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CURRENT STATUS OF THE PROBLEM OF ANXIETY DISORDERS AND FACTORS OF THE PATHOMORPHOSE OF ANXIETY SYNDROME

Vitaliy O. Kurylo

Zaporizhzhia State Medical and Pharmaceutical University

Doctor of Medical Sciences Professor, Department of Psychiatry, Psychotherapy, and Medical Psychology
ORCID ID:0000-0001-8456-5276

Abstract

Objective: To synthesize current scientific literature on the epidemiology, clinico-psychological correlates, and clinical pathomorphosis of anxiety disorders, aiming to generalize key features of the anxiety syndrome.

Materials and Methods: A comprehensive analysis of contemporary scientific publications, including systematic reviews and meta-analyses, was conducted to identify current trends in the understanding and management of anxiety.

Results: The review confirms that anxiety disorders are a highly prevalent, heterogeneous, and exceptionally comorbid pathology, frequently overlapping with mood, pain, and substance use disorders. Pathomorphosis of the syndrome was significant, frequently manifesting as “masked” anxiety. This involves a predominance of somatic or vegetative symptoms (e.g., chronic pain, functional dysfunction) presented in primary care, rather than classic psychiatric complaints. This clinical presentation is strongly linked to

psychological constructs of alexithymia and poor insight, which impede emotional awareness and verbalization. These deficits impede diagnosis, result in excessive medical investigations, and reduce CBT efficacy due to its reliance on cognitive-emotional processing.

Conclusions: Anxiety disorders are a prevalent, heterogeneous, and highly comorbid pathology. Major challenges include the somatization of symptoms and patients' low insight, which necessitates a transdiagnostic approach and interventions aimed at improving self-awareness.

Keywords: alexithymia; anxiety; comorbidity; depression; pathomorphosis; somatoform disorders; mental health; mental illnesses; quality of life.

Anxiety as a psychopathological syndrome remains a significant problem in modern medicine. Recent research identifies issues requiring investigation with contemporary methods. Presently, there is evidence of high comorbidity of anxiety and the formation of mixed variants of the anxiety syndrome itself. Scientific literature presents data on the overlap of anxiety with depression [11, 49], chronic pain [5, 48], alcohol consumption [42], features of obsessive-compulsive disorder [22], and anorexia nervosa [58]. The focus of research is also centered on identifying and correcting shared pathological processes and clinical-psychological correlates: cognitive biases [34], fear generalization [10], autonomic regulation dysfunction [9], and maladaptive cognitive schemas [15]. Furthermore, the significance of somatization within the context of pathological anxiety requires study, as it is relevant not only for mental disorders but also for increasing the duration of somatic disease symptoms and rehabilitation difficulties [7, 36, 38].

Therapeutic resistance of anxiety symptoms and persistent pathological anxiety in general also require investigation. This problem is currently insufficiently studied; however, specific areas of work are already being developed to identify resistance markers and design more effective therapeutic approaches [6, 23, 45, 51, 52].

Thus, anxiety syndrome is a relevant and complex problem, the practical significance of which includes both diagnostic and treatment aspects.

Purpose of the Work

The purpose of this work is to highlight current perspectives on anxiety and its epidemiological, clinical, medico-psychological, and biological characteristics, as well as modern problems in treating anxiety, based on the results of recent scientific research.

Materials and Methods

A search of scientific literature published between 2020 and 2025 was conducted. The search included scientific articles indexed in the PubMed, Google Scholar, Scopus, and Web of Science databases. The review included scientific articles on the topics of anxiety syndrome, anxiety disorders, and pathological anxiety in individuals without psychotic symptoms. The results of clinical, epidemiological, and medico-psychological studies, as well as review papers revealing modern concepts of anxiety, were examined.

Results

Epidemiology of Anxiety Disorders

Anxiety disorders have a significant prevalence and constitute a large portion of the global burden of mental health problems [46]. A portion of modern scientific research is dedicated to studying the prevalence of anxiety disorders in various population groups. However, much more scientific literature is devoted to studying risk factors, prognostic factors, and other issues related to influencing the course of anxiety disorders. A notable study conducted by Dehbozorgi et al. examined the prevalence of anxiety symptoms in individuals with a history of traumatic brain injury. This and several other studies revealed a significant prevalence of anxiety symptoms among individuals who have suffered concussions and other neurotraumas [12].

The features of epidemiology and clinical manifestations of anxiety demonstrate noticeable socio-cultural and gender differences. For instance, Farhane-Medina et al. conducted a systematic review of work on the factors of anxiety onset—biological, psychological, and socio-cultural factors—and their impact on the occurrence and course of pathological anxiety. Pronounced population variability was identified [19]. Significant variability was also found by Melkam when analyzing the prevalence of social phobia among students in Ethiopia. The results indicate not only high prevalence but also clear regional characteristics in the course of pathological anxiety. The authors rightly point out that the global nature of the pathological anxiety problem does not negate the need for socio-cultural adaptation of therapeutic interventions [39]. In the context of epidemiology, anxiety among vulnerable populations is actively studied. Above all, these groups include refugees and other people affected by armed conflicts. Pathological anxiety is significantly prevalent among these populations. In addition to general epidemiological studies, the study of anxiety among vulnerable populations also reveals the problem of the significance of various types of psychological trauma in the onset of anxiety [40].

Subthreshold anxiety symptoms—anxiety disorders without constant manifestations and direct reflection in complaints—are also a subject of study. The clinical significance of such anxiety symptoms and their potential for clinical transformation into full-scale anxiety disorders are being investigated [54]. Another subject of current research is the link between environmental factors and the prevalence of anxiety; for example, a potential link between pathological anxiety and air pollution has been identified, but confirming the significance of these factors requires separate study [61].

Clinical Variants of Anxiety Symptoms and Comorbidity with Other Mental Disorders

Clinical variants of anxiety are highly diverse, encompassing nosologically defined disorders—generalized anxiety disorder, panic disorder, anxiety-phobic disorders, clinical variants of these disorders, and symptomatic anxiety in other neurotic disorders [14, 25, 50].

Somatized anxiety is a separate subject of study, primarily due to the reduction in reflection regarding one's own mental state in individuals with somatization of anxiety. Keen et al. studied metacognitive beliefs in anxiety of a nosophobic and hypochondriacal nature and in somatic distress. Their findings suggest that maladaptive metacognitive processes may play a central role in reinforcing somatized mental symptoms and their persistence within a cycle of anxious beliefs and anxious thoughts [30]. The clinical reality of somatized anxiety is confirmed by neurobiological research. Neurostructural differences were found in individuals with pathological anxiety that were not characteristic of individuals without it. The results of this and similar studies may provide valuable information regarding the neurobiological foundations of pathological anxiety [37].

Accounting for the complex comorbidity of neurotic symptoms is an important practical issue. According to the authors, differences in clinical manifestations may reflect underlying pathogenetic features of the course of neurotic disorders. The authors conclude that the difference in the effectiveness of various drugs and psychotherapy techniques for different clinical manifestations of pathological anxiety may be due to certain, as yet insufficiently studied, underlying differences [3, 49]. Some papers examine transdiagnostic approaches to therapy. According to Cuijpers et al., treatment focused on shared patterns of depression and anxiety yields a more stable effect compared to syndrome-oriented therapy [11].

The link between anxiety and chronic pain syndromes is studied as a separate problem. For example, Rogers and Farris point to a strong connection between the severity of chronic pain syndromes and anxiety and depressive symptoms. The authors indicate bidirectional

links, where anxiety about the return of pain leads to the avoidance of physical activity, which in turn leads to the formation of pathological anxiety and the development of neurotic symptoms [48]. Authors of other works reached similar conclusions using the PHQ-2 and GAD-2 questionnaires; thus, various studies have identified an increased predisposition of patients with chronic pain to anxiety and depressive syndromes [5].

In addition to psychogenic somatoform syndromes, the features and impact of pathological anxiety in individuals with somatic diseases are also studied. Authors of one recent study point to significant comorbidity between anxiety and vitiligo [36]. Caponnetto et al. studied the course of chronic headaches and concluded that chronic headache and anxiety have a clear bidirectional relationship [7]. A similarly significant association was found between anxiety and the level of symptoms related to lower urinary tract pathology. Thus, mental distress can exacerbate and increase the duration of manifestations of urological diseases [38]. A positive correlation has been found between anxiety and reproductive system disorders in women [60]. In a study of anxiety in men, a clear positive correlation was found between the severity of anxiety and manifestations of erectile dysfunction [53].

Anxiety severity is examined as an independent factor in the severity of obsessive-compulsive disorder. Goodman and colleagues concluded that the level of anxiety and the predisposition to anxiety, including neurobiological determinants of anxiety, play an important role in the manifestations of obsessive-compulsive disorder, no less than obsessive and compulsive symptoms themselves [22]. The work of Yilmaz et al. also indicates the prognostic role of anxiety in both obsessive-compulsive disorder and eating disorders [58].

Alcohol dependence also has positive correlations with pathological anxiety, which has been confirmed in recent studies [42]. The comorbidity of sleep disorders with anxiety has been studied, revealing complex bidirectional links between insomnia and anxiety. The use of cognitive-behavioral therapy to correct sleep disorders also influenced the reduction of anxiety in some patients, pointing to the prospect of further research into psychotherapy with different sequences of target symptoms [41].

The resistance of mental disorders to treatment is studied separately. Perspective treatment strategies may be aimed at working with pathological anxiety [26].

Recent Data on Clinical and Psychological Characteristics of Patients with Anxiety

Some authors point out that anxiety disorders are characterized by certain cognitive biases that maintain emotions of fear and worry through a vicious circle mechanism. Leung et al., in their meta-analysis, concluded that thinking in anxiety disorders is characterized by a

pervasive tendency to process information such that thoughts regarding threats always find confirmation. Individuals with anxiety disorders are characterized by the simultaneous presence of biased attention, interpretation, and memory processing [34]. The phenomenon of anxiety generalization to obsessive fears was studied in a similar way. For example, in a large study of conditioned fear generalization, where the fear response spreads to stimuli that increasingly differ from the initial stimulus that caused the fear. According to Cooper, in individuals with anxiety disorders, a generalized, indiscriminate fear response is a transdiagnostic biomarker of vulnerability to anxiety [10]. Rabner et al. conducted a study on the characteristics of cognitive functioning in young adults. Specific executive function impairments were identified of cognitive functions, which, according to the authors, may affect the response to treatment and the long-term prognosis of the disorders [47].

Another phenomenon common in individuals with anxiety disorders is post-event rumination. In individuals with social anxiety disorder, strong evidence has been found that persistent negative thinking and the predominance of negative characteristics of the social interaction experience contribute to the maintenance of social anxiety disorder symptoms and the persistence of anxious thinking patterns. Thus, according to the authors, rumination should be one of the phenomena targeted for correction in the psychotherapy of these patients [16].

At the neurobiological level, the autonomic nervous system is largely involved in pathological anxiety. Therefore, symptoms mediated through the autonomic nervous system are considered in scientific literature as potential diagnostic markers and as information that supplements knowledge regarding somatovegetative and mental interactions in anxiety. For instance, the work of Cheng et al. conducted a study on heart rate variability in anxiety disorders. The authors found reduced variability in individuals with anxiety disorders, which may indicate impaired parasympathetic regulation and reduced adaptability of autonomic regulation. Such features, moreover, reflect chronic physiological hyperarousal [9]. Erdman and Eldar suggest in their work that pathological anxiety may arise due to a dysfunctional course of emotions and the interpretation of one's own emotional state. The authors also point to the importance of studying how fear and anxiety signals are processed and regulated at the brain level [17]. There are works studying the genetic and neurobiological correlates of the predisposition to pathological anxiety. Complex polygenic interactions affecting fear circuits and the regulation of pathological anxiety have been identified [32].

Modern scientific literature is represented by studies of clinical, psychological, and neurobiological characteristics in individuals with anxiety disorders. In addition to theoretical

significance, the results obtained are considered in the context of their importance for psychotherapeutic and pharmacological treatment [9, 10, 16, 32, 47].

Contemporary Concepts of Effective Treatment for Patients with Anxiety Syndrome

According to authors of current research, the most effective and relevant method of non-pharmacological treatment for anxiety syndrome of psychogenic origin is cognitive-behavioral therapy (CBT). In a meta-analysis of studies on the effectiveness of psychotherapy for neurotic disorders with a predominance of anxiety symptoms, CBT proved to be the most appropriate method for adult patients with such disorders [4]. Results of other works showed significant effectiveness of CBT in adolescents [29].

In addition to CBT in its pure form, which involves using only cognitive and behavioral techniques, other approaches are being researched, including newer directions of psychotherapy that combine techniques from different psychotherapeutic approaches. For individuals with anxiety disorders, the effectiveness of "Acceptance and Commitment Therapy" (ACT) in individual and group formats, as well as "Mindfulness-based therapy," has been identified [21, 24].

The use of virtual reality technologies in performing exposure techniques in psychotherapy has shown promising results, especially in individuals with severe anxiety syndromes and specific phobias. Results of modern scientific papers indicate that controlled exposure to stimuli that trigger phobic fears remains effective, and conducting exposure therapy via computer simulation is not inferior in effectiveness to traditional exposure [51]. Exposure therapy mediated by virtual reality technologies can also expand diagnostic capabilities when there is a need to clarify the features of anxiety symptoms and factors that intensify anxiety [56]. In post-traumatic stress disorder (PTSD) with a pronounced anxiety syndrome and in anxiety associated with psychotraumatic experiences, significant effectiveness of Eye Movement Desensitization and Reprocessing (EMDR) therapy has been proven [27].

Research results indicate that in anxiety syndromes, in addition to usual psychotherapeutic approaches, lifestyle modifications and physical activity—specifically, regular aerobic exercise—play a significant therapeutic role. Aerobic exercise is strongly associated with a reduction in anxiety and depression scores [2].

Certain substances, the consumption of which is a steady habit, can worsen anxiety. For example, caffeine, according to Klevebrant and Frick, intensifies anxiety and the predisposition to panic attacks in individuals with panic disorder [31].

Regarding the provision of long-term results in the correction of anxiety, preventive measures of a psychological and psycho-corrective nature are of great importance. Measures to enhance stress resilience and prevent anxiety escalation are an important part of the therapy for chronic neurotic disorders with anxiety symptoms [33].

Significance of Anxiety Symptomatology in the Management of Non-Psychiatric Patients

Some authors point to the significant role of somatization in forming the clinical picture of anxiety disorders. Somatized anxiety can lead to the appearance of persistent somatovegetative symptoms, which lead to a distortion of the signs of mental disorders. Thus, the atypical, somatized nature of anxiety symptoms can lead to numerous and often unnecessary medical examinations. Pathological anxiety has significant comorbidity with both autonomic and pain symptoms [48]. Characteristic manifestations of somatized anxiety, according to Caponnetto et al., are primary headaches [7].

Pathological anxiety, according to current research, is the main driver of mental distress and a factor that intensifies the perception of functional somatic disorders in a significant portion of general practice patients. Thus, the level of anxiety affects the onset and level of symptoms of urinary tract dysfunction. Subjective perception of symptoms from the urinary system directly depends on the level of anxiety [38].

Illustrative are the results obtained by Wilmer et al. when they investigated the correlates of quality of life in anxiety disorders; it was found that the mental and somatic burden of anxiety significantly impairs overall functioning, but this impact is especially pronounced in somatized anxiety syndrome. The impact of somatized anxiety is more complex, affecting both the subjective perception of quality of life and functional indicators [57]. Furthermore, in the elderly, anxiety has its own specifics; according to the authors, anxiety in old age affects the overall level of mental distress as well as the fear of falling. Therefore, evidence shows, anxiety is a significant problem in the context of general medical practice, which necessitates the creation of screening tools suitable for use in general practice-family medicine [55].

A reliable assessment of the characteristics of pathological anxiety is critically important for choosing effective pharmacotherapy [8]. As shown in the work of Fagan and Baldwin on the topic of pharmacological treatment of generalized anxiety disorder, the clinical features of the disorder's manifestations for example, the presence of accompanying somatized complaints may be significant when choosing antidepressants. Depending on the

characteristics of the clinical picture, the optimal choice may be either selective serotonin reuptake inhibitors (SSRIs) or serotonin-norepinephrine reuptake inhibitors (SNRIs) [18].

Some recent studies consider the significance of beta-blockers as adjunct drugs for treating anxiety. The authors confirmed their potentially important role in correcting the somatic manifestations of anxiety [1].

Current Perspectives on Medico-Psychological Correlations of Anxiety

One of the promising directions of research is the study of early maladaptive schemas—pervasive, self-defeating patterns of cognitive processing, emotional, and behavioral responding that are formed in the early stages of the development of mental disorders. For example, a link between emotional deprivation and increased emotional vulnerability with the risk of obsessive-compulsive disorder has been identified [15].

The "fear-avoidance" model is one of the scientific problems studied by authors in the context of somatized anxiety in phobic disorders. Initially, this model was formulated for chronic pain, but the principle that the fear of a recurrence of certain phenomena leads to avoidance behavior, which in turn maintains and intensifies distress, is a core mechanism in agoraphobia, specific phobias, and health anxiety [48]. In the study of chronic pain syndromes, a significant role of phobic-type avoidance behavior was found. For example, kinesiophobia can play a significant role in increasing the duration of pain syndromes and lengthening rehabilitation periods [35].

The problem of anxiety syndrome and social factors has been studied in separate research. For instance, measures for social rehabilitation and increasing inclusion in society significantly contributed to reducing anxiety and depression among adolescents [28]. Correlations have been found between social functioning and anxiety, especially in individuals with social anxiety disorder. These studies allow for the assessment of subtle psychological and behavioral characteristics and obtaining more reliable information on how social anxiety manifests outside the clinic [20].

Among neurobiological studies, a meta-analysis of functional MRI (fMRI) studies on the manifestations of cognitive functioning and neurobiological features in social anxiety disorder is illustrative. Consistent changes were found in brain regions associated with emotion regulation, self-analysis, and social cognition. In this disorder, regions such as the amygdala and prefrontal cortex are involved; in these regions, more significant biological correlates of psychological difficulties in social situations were found [59]. Some papers consider the therapeutic significance of methods for manipulating critical memory periods for

the extinction of fear memories. The study of these mechanisms requires a combination of psychological and neurobiological approaches [13].

The Connection Between Anxiety and Factors Affecting Awareness of One's Own Mental State

Studies on the topic of critical self-awareness (insight) of anxiety syndrome hold special significance among modern scientific works. Insight in anxiety syndrome is an insufficiently studied problem. Until recently, authors' attention was focused on depressive syndrome and somatoform disorders. However, there is already limited scientific data regarding the importance of the issue of masked anxiety, awareness of one's own mental state, and the clinical-psychological correlates of reduced critical self-awareness of anxiety [14, 17, 42].

A significant problem in the diagnosis and treatment of masked variants of anxiety lies in patients' limited awareness of their mental state. One factor of reduced awareness is alexithymia. Alexithymia, manifested by systematic difficulties in verbalizing emotions, difficulties in identifying one's own emotions, and externally-oriented thinking, correlates closely with the somatization of anxiety. Patients with high levels of alexithymia more often consult general practitioners with somatic symptoms. Results of individual studies point to the significance of alexithymia in the somatization of anxiety [6, 30].

Studies of autonomic nervous system functioning in anxiety indirectly confirm the decisive role of emotional processing deficits in the somatization of anxiety. A promising direction for treatment is neurophysiologically-based approaches, such as biofeedback and "neurofeedback", but focusing on training self-control of emotional reactions to stress. An effective therapeutic strategy may be aimed at strengthening the awareness of the interaction between the body and the mind, improving emotional insight [6].

Another direction of research is the study of metacognitive beliefs. For instance, the study conducted by Keen et al. complements existing cognitive theories that explain the onset of anxiety [30]. Features of patients' self-awareness of their condition affect the nature of complaints and the realization of individual symptoms as those important to report. These symptoms may be significant, including for the selection of pharmacological treatment [3].

In separate studies, it was found that metacognitive features, such as difficulties in defining, understanding, and regulating one's own thoughts and emotional states, are considered a key factor mediating masked anxiety [23].

Atypical or masked anxiety is often associated with a low level of awareness of one's own mental state. According to the conclusions of several recent studies, problems in

awareness of one's mental state, including awareness of the patterns of anxiety onset, cause not only diagnostic difficulties but also therapeutic ones. The effectiveness of psychotherapy, as the authors indicate, depends on sufficient "insight" into psychopathological symptoms [43, 44, 52]. According to the results of some recent research, awareness of anxiety symptoms and the ability to self-analyze them are important prerequisites for effective psychotherapeutic treatment of anxiety disorders and obsessive-compulsive disorder [45].

Conclusions

1. Anxiety syndrome remains one of the most complex problems in modern psychiatry. The prevalence of anxiety, which varies depending on many factors, is complicated by an extremely high level of comorbidity. According to current scientific data, anxiety rarely exists in isolation; it is deeply integrated into the pathogenetic chains of mood disorders, chronic pain syndromes, somatic diseases, and substance use disorders. Therefore, anxiety as a transdiagnostic phenomenon requires both a specialized and an integrated approach to diagnosis and treatment.

2. The pathomorphosis of anxiety syndrome is being studied. Among the trends in pathomorphosis, the phenomenon of "masked" or somatized anxiety and other atypical manifestations of anxiety have been highlighted. This is recognized as a relevant diagnostic and therapeutic problem. One of the directions in the study of pathomorphosis is the study of alexithymia and its influence on anxiety symptoms. According to some researchers, the aforementioned trends in the pathomorphosis of anxiety contribute to reduced patient awareness of their mental state, leading to underdiagnosis.

3. Cognitive-behavioral therapy and its variations (ACT, mindfulness-based therapy) remain the most studied direction of psychotherapy. The effectiveness of psychotherapy in individuals with anxiety syndrome directly depends on the patient's ability for cognitive restructuring and awareness of mental changes at the emotional level. Thus, further progress in the treatment of anxiety disorders lies not only in the improvement of existing methods (e.g., virtual reality technologies in exposure therapy) and pharmacotherapy regimens but also in the development of targeted interventions aimed at correcting metacognitive and cognitive features.

Conflicts of interest: authors have no conflict of interest to declare.

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