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Mechanisms of conversion, somatoform and psychosomatic disorders in adulthood and childhood-adolescence

Lejla K. Shaydukova
Kazan State Medical University, Kazan, Russia

ABSTRACT

Conversion, somatoform and psychosomatic disorders have been the subject of study for many years. If severe conversion disorders were common among patients in the 19th century, somatoform and psychosomatic disorders were more common in the 20th century. They have not lost their importance at present time. The combination of theoretical and clinical aspects gives the problematic a stable relevance, therefore these disorders lead to the need for interdisciplinary interaction, psychological and psychiatric counseling. The article briefly reviews fragments of the history of studying conversion and somatoform disorders, modern concepts of somatoform and psychosomatic disorders and their features in childhood and adolescence in comparison with the mechanisms of neurotic disorders, as well as the pathodynamics of somatoform disorders. The concepts of the emergence of somatoform and psychosomatic disorders are presented—macrosocial and microsocial, individual and family, psychoanalytic and psychodynamic, allowing to assess the breadth of the range of the raised problems. From the standpoint of the systemic approach, a parallel with neurotic disorders is drawn, the similarity of the mechanisms of their formation is emphasized, and the community of models of family relationships through "neurotic" and "somatic" symptoms is indicated. Identification of the features of somatoform disorders' mechanisms in childhood and adolescence also brings a certain novelty and explains the increase in the group of "frequently ill children". The combination of theoretical (psychological) and clinical (psychiatric) aspects is an important factor in the unification of the raised topic, which is initially interdisciplinary. The practical value lies in the analytical and didactic presentation of the material, which can be used by various specialists.

Keywords: conversion, somatoform, psychosomatic disorders; mechanisms; adulthood; childhood and adolescence.

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Механизмы конверсионных, соматоформных и психосоматических расстройств во взрослом и детско-подростковом возрасте

Л.К. Шайдукова
Казанский государственный медицинский университет, г. Казань, Россия

АННОТАЦИЯ

Конверсионные, соматоформные и психосоматические расстройства остаются объектом изучения на протяжении многих лет. Если грубые конверсионные расстройства были распространены среди пациентов в XIX веке, то соматоформные и психосоматические — больше в XX веке. Не утеряли они своей важности и в настоящее время. Устойчивую актуальность проблематике придаёт совмещение теоретических аспектов с клиническими, поэтому данные расстройства приводят к необходимости междисциплинарного взаимодействия, проведения психологического и психиатрического консультирования. В статье кратко рассмотрены фрагменты истории изучения конверсионных и соматоформных расстройств, современные концепции соматоформных и психосоматических расстройств и их особенности в детско-подростковом возрасте, дано сравнение с механизмами невротических расстройств, представлена патодинамика соматоформных расстройств. Автором приведены многочисленные концепции их возникновения — макросоциальных и микросоциальных, индивидуальных и семейных, психоаналитических и психодинамических, позволяющих оценить широту диапазона поднятой проблематики. С позиций системного подхода проведена параллель с невротическими расстройствами, подчёркнуто сходство механизмов их формирования, указано на общность моделей семейных взаимоотношений через «невротический» и «соматический» симптомы. Выявление особенностей механизмов соматоформных расстройств в детско-подростковом возрасте также вносит определённую новизну и объясняет увеличение группы «часто болеющих детей». Сочетание теоретических (психологических) и клинических (психиатрических) аспектов — важный фактор унификации поднятой темы, которая изначально носит междисциплинарный характер. Практическая ценность заключается в аналитическом и дидактическом изложении материала, который может быть использован различными специалистами.

Ключевые слова: конверсионные, соматоформные, психосоматические расстройства; механизмы; взрослый возраст; детско-подростковый возраст.

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INTRODUCTION

Conversion, somatoform, and psychosomatic disorders have been considerably studied over the years. Conversion disorder was commonly reported in the 19th century and somatoform and psychosomatic disorders in the 20th century. Currently, these disorders remain critical, as evidenced by the increasing number of scientific studies [1, 2]. However, these conditions often merge into a single neurotic register, without differentiating into individual nosological units.

The mechanisms of occurrence of these disorders are complex, because they are situationally conditioned, personally determined, and superimposed on the "vegetative organics," and they originate from the opaque sphere of the human subconscious and are formed from profound ethnocultural, religious, and parental-family relations.

Somatoform disorders can be independent, as indicated in the international classification of diseases. However, they are often complicated by transition to psychosomatic disorders with confirmed somato-organic characteristics. A compromise is the "somatic distress syndrome" adopted in the international classification of diseases, 11th revision [3]. The polyconceptual nature of conversion, somatoform, and especially psychosomatic disorders is shown by various concepts, hypotheses, and theories (here they act as synonyms, as they are presumptive, requiring further study and proof).

The presentation of these pathologies in childhood and adolescence is even more complex. Pediatricians are concerned with the increase of sickly children, wherein in most cases, organic, infectious, and other etiological factors could not be identified. Medically unexplained disorders in children are assessed as somatoform disorders, the occurrence of which is greatly influenced by family relationships [4]. Somatoform disorders in children and adolescents are separately studied [5, 6].

Pain that occurs without a clear cause or neurological or psychovegetative component is the best example of low evidence of such disorders. Some studies classified them as "psychogenic pain" or "idiopathic pain," and differentiation between them was indicated [7]. Psychogenic pain is interpreted as a hysterical conversion disorder, whereas idiopathic pain is classified as a somatoform manifestation. Whether to classify pain disorders as a somatoneurological pathology or categorize them as a mental disorder is controversial [8].

Theoretical and clinical aspects provide relevance to a range of problems; therefore, these disorders require interdisciplinary interaction and psychological and psychiatric counseling. Notably, specialists often act separately, in accordance with their professional orientation. Moreover, the "ABC of psychology" and didactic routine for psychologists may be of theoretical interest for practicing psychiatrists, and conversely, the clinical component will enrich the hypothetical and conceptual content of the work of psychologists.

The multidisciplinary nature of the subject is exhibited in the fact that most patients with such disorders are treated by therapists (e.g., cardiologists, gastroenterologists, and rheumatologists), internists (e.g., neurologists, gynecologists, and urologists), and pediatricians. These categories of specialists should be aware of the mechanisms of the pathology under consideration . Finally, the obligate group consists of practicing psychotherapists. Whether individual psychotherapeutic work should be conducted, which includes body practices [9], dance, theater therapy [10], and traditional types of art therapy, is unclear [11].

Awareness is the first step to healing. Therefore, the object of psychotherapy is to classify the family as "symptom carriers" and then conduct long-term family psychoanalytic and psychodynamic intervention. However, its implementation is limited by several conditions, namely, focused specialization, the need for qualifications and experience, the small number of psychologists in this field, and the inability to conduct the intervention in dispensary conditions. Rational cognitive–didactic psychotherapy with the presentation of materials on the mechanisms of the considered pathology and their characteristics in adulthood, childhood, and adolescence, is an optimal and accessible form of "awareness psychotherapy" [12].

FRAGMENTS OF THE HISTORY OF STUDYING CONVERSION AND SOMATOFORM DISORDERS

In 1895, Sigmund Freud defined conversion disorders in a way that it is understandable for modern psychiatry. In "Studies in Hysteria," he wrote, "An emotion that could not be expressed was transformed into a physical symptom, which was a compromise between the unconscious desire to express a thought or feeling and the fear of possible consequences" [13].

From this, the obligatory criteria were distinguished, namely, the impossibility or inability to directly express an emotion, its blocking because of fear of consequences, the transformation of affect into a physical equivalent, and the unconsciousness of this process. Conversion, which is the shift of a mental conflict into a somatic one, manifests at the macroorganic level. It is manifested by visible and demonstrative characteristics, which are shown by a loud demand for help or a quiet hint for attention, often concealing rage and egoism, revenge, and punishment, and an ineradicable desire and the inability to refuse it consciously, among others.

The psyche performs the subconscious imperative owing to its infantile suggestibility and, according to the author , demonstrates motor disorders in the form of pseudo-paresis and pseudo-paralysis, indicating an unconscious refusal to carry out unwanted motor acts. (The case of "Anna O." became a psychoanalysis classic, embodying the leading psychological phenomena of symbolization, resistance, transference, and a vivid conversion to borderline psychopathology.) According to Sigmund Freud and Josef Breuer, allowing patients to relive and describe neurotic trauma contributes to its withdrawal from the depths of the subconscious [13].

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A relatively different concept of the emergence of somatoform disorders was presented by Sigmund Freud in "Defensive Psychoneuroses" (1894) and "On the Basis for Isolating a Certain Symptom Complex in Neurasthenia as an Independent Anxiety Neurosis" (1895) [14, 15]. Cardiovascular, respiratory, digestive, and genitourinary disease symptoms, manifested by sudden sweating, dizziness, shortness of breath, tremors, flatulence, diarrhea, and urge to urinate, may also indicate an anxiety attack. The role of the "vegetative organics" is clear, as is the significance of the emotional sphere, which triggers a cascade of manifestations such as anxiety, panic, and fear. This shows another type of conversion, that is, the transition of affect to vegetatics, which was functional in nature. However, with a long history of such disorders, a more stable disorder arose, which was categorized as "psychosomatic."

Moreover, "conversion disorders" and "somatoform disorders" exhibited no similar signs. In 1935, in a monograph, Wittkower classified them according to different mechanisms of occurrence, excluding hysterical conversion from the category of psychosomatic disorders, but including somatoform disorders and "organ neuroses" [16]. However, some problematic and controversial issues of psychosomatic relationships of somatoform disorders in clinical psychiatry remain [17].

The term "psychosomatics" was defined a century earlier than Freud's concepts and was proposed by German psychiatrist JCA Heinroth [18]. The author may have proceeded from the protracted dispute of ancient Greek philosophers about the priority of the "body" according to the school of anatomists of Knidos and the "spirit" according to the school of psychics of Hippocrates. However, the dispute between "psychics" and "somatics" remain debatable [19]. However, with his presentation of his scientific views worldwide, Sigmund Freud provided impetus to numerous concepts, theories, and hypotheses about the origin of these disorders.

MODERN CONCEPTS OF SOMATOFORM AND PSYCHOSOMATIC DISORDERS

Macrosocial concepts of somatoform disorders include ethnocultural and religious factors [20]. It has been noted that the Chinese language has poor set of words that can describe experiences and emotionally charged terms that could express melancholy, apathy, and shades of mood. Accordingly, complaints of affective distress due to the inability to convey them in words are replaced by a somatic and vegetative equivalent, and depressive disorders are modified into somatoform disorders. This circumstance may elucidate the centuries-old development of specific Eastern pharmacotherapy (bioactive supplements), body therapy in the form of acupuncture, and manual therapy (message) instead of Western psychotherapy of treatment using words.

Moreover, Orthodox upbringing with a ban on the expression of feelings, restrictive canons of religious fundamentalism of any kind, and cultivating emotional closure contribute to psychosomatization as an outlet for emotions through the body owing to the lack of verbalization of affect. The macrosocial mechanisms of somatoform disorders are universal regardless of patient age (adult, child, or adolescent), creating an archetypal layer of cultural/religious response to conflict situations [21].

The microsocial concepts of somatoform disorders concern intra-family factors, including models of upbringing, especially at an early age. Excessive attention to the problems of the child's health, overprotection, and the creation of a "sick image" have psychological and psychoanalytic effects. It reflects an unconscious desire for soft dominance, fears of separation from parents, parents' fear of children's independence, attempts to solve interpersonal marital problems at their expense, and unfinished conflicts with their own parents. Therefore, parents keep the child in a "psychological cradle" either with excessive anxiety or a silent call for submission.

"Families who somatize" is a type of a psychosomatogenic family [22]. The psychological portrait of such families involve excessive family integration and hyperprotection, lack of flexibility in relationships and social rigidity, ignoring personal needs and cultivating dependence, exaggerated care as a tool for distracting attention from family contradictions and fear of conflicts, the use of a "psychosomatic symptom" as a regulator of relationships, and closed contours [23]. In these families, various types of relationships are possible, including binding, rejection, and delegation, which can also be dysfunctional and "wait" for their family psychologist and psychotherapist to identify the sources of the emergence of secondary pathology [24].

The scientific literature reveals the crucial role of the mother, who is symbiotically connected with her child and designated as "psychosomatic." It is characterized by dominance, authoritarianism, excessive involvement, anxiety and/or hostility, and obsession and/or demandingness. A similar concept of a "neurotic mother" with a high level of personal anxiety arises, which is forced to be suppressed but "justifiably" projected onto the child [25].

Kutter's "Concept of the Struggle for Own Body" indicates that a dominant mother can prevent a child from "mastering his or her body" by paying too much attention to him/her. Treating someone else's body as their own property is a form of control and dominance; however, completely ignoring and leaving it without attention can block a child's normal balanced relationship with his/her body. Previous studies on psychoanalysis reported the role of the psychology of the unconscious in such processes [26].

"The concept of separation and individuation" by Mahler points to the mother's desire for an endless "symbiotic unity" with her child and her rejection of the inevitable separation, which contradicts the natural dynamics of development processes. Excessive psychological fusion with the figure of the child leads to further weakness of the ego structures and can underlie psychosomatization [27].

The issue of parental dominance is emphasized in the "Concept of symbiosis violation" by Ammon [28]. Idealization

of the images of mother and child, overestimation of demands, establishment of strict control over the object of care, imposing own needs on him/her, and perceiving him/her as helpless and in need of permanent help are characteristics of the educator. It was established that mothers of this type react only to the physical needs of her child in the event of his/her illness, which motivates the demonstration of a somatic ailment to obtain at least this kind of communication.

The "desomatization–resomatization concept" by Schur is most relevant at any age; however, in children, the path back to resomatization is shorter [29]. As they grow and mature, mental and somatic processes begin to separate, having previously formed an integral whole in the postnatal age segment. Differentiation occurs, which is designated as desomatization. However, with the emergence of somatoform disorders (and being their possible cause), resomatization occurs, which is a return to the previous psychovegetative, somatic, and behavioral model.

Another concept of somatoform disorders is alexithymic. According to its definition first introduced by Sifneos, "alexithymia is the inability to express feelings in words." The main features of alexithymia were a person's inability to find words to describe feelings, preference for words of action, utilitarian thinking, lack of fantasies, and narrowed affect [30].

Alexithymia is a basic mechanism of somatization and applies to all age groups; however, its presence in childhood is crucial for the development of somatoform pathology due to age-related physiological underdevelopment of mental and verbal functions. According to the stages of mental sphere formation presented by Russian psychiatrists [31, 32], verbal formulation of one's own feelings in childhood and adolescence does not immediately occur. The stages of mental development are the stages of somatovegetative manifestations (up to 1 year), motor functioning (1–3 years), affective and perceptual manifestations (3–7 years), and behavioral manifestations (7–12 years) and the cognitive stage (12–15 years).

Accordingly, until the full development of the higher sphere of mental activity and differentiation of the affective and cognitive spheres, with the verbal channel being the output one, conscious verbal formulation of one's complaints about emotional disorders is challenging. Under certain conditions, verbally unprocessed affects accumulate and become psychosomatics.

Several additional factors contributing to alexithymia in childhood are critical. Organic pathology such as hypoxic birth disorders in the vertebrobasilar system, involvement of the cerebral systems of the suprasegmental level, reticular–limbic formation, perinatal injuries, and numerous childhood infections can cause brain deficiency and contribute to alexithymia as a component of somatoform disorders.

In addition, to the basic defect of brain development in children, which can be compensated for as they grow older, a certain impact on alexithymia is exerted by external factors, particularly learning, the cultivation of silence in the family, and harsh upbringing. Socialization at school is typically accompanied by demands to follow norms of behavior or bullying from classmates and teachers in educational institutions. In these cases, alexithymia develops as an adaptive function, leading to a somatoform disorder that relieves the child of immediate emotional suffering, but becomes the cause of the shift to a long-term somatized disorder.

A question arises: if there are purely physiological limitations to verbalization of negative affect in childhood and adolescence, why does not everyone develop alexithymia and somatoform disorders? The "concept of operational thinking" answers this question, indicating that the body is protected from somatic disorders by mental processes of symbolizing experiences and the transition of real events into the realm of "dreams" [33]. Probably, it is The translation of reality into the plane of fantasy, which often occurs in childhood and adolescence, may weaken the force of the traumatic impact of society and vice versa; the absence of this cordon contributes to somatization.

The stress theory by Selye points to its possible involvement in the development of somatoform disorders [34]. Stress was categorized as intrapersonal, interpersonal, and social. The latter included financial, environmental, social, work, and family options, which are fully represented in adults. This list of trigger stresses in childhood does not include social stress. The exceptions are family conflicts, divorce, and loss of parents. The presence of classical intrapersonal stress in a child because of age-related underdevelopment of personality structures remains controversial. Moreover, in adolescence, as a result of psychologically determined processes of the formation of ego structures, interpersonal and intrapersonal stress factors become especially relevant, which can trigger the formation of somatoform disorders.

Psychological traumas are significant in explaining somatization in humans at any age; however, in children, they are especially considerable owing to their novelty. The leading "childhood traumas" are separation and lack of love and a severe one-time or permanent insult. A phenomenon called "loss of an internal object" in psychoanalysis arises, which refers to one of the popular concepts of Engel and Schmale [35]. In children, the lack of parental love is the most significant cause of experiences, because they are closely connected with the parental figure at this age and are at the stage of symbiotic unity. Separation from the primary love object can be both real (placement in a children's home, boarding school, or orphanage) and virtual with disinterest in the child or denial by the parents. Mental disorders occur even in infants abandoned by their parents, meeting the definition of "abandonment complex." However, at this age, it is difficult to distinguish anaclitic depression with a somatic facade from somatoform disorders.

One of the common psychotraumatic factors is improper upbringing with belittling the child's achievements, disbelief in his/her abilities, and mild family bullying. Negative evaluative parental judgments in case of failures, which are capacious and fixed in the consciousness of children and adolescents,

often lead to a state of helplessness, which contributes to the development of somatoform disorders. The "concept of learned helplessness" is one of the concepts that has experimental confirmation [36]. Although the results of experiments on animals have been repeatedly reviewed and questioned, the logic of "acquired helplessness" in humans appears valid.

The association between disease specifics and personality traits of a person was traced by Dunbar; four "personality profiles" were identified, which differed in adults and children. Thus, in adulthood, the coronary and hypertensive personality profiles predominate, whereas in childhood, the allergic profile is predominant, and the profile prone to self-harm is predominant in both age groups [37].

The "concept of the fight-or-flight reaction" by Cannon emphasizes the unreacted emotions of rage and fear. The inability to respond to stress with phylogenetically ancient reactions of aggression or flight leads to the activation of vegetatics without subsequent discharge, which results in somatization [38].

In adulthood, the issues of socialization and submission to the moral and ethical laws of society and problems of emotional restraint for optimal adaptation are more relevant. Higher cortical functions of emotion and behavior control are already formed in adults, which are still undergoing the maturation process in children, but the constant forced control without adequate response places a burden on the autonomic nervous system. This mechanism for the formation of somatoform disorders is more characteristic in adults. However, as the child grows up and proceeds to adolescence, negative emotions accumulate from painful socialization in an educational institution, and in the conditions of deducting upbringing in the family, conditions for the somatization of stagnant affect develop.

The "concept of specific conflicts" by Alexander [39], which attaches primary importance to their content, is relevant for both adults and children, but with some amendments. According to the concept, a certain somatoform and psychosomatic pathology corresponds to a certain emotion, for example, gastrointestinal disorders in the form of vomiting correspond to the emotion of disgust and rejection (the verbal formula "feels sick of something/someone") and heart diseases correspond to a lack of recognition and love (the verbal formula "to take to heart"). In childhood, the substantive aspect of external conflicts is simpler than in adulthood (e.g., there is no concept of "unsatisfied career ambitions"), and the gastrointestinal vegetative system is activated more often and more clearly than the cardiovascular system.

The author believed that the type of psychosomatic disorder is dependent on the type of intrapersonal conflict, as oral fixation causes hunger and peptic ulcer disease, anal fixation leads to colitis, unsatisfied need for affection and touch manifests itself in skin diseases, and internal tension and autoaggression result in hypertension.

Separately, it is crucial to mention somatoform pain disorder, which is equally common in patients of any age. As previously mentioned, pain can be a universal symptom in somatology, neurology, and psychiatry, differing only in genesis (organic and psychogenic). Accordingly, the concepts of pain disorder mechanisms are characterized by their "organicity" or "psychologism" [40].

The first "organic" concept indicates the presence of pain by the mechanism of conditioned reflex reinforcement, when the expectation of pain reduces the pain threshold, increasing the extent of sensations. The other concept refers to the possible consolidation of a reflex in long-term pain, initially of organic origin in the form of a somatic or neurological disease, with the subsequent formation of a pathological stereotype. The third concept focuses on physiological indicators inherent in humans, namely, low pain tolerance threshold, when any physiogenic stress is perceived as pain [41]. Personal characteristics contribute to occurrence of somatoform disorder according to the mechanisms given [42].

Psychological (psychodynamic) concepts highlight the "secondary benefit mechanism" and hidden content of a symptom as a way to achieve an unconscious goal. Pain as a means of attracting attention, retaining love, avoiding the unwanted, cultivating a sense of guilt in others, controlling loved ones, giving meaning to existence, and explaining failures, among others, are subconscious sources of this manifestation. In school-age children, the demonstration of pain, often reminiscent of simulation, can arise as a fear of upcoming exams, solving socialization problems, and changing life stereotypes, which activates vegetative functions and contributes to somatized response.

FEATURES OF THE PATHODYNAMICS OF SOMATOFORM DISORDERS IN CHILDHOOD AND ADOLESCENCE

The "concept of a two-tier line of defense" by Mitscherlich [43] presents the pathodynamics of somatoform disorders and conditions for the transition from stage 1 of mental conflict resolution to stage 2 of physical defense and somatization. Kernberg added stage 3 of transition to a psychotic level, which is shown only for some psychoses, preceded by "diathesis" and "somatoses." This concept is present in all age groups and is universal for any cohort of patients.

Stage 1 of "somatization of affective experience" occurs almost asymptomatically and latent [44]. The shift from affective to somatic, even in adults, is characterized by a low level of awareness when depression is accompanied by polymorphic algia, hyperphagia, hypersomnia, and meteopathies. In these cases, it is challenging to determine the priority and whether depression has a somatic facade (previously, "masked depression" was popular, which was not presented in the classifications of mental illnesses), whether somatoform disorders are comorbid with depression, or whether the affective radical shifts into a somatic one and "somatization of depression" occurs.

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In addition, to insufficient awareness of depression, denial of its occurrence often occurs, namely, the phenomenon of "depressive anosognosia." This phenomenon, described in another cohort of patients [45], is present in people with mild depressive disorders of various origins. Denial of affective pathology has similar mechanisms and is associated with depression as a universal nonspecific symptom. The components of "depressive anosognosia" are superficial, cognitive, perceptual, supplying, non-compliant, and stigmatizing. Clearly, denial of depression is a branch formation of insufficient awareness and is a psychological block.

In children and adolescents, awareness of depression is even more challenging owing to its atypicality, veiled nature, rudimentary nature, syndromological incompleteness, and transitory nature [46]. In addition, a child is unable to complain about depression because of a lack of understanding of the term. The presence of abstract symbolism of this concept with an unfinished cognitive process in childhood and adolescence, with its visual-effective and concrete-figurative thinking, does not allow an individual to verbalize his/her complaints about a decrease in mood and contributes to the transition of affective pathology into a somatic channel.

At stage 2, functional psychosomatics arises without a true disorder of organs and systems, previously defined as "heart neurosis," "cardiac neurosis," and da Costa's syndrome with characteristic pseudo-anginal pains [47]; "stomach neurosis" and "gastroneurosis" with flatulence, nausea, vomiting, diarrhea, and irritable bowel syndrome; and "respiratory neurosis" with hiccups, choking, psychogenic cough, and rapid breathing.

In children, functional psychosomatics is expressed in systemic childhood neuroses in the form of nonorganic enuresis, encopresis, laryngospasm, hyperventilation syndrome (sometimes accompanied by functional respiratory convulsions), aerophagia, regurgitation, and pylorospasm. Moreover, in children, somatoform disorders manifest themselves more in the urinary, respiratory, and digestive systems, relating to distorted patterns of disturbed vegetatics.

In adulthood, urinary system disorders (neurotic polyuria and polydipsia) are accompanied by reproductive system disorders such as psychogenic frigidity, dyspareunia, and vaginismus in women and erectile dysfunction and premature ejaculation in men. Currently, unexplained, without identified causes, "idiopathic" female infertility is considered a variant of psychosomatics. Additionally, the cardiovascular system is involved in the form of vegetative–vascular dystonia, which is a functional heart rhythm disorder. Somatoform pain disorder in adult patients occurs in the form of psychogenic neuralgia, pseudo-radicular syndrome, myalgia, cephalgia, and cardialgia, whereas gastralgia more often develops in children.

Finally, organic psychosomatoses, which are chronically recurrent and difficult to treat, develop at stage 3. In the gastrointestinal tract, these manifest as gastritis, duodenitis, peptic ulcer, and nonspecific ulcerative colitis/Crohn's disease; in the cardiac system as angina pectoris, arterial hypertension, and heart rhythm disturbances; in the vascular system as vasculitis; in the skin system as psoriasis, eczema, and neurodermatitis; in the pulmonary system as bronchial asthma; in the musculoskeletal system as rheumatoid arthritis; and in the endocrine system as thyrotoxicosis and type 2 diabetes mellitus. The list of "psychosomatosis" tends to expand [48].

The transition to stage 3 can be gradual or psychogeniclytic and rapid; it can occur in adults and children who are under monitoring for asthma and allergies or patients with diseases of "unclear genesis." These patients complain of disorders in one area; however, some multiple psychosomatic disorders involve various body systems. The list includes up to 59 symptoms, including algic, anxious, and depressive symptoms, in the absence of a physical cause (Briquet's disease). This disorder is related to chronic polysymptomatic hysteria and combines conversion and psychosomatic mechanisms [49].

Similar multistage pathodynamics was described by Lakosina in relation to neurotic disorders, namely, short-term affective situational reaction, more prolonged neurotic reaction, neurosis with somatization of affective disorders, and neurotic personality development [50]. The difference includes the fact that in the algorithm of neurosis formation, final changes are pathocharacterological in the form of acquired, marginal psychopathy, and somatovegetative disorders with a possible transition to psychosomatic ones are the most significant in the structure of somatoform disorders.

Notably, postneurotic marginal psychopathy, despite its undoubted pathological nature, paradoxically strengthens the ego structure and creates a rigid framework of personal resistance in the form of a sthenic reaction. If at the start of the conflict a person presents himself/herself as an intropunitive–destructive object and communicates with the environment through a neurotic–somatic symptom, then after a few years, as a result of pathological coping, an extrapunitive–destructive personality is formed. This process is more typical in adults, who already has a formed personality, which is subject to change.

Some "functional somatic symptoms" are characteristic of children and adolescents and disappear as the body matures [51]. If they persist, they can develop into somatoform disorders. Getting stuck at the somatovegetative stage (with a frequent transition to the psychosomatic stage) indicates a phylogenetically earlier level of response to stress. The occurrence of such disorders in adult patients probably indicates the actualization of resomatization mechanisms. However, the reasons for such regression are unclear and are presented in the scientific literature as theories, hypotheses, and concepts.

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CONCLUSION

Conversion, somatoform, and psychosomatic disorders remain critical, as evidenced by their increasing prevalence in the general population and a large number of scientific studies of these conditions. An analytical review of the concepts of the mechanisms of occurrence of these disorders and identification of features in childhood and adolescence bring novelty to this study. Comparison with the mechanisms of formation of neurotic disorders allows for extrapolative interpretation from a systemic approach, and the presentation of various "family" concepts proves that these mechanisms have individual and group origins.

The combination of theoretical and clinical aspects is crucial in the unification of the topic raised, which is initially interdisciplinary in nature. The practical value consists in the analytical and didactic presentation of data, which can be used by various specialists, such as psychologists, psychiatrists, child psychiatrists, psychotherapists, pediatricians, therapists, and internists.

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AUTHOR INFO

Lejla K. Shaydukova, MD, Dr. Sci. (Med.), Prof., Depart. of Psychiatry and Medical Psychology, Kazan State Medical University, Kazan, Russia;
ORCID: 0000-0003-2258-1232;
eLibrary SPIN: 7514-5446;
e-mail: shaidukova@list.ru

ОБ АВТОРЕ

Шайдукова Лейла Казбековна, д-р мед. наук, проф., каф. психиатрии и медицинской психологии, ФГБОУ ВО Казанский ГМУ Минздрава России, г. Казань, Россия;
ORCID: 0000-0003-2258-1232;
eLibrary SPIN: 7514-5446;
e-mail: shaidukova@list.ru