PERSONALITY AS A SUBJECT OF RESEARCH: HISTORY, THEORY, METHODOLOGY

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К РАЗВИТИЮ ТЕОРЕТИЧЕСКИХ ИССЛЕДОВАНИЙ В ПСИХОСОМАТИКЕ. МЕХАНИЗМ ПСИХОСОМАТИЧЕСКОГО ВЗАИМОДЕЙСТВИЯ КАК ИНСТРУМЕНТ ЭВОЛЮЦИИ ПСИХИКИ

TO THE DEVELOPMENT OF THEORETICAL RESEARCH IN PSYCHOSOMATICS.
THE MECHANISM OF PSYCHOSOMATIC INTERACTION AS AN INSTRUMENT
FOR THE EVOLUTION OF THE PSYCHIC

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Аннотация:

Дана классификация идей и теоретических моделей психосоматики. Констатируется наличие застоя в развитии теоретических представлений в этой области. Сделан вывод о необходимости формирования обобщающих идей и привлечения результатов концептуальных и эмпирических исследований, полученных в «смежных» областях знания.

Была сформирована концептуальная модель природы порождения телесных болезней психологическими причинами, представляющая собой гипотезу о функции, механизме и условиях запуска этого явления. Предполагается существование общих механизмов формирования телесных заболеваний, представляющих собой, подобно механизмам старения, инструменты эволюционного процесса. Функцией этих механизмов является способствование психологическому и поведенческому аспекту биологи-

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Abstract:

A classification of ideas and theoretical models of psychosomatics is given. It is stated that there is a stagnation in the development of theoretical concepts in this area. It is concluded that it is necessary to form generalizing ideas and attract the results of conceptual and empirical research obtained in «related» fields of knowledge.

A conceptual model of the nature of the bodily diseases formation by psychological causes was formed, which is a hypothesis about the function, mechanism and conditions for triggering this phenomenon. It is assumed that there are general mechanisms for the formation of bodily diseases, which, like the mechanisms of aging, are instruments of the evolutionary process. The function of these mechanisms is to contribute to the psychological and behavioral aspect of biological evolution carried out during the life of each individual. The general mechanism of the bodily

ческой эволюции, осуществляемой в ходе жизни каждой особи. Общий механизм генеза телесных болезней реализуется в двух формах:

а) системы противодействия организма естественно возникающим патогенным факторам (например, иммунная, регенеративная и т.д.) уменьшают свою мобилизованность и степень организованности;

б) формируются другие («изобретенные» эволюцией) факторы и пути болезнеобразования.

Условием запуска общих механизмов болезнеобразования является неучастие особи в формировании новых способов поведения и психической активности, то есть ее неучастие в психическом аспекте биологической эволюции.

Сделан вывод о том, что данная концептуальная модель согласуется с большинством основных идей и моделей, описывающих психосоматическое взаимодействие, и создает для их понимания общий контекст. В ее рамках создаются возможности для большей интеграции «медицинского» и «психологического» подхода в психосоматических исследованиях. Данная модель описывает механизмы порождения телесных болезней во всем животном мире. Эмпирическое подтверждение базовых предположений предложенной модели возможно в экспериментах с животными и людьми. Развитие исследований в рамках данной концепции открывает перспективу создания новых способов профилактики и лечения телесных заболеваний в психологии, психосоматотерапии и этиологической медицине.

Ключевые слова:

психосоматика, психосоматическое взаимодействие, психосоматические механизмы, этиология, патогенез, биологическая эволюция, психика, поведение, развитие.

diseases formation is realized in two forms:

a) The body's systems of counteraction to naturally occurring pathogenic factors (for example, immune system, regenerative, etc.) reduce their mobilization and degree of organization;

b) Other («invented» by evolution) factors and pathways of disease formation are formed.

The condition for triggering the general mechanisms of disease formation is the non-participation of an individual in the formation of new modes of behavior and psychic activity, that is, its non-participation in the psychic aspect of biological evolution.

It is concluded that this conceptual model is consistent with most of the main ideas and models describing psychosomatic interaction, and creates a common context for their understanding. Within its framework, opportunities are being created for greater integration of the «medical» and «psychological» approach in psychosomatic research. This model describes the mechanisms of bodily diseases formation throughout the animal world. Empirical confirmation of the basic assumptions of the proposed model is possible in experiments with animals and humans. The development of research within the framework of this concept opens up the prospect of creating new methods to prevent and treat bodily diseases in psychology, psychosomatotherapy and etiological medicine.

Keywords:

psychosomatics, psychosomatic interaction, psychosomatic mechanisms, etiology, pathogenesis, biological evolution, psychic, behavior, development.

During its development for more than a century, modern psychosomatics has accumulated dozens (if not hundreds) of theoretical models describing the interaction of psychic and bodily processes in the formation and healing of bodily diseases [1-3]. The totality of these models is often classified according to the correspondence to the area of knowledge or practice within which they were formed, for example, «psychoanalytic», «psychoecological», «neurophysiological», etc. models are distinguished. The author believes that to consider the whole variety of psychosomatic models and, what is important, the ideas underlying

them, as a whole, it is useful to divide them into three groups according to whether they describe: a) the mechanism of psychosomatogenesis itself; b) its functions; c) only the conditions for triggering this mechanism.

According to the author, three developed ideas can be distinguished that explain the mechanism of interaction of the psychic and the body in the formation of somatic diseases.

The idea of unity, interpenetration of the energy systems of the psychic and body and, at the same time, the dominant role of this unity in the formation of bodily diseases is traditionally used in Eastern healing systems. Z. Freud introduced this idea to the conceptual field of modern psychosomatics, suggesting that the psychic energy of unreacted impressions, unrealized emotions and unresolved internal conflict, penetrating the body, causes it to form «conversion» (hysterical) symptoms [4].

Emotional arousal, emotional stress, the process of suppressing emotions are a unity of psychic and bodily physiological processes, and some of these physiological processes, with their prolonged course, can be pathogenic. Therefore, the way of psychical life, in which such psychic phenomena occur for a fairly long time, can contribute to the formation of bodily diseases. In a developed form, this idea was implemented in the model of F. Alexander, who assigned the most important role in the interaction of psychic and bodily processes to the work of the vegetative nervous system [5]. His model describes the mechanisms of formation of seven bodily diseases.

The idea that the cerebral cortex is the main regulator of everything that happens in the body and through the mechanism of conditional reflex can form bodily disorders was presented in a developed form in the model of K.M. Bykov and I.T. Kurtsin [3]. However, they believed that this influence of the central nervous system on internal organs occurs exclusively directly, bypassing the endocrine system, which is poorly consistent with modern ideas about the regulation of internal organs activity.

In the psychosomatic literature, one can also find three developed ideas about what useful functions bodily diseases can perform in the life of a sick person. All three ideas significantly influenced the development of psychosomatic theory and practice.

A useful function of bodily disease in the life of a sick person (or their family) may be that, due to their psychological limitations, disease is the only way to satisfy some important need of theirs. In its final form, this idea was realized in the model of G. Groddeck [6]. He believed that people are able to deliberately, although, as a rule, unconsciously, trigger the formation of various organic diseases or prevent their healing. Note that the question of the mechanism for implementing such an intention was not raised here.

The two following ideas belong to Z. Freud [4]. First, he believed that bodily symptoms, in their form, helped to bring back to consciousness the experiences that had been repressed into the unconscious. Secondly, that the transfer of the energy of intolerable experiences into the body saves the psychic from «overheating». It is clear that this idea,

together with the previously described idea of energy conversion, constitute a single concept and, in the author's opinion, are the only example of a psychosomatic model that simultaneously describes the mechanism of psychosomatogenesis, its function, and, naturally, the conditions for its triggering. However, it is important to note that Freud himself thus described only the formation of conversion symptoms, i.e. imitation of somatic diseases, but not the bodily diseases themselves.

According to the author, the rest of the set of psychosomatic ideas and models can be attributed to the description of the conditions for triggering the mechanism of psychosomatic diseases formation, but not to the description of the mechanism itself. These models often describe in some detail the patterns of the formation of psychological realities that contribute to the formation of bodily diseases, as well as how psychosomatic and purely somatic mechanisms interact in the long-term process of creating psychosomatoses in ontogenesis. Most often in the literature, the following are called as conditions for triggering the psychosomatic mechanism: a) repressed into the unconscious and unrealized needs, as well as emotions corresponding to them; b) chronically unresolved (and therefore, hindering personal development) internal conflicts, as well as methods of psychic organization that prevent conflict resolution; c) stress; d) not experienced psychotraumas.

In general, it can be stated that the further development of theoretical models describing the mechanism of psychosomatic interaction is still a very urgent task. The diversity of ideas and models requires the emergence of a generalizing idea. However, unfortunately, it is necessary to recognize the fact that the rapid development of psychosomatic theory in the early and mid-twentieth century, which gave rise to a huge variety of models, stopped abruptly in the late eighties, despite the continued growth in the number of empirical studies. According to the author, the way out of this crisis can be resolved by a broader involvement in the consideration of data and models of «related» fields of knowledge in relation to psychosomatics [7]. Earlier, the author proposed a conceptual model describing from a unified perspective the mechanism, functions and triggering conditions of psychosomatogenesis, in which this mechanism was considered as an instrument of psychic evolution [7-12]. Significant additions to this model made by the author have not yet been included in recent publications, which determined the relevance of writing this work.

Theoretical and empirical bases of the author's concept

1) «Ontogenetic» concept of V.M. Dilman [13], in which the «main diseases of aging» (atherosclerosis, hypertension, type 2 diabetes, cancer) are considered as the result of the continuation of the physiological mechanisms activity that ensure ontogenetic development, after the ending of this development. The traditional view of the causes of bodily diseases sees them only in inevitable failures and breakdowns in a complex

system of the body, in the results of encounters with an aggressive external environment and in an improper lifestyle. On the contrary, the «ontogenetic» concept raises the question of internal, general and regular mechanisms of the formation of diseases.

2) The traditional view of aging as a process of inevitable and inherent in all living beings wear of tissues and the accumulation of random breakdowns in a functioning organism in modern gerontology has changed to an understanding of aging as an «invention of evolution» that contributes to the evolutionary process. Such a view, first expressed by A. Weismann [14], was further reinforced by the discovery of the phenomena of replicative aging [15,16], neotenia [17], negligible aging [18], participation in the aging process of apoptosis [19], etc.

3) The mechanisms of epigenetic inheritance, reverse replication: protein-RNA-DNA, endogenous retroviruses discovered in recent decades, allow us to speak about the possibility of inheritance of lifetime acquired traits [20]. Also, some discoveries of modern evolutionary biology suggest that «random mutations» are largely controlled by individuals and populations, which means that they are not at all as random as it was believed until recently. The mechanisms of evolution themselves are subject to evolution, and life develops as a single system [20].

4) The psychosomatic concept of V.S. Rotenberg and V.V. Arshavsky [21], based on their own experiments and the experiments of M. Seligman [21,22], considers search activity (that is, the search for ways to solve tasks and situations when the individual does not have such ways) to be the most important factor in maintaining health. The usefulness and pathogenicity of emotions here is determined not by their sign, in stresses – not by duration, but by what they contribute to search activity or rejection of it.

5) The placebo is the effect of a neutral agent as a cure with a confident expectation of such an effect. Obviously, the examples of placebo healings from somatic symptoms and diseases indicate the very possibility of strengthening the systems of counteracting disease-causing factors. However, thus, they simultaneously indicate an obvious in these cases preliminary decrease in the capabilities of self-healing systems. According to the author, the prevalence and even the «routine» of placebos and the obvious ease with which the self-healing systems are mobilized here allows us to speak of a certain «chronically» reduced activity of the forces of counteraction to disease-causing factors: a) as a phenomenon frequently encountered in the human population; b) as a consequence of the action of some regulatory mechanism.

6) It is known that the cause of death during the disease is often not the direct action of pathogenic factors, but a side negative effect of the activity of the resistance forces of the disease (for example, high temperature, apoptosis, diarrhea, etc.). It is clear that in these cases, the activity of these forces was incompatible with life, which suggests that the effectiveness of self-healing systems depends on the level of their interaction with each other and the

conformity of their activity with the goal of preserving life.

Any new disease puts the body in a very unique position, leaving it without a predetermined specific strategy for healing from this particular disease. It is clear that the effectiveness of the self-healing forces can significantly increase if the individual can launch an unconscious search for ways to overcome the disease.

Author's concept

The description of the author's conceptual model presented below is a sequence of theses of the main hypothesis (in italics), explanations to them, as well as formulations of more specific hypotheses.

First. There are general mechanisms for the formation of bodily diseases, which, like the mechanisms of aging, are instruments of the evolutionary process.

These common mechanisms involved in the formation of many different diseases are not associated with naturally and therefore quite randomly occurring in the life of an individual factors of disease formation, such as failures and breakdowns of the functioning of organs and systems, infections, etc. Just as in the case of aging mechanisms, we are talking here about the mechanisms «invented» by evolution, which means that they quite regularly ensure the disruption of the functioning of the body.

Second. The psychic and behavioral aspect of biological evolution is carried out (more precisely, has the ability to be carried out) not only during the process taking place during the change of generations, but also during the life of each individual.

The Synthetic Theory of Evolution considers the evolutionary process to be realized through random mutations in parental individuals and selection of useful acquisitions among offspring individuals. However, the psychological aspect of biological evolution is quite specific and this point of the main hypothesis is obviously related to two questions: a) whether the accumulation of behavioral and psychic acquisitions can occur during the individual's decision of certain life tasks during their life; b) whether these acquisitions can be passed on to offspring. It is clear that for higher animals, for which the necessary way for the development of young is their training by parental individuals, the answer to the second question is predetermined. It is also worth remembering the discovery of mechanisms that ensure the fixation of changes accumulated by an individual in the genome [20]. As for the first question, it is important to remember that the acquisition of new forms of behavior (operant learning) is possible even at the level of higher unicellular organisms [20,23]. It is clear that in this context we are talking about psychic development, which does not require changes in the structure of the nervous apparatus.

The author believes that the behavioral and psychic evolvement of an individual is determined by:

- a) The tasks of its adaptation to the environment;
- b) Tendencies and developmental needs arising from the psychic organization of an individual (for example, in humans – by internal conflicts);
- c) Trends in the development of the evolutionary process as a whole.

Third. The function of generalized mechanisms of disease formation is to promote the psychic and behavioral aspect of biological evolution, carried out during the life of individuals.

The author believes that this promotion occurs in three ways.

- 1) The disease may not allow the sick individual to fully rely on the existing «habitual» forms of behavior to meet urgent needs and, thus, stimulates the search for new ones.
- 2) Individuals of social species participating in the development of new forms of behavior and psychic activity receive benefit in health, which in turn contributes to dominance in their community, and hence the possibility of spreading their accumulated achievements.
- 3) The disease reduces the viability of individuals (and populations) that do not participate in evolution, and is therefore a selection factor.

Fourth. According to the function, the condition for triggering the general mechanisms of disease formation is the non-participation of an individual in the formation of new modes of behavior and psychic activity, that is, its non-participation in the psychic aspect of biological evolution. The condition for maintaining health (as far as it relates to the action of the mechanisms of the genesis of bodily diseases described here), respectively, is the participation of an individual in the course of its own life in psychic and behavioral evolution.

It is clear that evolutionary search can be guided by both an actual necessity (external situation or internal conflicts) and the very need to search for the new. Therefore, the non-participation of an individual in its evolutionary process can also be considered both in connection with the actual necessity to search and with the duration of the absence of involvement as such.

It is important to emphasize that, of course, the very search for new forms, including unsuccessful attempts, but not its result, is participation in one's own evolution.

It is easy to make sure that in relation to a person, the main variants of the conditions for triggering the formation of a bodily disease described in the psychosomatic literature are part of the general condition described above. Indeed, if we are not aware and do not try to realize our needs, including the need for search and creativity, if our internal organization is so rigid that it does not allow our internal conflicts and traumas to become sources of our personal growth, if stress does not direct us to search for something new, then all this makes it impossible for us to participate in the evolution of the psychic.

It is also clear that search activity is a necessary instrument for our psychic evolution, and that is why it is such an important factor in maintaining health.

Fifth. The general mechanism of the genesis of bodily diseases, which turns on when an individual does not participate in its psychic evolution, manifests itself in two forms:

- a) The body's systems of counteraction to naturally occurring pathogenic factors (for example, immune system, regenerative, etc.) reduce the degree of their mobilization and systemic organization;
- b) Other («invented» by evolution) factors and pathways of disease formation are formed.

Accordingly, in actively evolving individuals, resistance forces remain at the maximum of their power, and the genesis of «additional» factors and pathways of disease formation does not trigger.

It is clear that both this maximum and the corresponding minimum are manifested not only in the situation of fighting disease-causing factors, but also as a readiness to face them.

The author understands the systemic organization of the work of the systems to counteract disease-causing factors as: a) the conjugation of the work of various systems, their combining into an integral system; b) the conformity of the work of various systems for the purpose of preserving the life of an individual; c) the flexibility of work of this holistic system, its ability to form new «internal protocols» of healing. The power of these systems, respectively, is understood as a combination of mobilization and structural organization.

An important clarification: the author does not assume that all somatic diseases can be considered the result of the action of the mechanism described by him. Factors of disease formation are more often formed naturally or as a result of aging mechanisms than as a result of the action of this general mechanism. However, even more important is that the factors of disease formation may turn out to be such that they cannot be counteracted even by the mechanisms of resistance working at their fullest capacity (in actively evolving individuals).

Previously, the author believed that the «classical» mechanisms of psychosomatogenesis described by Z. Freud [4] and F. Alexander [5] are more correct to consider as naturally occurring disease-causing factors, along with purely somatic ones. However, at present, the author is inclined to assume that they should be understood as part of the second form (i.e., the formation of disease-causing factors) of the general mechanism of disease formation described above. Triggering of the deliberate genesis of disease formation, when the disease gives a sick person some secondary benefits [4,6], according to the author, for its implementation can use the entire general mechanism of disease formation described above. The placebo effect can also use the same mechanism, increasing the power of the disease resistance systems and suppressing the genesis of factors arising from the action of the general mechanism. Earlier, the author suggested that such a possibility arises due to the fact that during the implementation of a placebo, an unconscious search for a self-healing strategy occurs, which can be understood as an act of psychic evolvment [10]. However, as the author believes, the study of the interaction of placebo and the general mechanism of disease formation should be continued.

Sixth. In general, the system of disease formation mechanisms includes:

- a) Mechanisms for recognizing participation and non-participation of an individual in

psychic evolvement;

b) The actual mechanisms of disease formation.

The author believes that this recognition mechanism can be implemented by specialized detector neurons or neural systems in the brain that function similarly to the «neurons of identity and novelty» and are activated when an individual tries to form a new psychological or behavioral decision.

The discovery of such detector systems in the course of neurophysiological research could be the most important confirmation of such a speculatively created concept. Physiological studies of general mechanisms of strengthening and weakening of systems counteracting pathogenic factors are also relevant. Comparative studies of the influence of various ways of evolving of the psychic (for example, finding ways to solve urgent tasks, free creative search, mastering new types of activity for an individual, in the absence of clear instructions) on integral characteristics of health (in humans) and the ability to resist experimentally generated pathologies (in animals) could also be useful.

According to the author, the development of theoretical and empirical research in the context of the proposed conceptual model of psychosomatogenesis can create opportunities for its practical application. First, the discovery of brain evolvement detectors can make it possible, when exposed to the latter, to simulate evolvement, and therefore turn on disease resistance systems to their full capacity. Which the author believes may become a powerful etiological method in medicine. Secondly, it will be possible to form the schemes of optimal evolvement, and thirdly, to optimize the schemes of psychosomatotherapy.

Conclusions

1) The formed conceptual model of bodily diseases formation describes from a unified standpoint the mechanism of psychosomatic interaction, its functions and conditions for its triggering, considering this mechanism as an instrument of the psychological aspect of biological evolution.

2) This mechanism is the same, at least for all higher animals.

3) This concept is consistent with all major psychosomatic concepts and, moreover, creates a context for their understanding as parts of this general model.

4) This concept is largely based on the results of empirical and theoretical research in the field of gerontology, evolutionary and molecular biology.

5) It expands the idea of psychosomaticity.

6) As this model considers only the deep etiology of somatic diseases as connected with the psychic, and leaves the opportunity for pathogenesis to remain purely medical, it creates a context for the rapprochement of «psychologists» and «doctors» in the general field of psychosomatic research.

- 7) This concept is available for empirical confirmation.
- 8) This concept creates wide opportunities for practical application.
- 9) This concept creates a context for further development of theoretical and empirical research in psychosomatics.

There is no conflict of interest.

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