizer" sees the person as accurately as the person

sees herself), the level of neuroticism drops significantly. That is, if you "notice that you are felt" (regardless of whether it is "Sympathizer" or "Anti-sympathizer"), the level of neuroticism under the influence of training decreases.

4) Similar patterns of influence on the personality has "Sympathizer" (a person who received a red card and is emotionally the closest in the group). Students with a high level of neuroticism tend to change their perception of themselves more often, bringing it closer to the idea of "Sympathizer" than students with a medium or low level of neuroticism (Fig. 5).

As with "Anti-sympathizer", students who have a low level of aggression are more likely to change their minds under the influence of "Sympathizer". As a matter of fact there are grounds to trace the relationship between aggression and neuroticism in this regard, although no such significant correlations were found in our study.



0 - the influence of "Sympathizer " is absent
1- "Sympathizer " affects the personality

Fig. 5. Influence of "Sympathizer" on self-perception of students with high and moderate levels of neuroticism

Therefore, it can be argued that if a significant person (regardless of "Sympathizer" or "Anti-sympathizer") sufficiently accurately feels and describes the personality of the respondent, it can be a guarantee of a powerful psycho-corrective effect on neuroticism. However, dependence on the opinion of another will be associated with an increase in neuroticism.

Conclusions

1. A theoretical model of the functioning of the self-Image with the peripheral part on the border of the relation Self and significant another person was proposed, which allows to define the concepts of neuroticism, stability and dependence on significant others. The peripheral part of the Self-Image is the area that surrounds the core of the Self (as a source of basic self-awareness and personal integration), that is in contact with the social environment and is responsible for creative adaptation in reference relationships.

2. Projective methods and experimental research, in contrast to test methods, allow bypassing the "blind spots" in the self-perception of neurotic individuals and thus more adequately explore the deep mechanisms of the neurotic process. In regard, an author's experimental study was proposed.

3. Analysis of correlations in the studied groups showed that HN-respondents are characterized by a significant positive correlation between neuroticism and instability of the peripheral part of the Self-Image, while such a relationship was not typical for the group of MN. Boys and girls with HN tend to change their perception of themselves more often, bringing it closer to the opinion of the "Supporting Figure", than those studied with MN. No such features of HN -respondents were studied in relation to the dependence on the opinion of the "Frustrated figure". However, it has been found that the level of aggression of individuals who are exposed to both "Supporting" and "Frustrating" figures is low. As a result of the ascertaining experiment, it was found that the peripheral part of the Self-image of boys and girls with a high level of neuroticism (HN) is more dependent on the opinion of reference others (unstable Self-image) than of persons with moderate neuroticism (MO) and this is accompanied by high levels of anxiety, frustration and rigidity. Therefore, the hypothesis of our study was confirmed.

4. Anxiety, frustration and rigidity can be considered in the context of significant markers of neuroticism, hence significant correlations were found between them ($r = 0.72$; $r = 0.64$; $r = 0.49$ at $p = 0.05$).

5. The self-awareness of the neurotic client should be considered both as the main object and as a fundamental support for psycho-correctional influence, and the resource of this influence should be sought in adequate relations. Instability of self-awareness and dependence of the Self-image can act in this case as diagnostic criteria of neuroticism and it is especially worth paying attention to them from an early age. At the same time, this period seems favorable and sensitive for effective psycho-

correctional influences in order to form a stable, positive and independent Self-image in cases where the natural process of positive age dynamics has failed.

6. This topic needs further study in the context of development and improvement of the program of psycho correction of neuroticism of young men, which would be based on the features of the Self-image of students with a high level of neuroticism. The introduction and support of psychological care services in the institutions of higher education is an extremely urgent and important task.

References

- Adler A. (2002). *Očerki po individual'noj psibologii*. Moskva.
- Aldinger, M., Stopsack, M., Ulrich, I., Appel A., Reinelt, E., Wolff, S., Jörgen Grabe, H., Lang, S., Barnow, S. (2014). Neuroticism developmental courses - implications for depression, anxiety and everyday emotional experience; a prospective study from adolescence to young adulthood. *BMC Psychiatry*, 14. <https://doi.org/10.1186/s12888-014-0210-2>
- Basiuk, O. B. (2009). Do pytannia rozuminnia modelei nevrotychnosti (na prykladi yunatskoho viku). *Psykhobichni aspekty natsionalnoi bezpeky: III Mizhbnar. nauk.- prakt. konf. Lviv*, 191-193.
- Bodalev, A. A. & Stolin V. V. (2000). *Obshhaja psibodiagnostika*. Sankt-Peterburg.
- Cuperman, R., Robinson, R. L. & Ickes, W. (2014). On the Malleability of Self-image in Individuals with a Weak Sense of Self. *Self And Identity*, 13(1). 1-23. <https://doi.org/10.1080/15298868.2012.726764>
- Gelan, C. (2009). The role of self-image in interpersonal communication. *15th international conference. Knowledge Based Organization International Conference*, 4. Sibiu, Romania. 26-30.
- Gonta, I., & Bulgac, A. (2019). The Adaptation of Students to the Academic Environment in University. *Revista Romaneasca pentru Educatie Multidimensionala*, 11(3), 34-44. <http://dx.doi.org/10.18662/rrem/137>
- Horney, K. (1994). *The neurotic personality of our time*. New York.
- Jeronimus, B. F., Ormel J., Aleman A. & Penninx B. W. J. H. (2013). Negative and positive life events are associated with small but lasting change in neuroticism. *Psychological Medicine*. 43 (11), 2403-2415. <https://doi.org/10.1017/S0033291713000159>
- Karpenko, V., Mykolaichuk M., Voitenko V. & Medynska Yu. (2012). Suchasnyi stan psikhichnoho zdorovia studentskoi molodi: emotsiina, mizhosobystisna ta rolova sfery. *Praktychna psikhohiia ta sotsialna robota*, 11, 2-8.

- Kernberg, O. F. (2001). *Tjazhelye lichnostnye rasstrojstva: Strategii psiboterapii*. Moskva, 13-73.
- Kim, J. J., Gerrish, R., Gilbert, P., Kirby, J. N. (2020). Stressed, depressed, and rank obsessed: Individual differences in compassion and neuroticism predispose towards rank-based depressive symptomatology. *Psychology and Psychotherapy: Theory, Research and Practice* (IF 2.645).
<https://doi.org/10.1111/papt.12270>
- Kohut, H. (2009). *The restoration of the self*. Chicago. London.
- Kopala-Sibley, D. C., Chartier, G. B., Bhanot, S., Cole, J., Chan, P. Y., Berlim, M. T., & McGirr, A. (2020). Personality Trait Predictive Utility and Stability in Transcranial Magnetic Stimulation (rTMS) for Major Depression: Dissociation of Neuroticism and Self-Criticism. *The Canadian Journal of Psychiatry*, 65(4), 264–272. <https://doi.org/10.1177/0706743719839705>
- Liedloff, J. (1991). Normal Neurotics like Us. *Continuum-Concept.org*
<http://www.continuum-concept.org/reading/neurotics.html>
- Maddi, S. (2002). *Teorii lichnosti. Sravnitel'nyj analiz*. Sankt-Peterburg.
- Mjasishchev, V.N. (2013). *Lichnost' i nevrozy*. Moskva.
- Popovici, D-V. & Buica-Belciu, C. (2013). Self-Concept Pattern in Adolescent Students with Intellectual Disability. *International Conference on Psychology and the Realities of the Contemporary World (PSIWORLD)*. Bucharest, Romania. *Procedia Social and Behavioral Sciences*, 78, 516-520.
- Pospelova I. & Kosyanova O. (2017). Psychological bases of teaching future psychologists to form positive physical self-image in adolescents. *Science and Education*. 164(11), 60-64.
- Rajgorods'kij, D. Ja. (2001). *Prakticheskaja psihodiagnostika. Metodiki i testy*. Uchebnoe posobie. Samara, 169-171.
- Rogers, C. (2012). *On Becoming a Person: A Therapist's View of Psychotherapy*. Boston. New York.
- Ryum T., Vogel, P. A., Walderhaug, E. P. & Stiles, T. C. (2014). The role of self-image as a predictor of psychotherapy outcome. *Scandinavian Journal of Psychology*, 56 (1), 62-68. <https://doi.org/10.1111/sjop.12167>
- Semke, V. Ja. (2001). *Osnovy personologii*. Moskva.
- Simoncic, T. E., Kuhlman, K. R. & Vargas, I. (2014). Facebook use and depressive symptomatology: Investigating the role of neuroticism and extraversion in youth. *Computers in Human Behavior*. 40,1-5.
<https://doi.org/10.1016/j.chb.2014.07.039>
- Smith, K. A., Barstead, M. G. & Rubin, K. H. (2017). Neuroticism and conscientiousness as moderators of the relation between social withdrawal and internalizing problems in adolescence. *Journal of Youth and Adolescence*. 46(4), 772-786. <http://dx.doi.org/10.1007/s10964-016-0594-z>

- Stan, M. M. (2015). Study on the structuring of self-image in early childhood. International Conference PSIWORLD. Bucharest, Romania. *Procedia Social and Behavioral Sciences*, 187, 619-624.
<https://doi.org/10.1016/j.sbspro.2015.03.115>
- Sullivan, G. S. (2000). Vashingtonskaja shkolan: mezhlichnostnaja teorija psihoterapii. *Tehniki konsultirovanija i psihoterapii: teksty*. Moskva, 152-174.
- Topuzov, O., Shamne, A., Malykhin, O., Aristova, N., & Opaliuk, T. (2020). Adaptation Peculiarities of the First-Year Students to University Life: Study on Stress Resistance. *Revista Romaneasca pentru Educatie Multidimensionala*, 12(2), 48-59. <https://doi.org/10.18662/rrem/12.2/265>
- Tsilmak, O., Okhrimenko, I., Barko, V., Protsenko, O., & Gerashchenko, O. (2020). Psychological Profile of Unsuccessful University Students. *Revista Romaneasca pentru Educatie Multidimensionala*, 12(2), 267-289.
<https://doi.org/10.18662/rrem/12.2/278>
- Vinkers C. H., Joels M., Milaneschi Y., Kahn R. S., Penninx B. W. J. H., & Boks M. P. M. (2014). Stress exposure across the life span cumulatively increases depression risk and is moderated by neuroticism. *Depression and Anxiety*, 31(9), 737-745. <https://doi.org/10.1002/da.22262>
- Voloshenko, M., Dzhezhik, O., & Azarkina, A. (2020). The method of forming the health-saving competence of pedagogical universities' students. *Revista Romaneasca pentru Educatie Multidimensionala*, 12(1), 198-208.
<http://dx.doi.org/10.18662/rrem/209>
- Walker, K. L., Chang, E. C. & Hirsch, J. K. (2017). Neuroticism and Suicidal Behavior: Conditional Indirect Effects of Social Problem Solving and Hopelessness. *International Journal of Mental Health and Addiction*. 15, 80–89.
<https://doi.org/10.1007/s11469-016-9648-4>
- Wegemer, C. M. (2020) Selflessness, Depression, and Neuroticism: An Interactionist Perspective on the Effects of Self-Transcendence, Perspective-Taking, and Materialism. *Frontiers in Psychology*. 11:523950.
<https://doi.org/10.3389/fpsyg.2020.523950>
- Zaharov, A. I. (2000). *Nevrozy u detej i psihoterapija*. Sankt-Peterburg.