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Psychological underpinning of personalized approaches in modern medicine: syndrome analysis of mitral valve prolapsed patients

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The article aims to demonstrate a high efficiency of the methodological means suggested by psychological syndrome analysis approach (Vygotsky-Luria school) for solving theoretical and applied issues in contemporary person-centered medicine.

This is achieved through an example of empirical study meant to construct a psychosomatic syndrome for 290 patients with mitral valve prolapse (MVP). Analysis of all collected data was based on psychological syndrome analysis concept (Vygotsky–Luria school) and A.R. Luria's principles for psychological factors (causes) selection, which determine the logic and structure of a neuropsychological syndrome. It demonstrated the association between characteristics of emotional experiences and clinical symptoms manifested in MVP patients. This correlation was statistically verified. The results proved that the most important syndrome-establishment factor (radical) is a specific emotionality and dysfunction of emotion regulation and emotional control in MVP patients (excessive emotional repression with insufficient reflection of emotional experiences). Features of the motivation sphere of MVP patients appear as a second psychological syndrome-establishment factor: these are domination of the motive of failure avoidance and unsatisfied self-approval need.

We argue that psychological syndrome analysis can be used as a means to approach not only diagnostic but also prognostic tasks both in clinical psychology and medicine, as well as for the development and implementation of the person-centered integrative diagnosis model.

We maintained that this approach, applied in theoretical and practical fields of clinical psychology and mental health care is highly efficient at the current stage of the science evolution due to prospects revealed by s new methodological context of postnonclassical model of rationality and a comprehensive character of the cultural-historical concept regarding an individual and his mind as a self-developing open systems.

Keywords: person-centered integrative diagnostic model, psychological syndrome analysis, Vygotsky-Luria school, psychosomatic syndrome, mitral valve prolapse, postnonclassical model of scientific rationality, self-developing system.

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1. Introduction

The current situation in medicine, as described by many researchers, reveals a more pronounced "dehumanization" and "technification" of medical diagnostics and health care. Recent biological advances in medicine by far exceed developments in humanitarian disciplines owing to new technologies and state-of -the-art equipment, as well as the appearance of various technical mediators in health care, including diagnosis and treatment (Mezzich, 2007; Fulford, Christodoulou, Stein, 2011).

The answer to such an awkward situation in medicine is the emergence of research trends in psychiatry and clinical medicine with the focus of the analytical interest on a comprehensive analysis of personality in disease. This focus is urged by rehabilitation tasks, as well as preventive treatment and encouragement of treatment compliance. This corresponds to the shift from a general nosocentric paradigm towards the bio-psycho-social and person-centered approach in psychiatry and medicine. (Engel, 1982; Mezzich, 2007). The tendency results in the introduction of multiaxial diagnosis systems in psychiatry, and in the appearance of such category as "a person-centered integrative diagnostic model" (Salloum, Mezzich, 2009).

Within the paradigm, diagnosis is defined as a description of ill and positive aspects of health, which mutually interact in the personality field. The person-centered integrative diagnostic model (PID) should provide information covering both ill and positive health. Within this category, the structure of medical diagnosis includes not only certain facts concerning impaired health but also information about preserved health that takes into account personal and social values and resources of the patient and his/her ability to adapt and compensate, as well as the patient's life quality (Salloum & Mezzich, 2009).

The theoretical model of PID makes it necessary to consider a number of psychological constructs, such as subjective pattern of disease, defense mechanisms, coping processes, quality of life, etc. It provides a reason for the inclusion of psychologists into poly-professional collaboration in medicine and health care and the need for multidisciplinary research and multidisciplinary clinical and psychological diagnosis in the PID frameworks.

Psychological research paradigms appear in the limelight of the multidisciplinary clinical and psychological context mainly because contemporary clinical psychology can suggest the mode of organization for a study and a method for conducting it. Psychological syndrome analysis is the very method that enables the observation of complex clinical and psychological phenomena from the perspective of a systemic approach (Vygotsky, 1993; Luria, 1973).

The *primary aim of this article* is to demonstrate the high efficiency of methodological means suggested by the psychological syndrome analysis approach (Vygotsky-Luria school) for solving theoretical and applied issues in modern person-centered medicine.

We give an example of multidisciplinary research of patients with mitral valve prolapse (MVP) using methodological principles of the syndrome analysis. The construction of a psychosomatic syndrome will facilitate a structural analysis of complex psychosomatic phenomena in MVP patients, which helps separate

manifestations of psychological factors and mechanisms from their emergence and functioning, and gives a psychological interpretation of clinical phenomenology.

We seek to show that a psychosomatic syndrome may serve as a means for determining not only diagnoses but also prognoses both in clinical psychology and in medicine.

For the sake of preliminary remarks it should be noted that in L.S. Vygotsky's and A.R. Luria's works a syndrome is a structure shaped by a constellation of causally-related, multilevel symptoms and the factors (causes) that determine the formation and dynamic parameters of the syndrome. Primary and secondary symptoms are different in nature: in contrast to primary symptoms, secondary symptoms are purely psychological phenomena, both in terms of their nature and the mechanism of their derivation. Hence secondary symptoms are affected to a greater degree by psychological matters (Vygotsky, 1993; Luria, 1973). In the logic of the psychological syndromes proposed by L.S. Vygotsky and A.R. Luria, with the selection of primary and secondary symptoms, as well as the factors (causes) that determine the formation and dynamic parameters of the syndrome, it is possible to see a representation of a psychological syndrome as an open self-developing system (Zinchenko, Pervichko, 2013).

Therefore, the psychological syndrome analysis concept (Vygotsky-Luria school), corresponds to the ideals of postnonclassical model of scientific rationality, and could satisfy modern scientific standards.

Consequently, the psychological syndrome approach can negotiate issues in modern person-centered clinical practice.

2. Research Rationale

In practice of our empirical research, we use the Vygotsky-Luria syndrome analysis methodology, to provide the data for establishing an "extended diagnosis."

Our research interest in MVP patients is far from being accidental. MVP is widespread, affecting between 30.8% and 42.0% of the population (Barlett, Kirtley, Mangham, 1991; Scordo, 2007). Besides, there is a risk of development of serious complications, the most dangerous of which is a sudden death, which occurs mostly under conditions of emotional and physical stress (Cowan, Fye, 1989). Other relevant facts include the following: a pronounced dissociation between numerous subjective complaints of the patients, on the one hand, and the scanty data from objective studies, on the other (Joiner, Cornman, 1986); indications of widespread anxiety disorders accompanying MVP and the unpleasant inclusion of the formation of "functional MVP" within anxiety disorders and cases of a genuine reduction in the intensity of clinical symptoms after psychotherapy and antidepressant or anxiolytic treatment (Coplan et al., 1992; Scordo, 2007); there is even some evidence that such treatment may be symptomatolytic—that is, it may result in the complete disappearance of echocardiographic MVP indicators in patients suffering from panic disorders (Coplan et al., 1992).

The data, as a whole, reveal inconsistency and ambiguity and indicate the problematic character of the treatment of such patients from both clinical and a psychological point of view; these findings have generated great academic interest among

medical and clinical-psychological researchers in patients suffering from this form of heart pathology, and the findings also suggest an absolute relevance for formulation of psychosomatic hypotheses.

3. Research Objectives

The primary aim of this research was to describe the psychosomatic syndrome with MVP patients.

The present research relates *a psychosomatic syndrome* to an invariable set of psychological, psychovegetative, and genuine somatic symptoms. The structure and dynamics of a psychosomatic syndrome may be hypothetically shaped by a number of causes (factors*) of both psychological and psychophysiological nature.

4. Research Design, its Methods and Participants

This research was conducted in 1993-2011 and consisted of 3 stages:

1) The first stage of study involved 290 MVP patients aged from 18 to 37 (the average age was 25.6±1.1) and 73 healthy persons (no abnormality detected; the average age was 27.5±1.3). 71 MVP patients had an anxiety disorder (AD) symptoms.
2) In the follow-up study (conducted 15 years later) 92 MVP patients took part. Among them 32 persons attended systemic integrative psychotherapy on request (individual assessments), 60 persons received scheduled medication treatment (magnesium orotate, alprazolam).
3) In 2008-2011 the control diagnostics was conducted for 132 patients who had been included in research groups in 1993–1996. 28 patients still had AD.

The main method of this study was psychological syndrome analysis (Vygotsky-Luria school). Techniques for the qualitative and statistical data analysis of clinical-and-psychological follow-up study (conducted for 15 years) were used.

The research involved a methodological complex comprising various methods of psychological and medical diagnostics, as well as statistical data processing.

The medical part of the study involved a complex of diagnostic procedures aimed at establishing a diagnosis for each patient (all patients had an ultrasonic cardiogram), and establishing the degree of intensity of clinical symptoms and signs. Occurrence of the symptoms of autonomic nervous system was revealed with the Questionnaire for exposure of symptoms of the autonomic nervous system changes (Vein, 2003). An assessment of psychopathological status was conducted by ICD-10 procedure-coding criteria.

* In our study, the notion "factor" has two meanings. First, we use it in the context of methodology of Vygotsky-Luria syndrome analysis: factor as an underlying cause of a defect (a syndrome generating radical) (Luria, 1973). Further in this work we speak of a "psychological factor" retaining this particular meaning. Second, we may regard "factor" as a certain statistical construct that comes as a result of the mathematical procedure of factor analysis. We further refer to it as a "statistical factor."

Statistical processing of the data was conducted with application of various methods: calculation of mean values and standard deviation; calculation of the certainty of distinctions between samples based on indicators of the probability of distinctions between indicators (Student's *t*-test); and revealing correlations among investigated features in compared groups, employing the method of calculation of Spearman's rank correlation coefficient (r_s), and the method of factor analysis of variables (the principal components analysis with a varimax rotation).

The psychological study had a number of consecutive stages, each with independent tasks and the testing of self-contained hypotheses. The logic of stage fragmentation and the formulation of tasks and hypotheses for each stage were conducted in series, in accordance with the results of the preceding stages.

5. Results

5.1. The main results of the study of MVP clinical picture.

The examination of MVP clinical picture illustrated the highest representation of dysfunction of sympathetic and parasympathetic nervous systems as well as vascular and anxiety disorders (AD) within MVP. MVP patients significantly ($p<0.05$) distinguish from healthy subjects in terms of representation of 22 analyzed clinical symptoms and syndromes. The most intense characteristics in MVP picture are as follows: subjective feeling of cardiac rhythm disorder, cardialgia, headache tension syndrome, migraine, neurogenic hyperventilation syndrome, thermoregulation disorder, panic disorder and syncopal states. According to daily monitoring of blood pressure and electrocardiogram, MVP patients significantly ($p<0.05$) more often have tachycardia in day time, lability of heart rate and blood pressure, especially in stressful situations.

After 15 years we explored the reduction of clinical symptoms in MVP patients with AD who attended psychotherapy and/or took medical treatment.

5.2. The stages of psychological research and its results

The psychological study consisted of five stages.

The *first, tentative stage* of psychological research consisted of developing the range of psychological phenomena specific for the group of patients and defining the subject area as well as the hypotheses of the general study. This *stage* of study engaged 290 MVP patients and 73 healthy persons. Structured clinical-psychological interviews and psychological testing were the basic methods chosen for this stage. We used the Minnesota Multiphasic Personality Inventory (MMPI); and the Sixteen Personality Factor Questionnaire (16 PF).

The MMPI midrange profile for MVP patients is characterized by certain ($p<0.05$) differences with a standardization (control) group for F and K scale values and by highly certain ($p<0.001$) differences with healthy participants for the 1, 2, 3, 6, 7, 8, and 0 scales. Analysis of Cattell test results displayed a divergence between MVP patients and healthy participants on a number of items. We obtained lower ($p<0.05$) values for the A, C, E, F, and H factors and higher ($p<0.05$) values for the O, Q2, and Q4 scales.

The whole data set collected for this stage demonstrated that most MVP patients have a complex of emotional personality features that distinguish them from healthy participants; these features include increased anxiety, emotional lability, self-distrust, a propensity toward self-deprecation, increased sensitivity to one's failures, and a tendency to lose control over emotions. MVP patients are cautious when analyzing events and pessimistic in their views of reality; they may tend to complicate trivial matters. This set of characteristic features and their peculiar combination testify to an enduring state of emotional tension. In the subgroup of MVP patients with AD, these features were significantly ($p<0.05$) more pronounced.

As it is noted in some works on the subject, people displaying such emotional and personality features may be highly sensitive to psychological stressors. Results of the tentative stage defined the logic and direction of the study, its aims and tasks, for further stage.

The *second stage* consisted of experimental stress modeling. This *stage* of study involved 134 MVP patients and 73 healthy individuals. Experimental stress simulation was processed by exploring aspiration level (AL). A situation was set up that induced a state of mental tension. In the course of the experiment participants were asked to solve 12 tasks. As stimulating material Raven's Progressive Matrices, series D and E, were used. The selection of the most difficult, almost unsolvable, tasks was stipulated by the purpose of the experiment: to set up a stressful situation. In a preliminary interview a motivated attitude toward the work was induced in the participants, and the experiment was presented as a test of expertise. A time limit was set for task fulfillment. The blood pressure (BP) values of the participants were checked before and after the experiment, as were their values on the Spielberger reactive-anxiety (RA) scale.

Summing up this stage of study we may assert that all participants (both sound and unhealthy) exhibited a state of mental tension under the conditions of the stress-modeling experiment. In addition, a qualitative analysis of the data showed that most of the healthy participants (84%) experienced (during the modeled experiment) the *state of operational tension* (characterized by the dominance of the content-procedural motivation when undertaking tasks and an optimal level of BP and RA); most of the MVP patients (76%) experienced the *state of emotional tension* (characterized by the dominance of self-assertion motivation and pronounced RA and BP). It should be pointed out that the MVP group was not homogeneous; they demonstrated two opposite reactions that, for the most part, were not found in the group of healthy participants; these were "repressive" reactions, with an understated, rigid aspiration level (28% of patients with emotional tension), and "overanxious" reactions, in which pretensions either were not present under the conditions of the experiment or were unstable (34% of patients with emotional tension). In the subgroup of MVP patients with AD, these features were significantly ($p<0.05$) more pronounced.

The facts revealed at this stage of the study called for detailed scrutiny of the quality of the emotional experience for both the healthy and the unhealthy participants in the context of stress, and for an analysis of the ways they chose to overcome emotionally intense situations as well as characteristic features of the motivation sphere revealed in such situations.

All these tasks were covered in the *third stage* of our study. We checked the hypothesis that MVP patients differ from healthy individuals in higher sensitivity to traumatic events, peculiar ways of resolving emotiogenic situations, and a tendency to suppress concomitant feelings. Besides, the categorial structure of the emotional experience of MVP patients differs from the emotional experience of healthy participants. Emotional experiences were processed by implication of our modified version of Rosenzweig's method for studying reactions to frustration, which includes the stage of looking into the subjective semantics of emotional experiences (Nikolaeva et al., 1995).

The results showed that MVP patients differ from healthy subjects in significantly ($p<0.05$) greater number of potentially traumatic occasions and significantly greater ($p<0.05$) number of words (descriptors) which had been chosen for description of their feelings experienced in such situations (Table 1).

The psychosemantic analysis of qualitative characteristics of emotional experiences revealed by the participants in emotive situations demonstrated that for all subjects the description of suggested situations involved a predominance ($p<0.05$) of negative emotions. Nevertheless, a few essential divergences may be noted: in categorial structures of emotional experiences MVP patients revealed "fear," "anger," and "contempt" with a higher ($p<0.05$) frequency (Table 2).

MVP patients are certain ($p<0.05$) to more frequently reveal extrapunitive and self-defense reactions (E and ED types of reaction). They dramatized the generic stressful character of the situation, making some external reason the culprit of frustration and directing ill feelings toward somebody or something in the immediate vicinity. Impunity (M-directed reactions) was of no less frequency; patients were prone to describe the situation as being deprived of stress pressures (Table 3). Nonverbalized reactions of the patients (when asked to describe what they would think

Table 1. Mean group in dices for emotive situations and emotional descriptors, suggested by the participants

Index	MVP patients, survey1, n=134	MVP+AD patients, survey1, n=71	MVP patients, survey 2, n=96	MVP+AD patients, survey 2, n=28	Healthy subjects, n = 73
Total number of chosen situations	7.70±0.41*	8.23±1.13*, ^	6.57±0.78*, #	10.20±2.16*	5.36±0.5
Frequency of situation choice (%)	32.08*	34.29*	27.38*, #	42.5*	23.46
Number of descriptors per situation	8.5±1.4*	10.57±1.26*	7.35±1.4#	10.11±2.12*	7.10±1.35

* Differences are certain when compared to the control (standardized) group ($p<0.05$).

^ Differences are certain when 1st stage data compared to 2nd stage data of MVP patients examination ($p<0.05$)

Differences are certain when MVP patients without AD compared to MVP patients with AD ($p<0.05$)

Table 2. Frequency in representation of categorial structures of emotional experience by participants in frustrating situations (%)

Categories of emotional experiences	MVP patients, survey1, n=134	MVP+AD patients, survey1, n=71	MVP patients, survey 2, n=96	MVP+AD patients, survey 2, n=28	Healthy subjects, n=73
Joy	0	0	1.2	0	3.1
Anger	26.3*, ^	28.9*	18.6#	30.1*	19.0
Shame	9.5	9.1	9.3	10.4	8.6
Contempt	11.1*, #	7.2	10.6*	8.7*	6.1
Fear	17.2*	18.7*	13.2	14.2	11.3
Astonishment	8.1*, ^, #	5.2*	16.5#	6.9*	14.8
Sadness	27.8*	30.0	30.6	29.7	37.1
Total number	100	100	100	100	100

* Differences are certain when compared to the control (standardized) group ($p<0.05$).

^ Differences are certain when 1st stage data compared to 2nd stage data of MVP patients examination ($p<0.05$)

Differences are certain when MVP patients without AD compared to MVP patients with AD ($p<0.05$)

about in a situation of frustration) revealed even more explicit extra-punitive reactions (E=60.5%), with a focus on self-defense (ED=60.8%); these reactions distinguish them from healthy participants ($p<0.05$). Intropunitive reactions (when a patient admits his/her blame or assumes responsibility for negotiating the situation) appear with no less frequency (I=31.2) (Table 3). Analysis of the obtained results

Table 3. Frequency analysis of the categorial structure of verbalized and non-verbalized reactions to frustration (%)

Index	Verbalized reactions to frustration		Non-verbalized reactions to frustration	
Categories	MVP, n=134	Healthy subjects, n=73	MVP, n=134	Healthy subjects, n=73
O-D	20.2	21.6	15.9	17.5
E-D	55.6*	37.6	60.8*	39.6
N-P	24.2*	40.8	23.3*	42.9
Total number	100	100	100	100
E	52.9*	44.3	60.5*	45.4
I	16.0*	40.9	31.2	40.1
M	31.1*	14.8	8.3	14.5
Total number	100	100	100	100

* Differences are certain when compared with the control (standardized) group ($p<0.05$)

testifies to the fact that imputation and even unmistakably aggressive reactions to the interlocutor (involving rage and aggressive thoughts) are most common ways dealing with frustration among MVP patients.

The analysis of data collection suggested that MVP patients differ from healthy subjects in a more frequent choice of frustrating situations and more intense negative emotional experiences as well as liability to suppress negative emotions. The most typical way for MVP patients for coping frustrations is to blame others and even act aggressively in some cases. Notable, that mentioned patterns are more distinct specifically in blaming situations, which are considered as the most traumatic ones.

The described characteristics of emotional experiences of MVP patients are significantly ($p<0.05$) more intense in MVP patients with AD symptoms (Table 1–2).

The reexamination of MVP patients after 15 years proved detected characteristics of emotional experiences under frustration to be quite stable.

Put together, these results were interpreted as manifesting the hypersensitivity of MVP patients to emotiogenic situations; this hypersensitivity was caused by revealed features of the autonomic nervous system, as well as by particular features of their motivation sphere, so that the failure-avoidance motive appeared as a principal sense-making motive in potentially traumatic situations. As is well known, this reaction leads to frustration of the need to maintain self-approval. The above-mentioned peculiarities in the motivation sphere presumably cause MVP patients' state of emotional tension in many contexts that they regard as potentially traumatic.

As a step further, we assumed that MVP patients might be prone to employing emotionally intense strategies as well as strategies of "evasion" as a typical way of coping with traumatic events not only in the experimental context but in everyday life.

To check this hypothesis, we conducted further research at the *fourth stage* of our study. We undertook an analysis of the coping strategies of the participants in emotiogenic situations with the aid of the Ways of Coping Questionnaire (WCQ) (Folkman, Lazarus, 1988).

The results of coping strategies analysis by WCQ showed, that MVP patients during first test applied for the coping strategy called "escape-avoidance" (59.7±3.4 points, rank meaning 1), **"distancing"** (56.9±4.2points), "**confrontive coping**" (54.8±2.3 points) and "**seeking social support**" (53.7±3.9 points) which they commonly used in difficult life situations. Frequency of adherence to these coping strategies is significantly ($p<0.05$) higher than in the control group. The strategy "positive revaluation" is used significantly ($p<0.05$) rarely.

These facts confirm our hypothesis about the specificity of the motivation sphere for the majority of MVP patients when the structure of the achievement motive is shaped into domination of the failure-avoidance motivation. The fact reveals the real urgency of making close observations of personality features of MVP patients.

This task was accomplished in the *fifth stage* of the empirical study. The following methods were used: the Thematic Apperception Test (Murray, 1943/1971), the

Sentence Completion Test (Sachs, Levy, 1950), and the Life *Style Index (LSI)* (Plutchik, Kellerman, Conte, 1979).

A comprehensive qualitative analysis of the results achieved in this stage revealed the following tendencies: most of the MVP patients voicing health complaints were distinguished by a highly pronounced avoidance motive along with the lack of the ability to distinguish emotions and needs; they had difficulty with intellectual mediation and control over emotions, poor sensitivity in interpersonal relations, and low capacity for empathy. The patients with "overt overanxious" reactions were characterized by the highest level of inefficient control and lack of ability to distinguish their emotions and needs. These characteristics might be the reason for their inability to reduce the high inner tension and anxiety that appeared in their extrinsic behavior.

The MVP patients resorted to a set of defense mechanisms, among which "rationalization", "denial", "projection", and "reaction formation" usually prevailed.

5.3. Syndrome analysis of multidisciplinary clinical-and-psychological study results in MVP patients.

At the *conclusive stage* of the study statistical processing and qualitative analysis of the whole set of clinical and psychological data were undertaken, and a hypothesis about the formation of a psychosomatic syndrome in MVP patients was tested.

As a result of factor analysis, which included 140 psychological and clinical characteristics, we identified 4 statistically significant factors, that explain 79.34% of dispersion and related analyzed clinical and psychological characteristics. These factors are as follows: 1) factor of clinical-psychological interactions (the only one among other established factors that showed maximum loading, covering both psychological characteristics of the MVP patients and indicators revealing the profile of clinical symptoms and signs); 2) factor describing emotional experience characteristics in emotiogenic situations; 3) factor describing coping strategies in traumatic situations; 4) factor of emotional disorganization of behavior/emotional control.

Analysis of the statistical factor structure as well as quality analysis and interpretation of the whole set of the results of the clinical-and-psychological study (A.R. Luria's principles for psychological factors (causes) selection, which determine the logic and structure of a neuropsychological syndrome), lead to the conclusion that MVP patients have a quite stable and comprehensive complex of clinical and psychological characteristics that can be defined as a *psychosomatic syndrome*.

This syndrome comprises the following clinical symptoms and syndromes: subjective manifestations of cardiac arrhythmias, panic attacks in anamnesis, the syndrome of neurogenic hyperventilation, some degree of intensity of vegetative disorders, some degree of intensity of clinical disorders, severity of pain syndrome, and indicators of cortisol level in blood serum. The syndrome structure is statistically formed by the following psychological symptoms: domination of the motive of failure avoidance, unsatisfied self-approval need, a complex of indicators of overt emotional tension in stress situations, insufficient or excessive control over motivations and emotions, characteristics of the emotional experience in

stress situations (domination of the emotional categories "fear" and "anger," which in most cases reveal no outward expression), suboptimal means of resolution of emotiogenic situations.

The results of qualitative and statistical analysis proved that the *most important syndrome-establishment factor (radical) is a specific emotionality and dysfunction of emotion regulation and emotional control* in MVP patients (excessive emotional repression with insufficient reflection of emotional experiences).

The analysis of the data lead us to assert that *features of the motivation sphere of MVP patients appear as a second psychological syndrome-establishment factor (radical): these are domination of the motive of failure avoidance and unsatisfied self-approval need.* This conclusion was drawn on the basis of Luria's principles for psychological factors (causes) selection, which determine the logic and structure of a neuropsychological syndrome, and on the interpretation of the results of statistical factor analysis (the complex of characteristic psychological features, which reflect features of the motivation sphere, was represented in the structure of the first three statistical factors with high factor loadings).

The reexamination (after 15 years) of the patients demonstrated that the psychosomatic syndrome has a stable structure, despite either positive or negative dynamics in the patient's state. This leads to its prognostic possibilities: the patients assigned to the "risk group" for plausible symptomatology complications in the clinical and psychological signs described above, as well as the whole complex of clinical and psychological features, confirmed our hypothesis of the "hardening" of clinical MVP manifestations under conditions of emotional pressure when medication and psychological aid were not provided. Meanwhile, psychologically "safe" patients displayed generally positive dynamics and a reduction of MVP signs in a number of cases.

Psychotherapy in our study showed good results: analysis of the dynamics in the emotional state of the patients (before and after the therapy) using psychological dimensions revealed a tendency toward the reduction of anxiety level. 72,2% patients attended psychotherapy demonstrated valid improvements of QOL self-rating, as well as the reduction of anxiety level. Patients who attended psychotherapy had a better ability in recognition of emotional experience, and the development of personality reflection. Physical examination of the patients revealed a significant ($p<0.05$) reduction in frequency and intensity of panic attacks and heart pain (especially those provoked by emotions), as well as loops of thermal control among patients who had been undergoing a psychotherapy. Moreover, ultrasonic cardiography testified to a significant ($p<0.05$) reduction in the depth of MVP (from 4.2 ± 0.2 mm to 3.8 ± 0.2 mm) among patients who had been undergoing a long-term psychotherapy. The decrease of prolapse depth was observed in all the psychotherapy patients (Pervichko, Zinchenko, Martynov, 2013). The results of our research allow selecting patients with MVP, who are recommended because of psychological indications for the psychotherapy.

In this way, the consistent implementation of the logic of construction of psychosomatic syndrome in patients with mitral valve prolapse allows us to give a psychological interpretation of the described clinical phenomena, corroborates the hypothesis of the possibility of "functional MVP" in anxiety disorders (Coplan et

al., 1992), and enables production of "expanded diagnosis" and the definition of the forecast development of the person in the disease conditions (Vygotsky, 1993, Mezzich, 2007; Mezzich et al., 2010).

To indicate directions for further research in the context of present discourse, it is important to point out that psychological syndrome analysis as the methodological approach, exhibit a considerable theoretical methodological potential in the implementation of a person-centered integrative diagnostic model.

6. Conclusions

The presented research showed that psychological syndrome analysis concept (Vygotsky-Luria school) may be regarded as a relevant theoretical and methodological basis for solving issues in the field of psychodiagnostics and psychotherapy and for the development of models of person-centered approaches to diagnosis and treatment.

Verification by means of these hypotheses has been performed in our research. We carried out an empirical study constructing a psychosomatic syndrome for 290 patients with mitral valve prolapse, applying principles for psychological syndrome analysis (Vygotsky-Luria school) and statistical data analysis. The results of qualitative and statistical analysis proved that the *most important syndrome-establishment factor (radical) is a specific emotionality and dysfunction of emotion regulation and emotional control* in MVP patients (excessive emotional repression with insufficient reflection of emotional experiences). The *features of the motivation sphere of MVP patients appear as a second psychological syndrome-establishment factor (radical): these are domination of the motive of failure avoidance and unsatisfied self-approval need.* This conclusion was drawn on the basis of Luria's principles for psychological factors (causes) selection, which determine the logic and structure of a neuropsychological syndrome, and on the interpretation of the results of statistical factor analysis.

We maintained that this approach, applied in theoretical and practical fields of clinical psychology and mental health care is highly efficient at the current stage of the science evolution due to prospects revealed by s new methodological context of postnonclassical model of rationality and a comprehensive character of the cultural-historical concept regarding an individual and his mind as a self-developing open systems.

Results of the present study do not only extend the limits of scientific notion of mitral valve prolapse, they help individualize strategies of medical and psychotherapy treatment for MVP patients. The results bring in new issues urgent for scientific studies in clinical psychology and medicine at the contemporary stage of science development.

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