Social anxiety disorder: relevance and perspectives

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Background. Epidemiological studies indicate that social anxiety disorder as one of the most common mental health disorders. However, many patients do not seek or receive help, despite the prevalence of social anxiety disorder, the large amount of information, the possibilities of psychotherapy and medical treatment.

Aim. Generalization of actual knowledge and research on the aetiology and pathogenetic mechanisms of social phobias and coverage of the actual issues of low referral of people suffering from social phobia.

Methods. For review, the following databases, such as ScienceDirect, ResearchGate, PubMed and Google Scholar, were used. The search was performed using the keywords: social anxiety disorder, sociophobia, social anxiety, cognitive-behavioral model, neurobiology, mental health.

Results. The general information about social anxiety disorder, its prevalence and its consequences were covered. The main etiological mechanisms, modern views on the neurobiological and psychological basis of the disorder are considered. In addition, the peculiarities of the clinical picture and its influence on the social functioning of the individual, including the referral of help, were analyzed. The aspects that are useful to consider during the development of recommendations for specialists in general medical practice and centers of public mental health were suggested.

Conclusions. A social anxiety disorder should be considered as a complex mental health disorder. Recognition of signs of social anxiety disorder in their component often leads to a false interpretation of clinical signs as manifestations of depression or other neurotic disorders among primary care professionals. Informing general practitioners and specialists of public mental health centers about the traits of the clinical picture and the social functioning of patients with this disorder can help to overcome the stigma and improve the referral of qualified assistance.

Introduction

Social phobias (sociophobia, social anxiety disorder) are typically characterized by a strong sense of tension and anxiety during social interaction or activity because of the individual's thoughts about being evaluated by others or assumptions on people's opinions. Being in constant emotional distress, such people experience significant difficulties in the professional, academic and financial aspects of life, which usually involve an individual into interpersonal communication [4, 7]. Given that the key aspect of this disorder is the intense fear of being condemned by others, and/or humiliated, embarrassed in the presence of others, those people avoid such a possibility. While communicating with others, they may not show significant discomfort, for example, trying to avoid visual contact and looking embarrassed, however, they experience a different range of emotions and physical manifestations that are relevant to them (increased heartbeat, sweating, tremor, or decrease of concentration) [10]. All those feelings that may be perfectly appropriate for certain life situations or new experiences, a person with a social phobia perceive as an occasion to appear foolish, weak or uninteresting in the eyes of others. They only increase social isolation by avoiding the possibility of obtaining corrective experience and refuting misconceptions about themselves. At

the same time, in the eyes of the others, they begin to look isolated, locked up or even depressed. Consequently, the environment begins to lessen interaction with them, react to such behavior with distrust, incomprehension, and sometimes with indignation and discontent, closing the "enchanted circle".

Prevalence and Implications

Epidemiological studies indicate that social anxiety disorder is one of the most common mental health disorders with lifetime prevalence at 12-15% [7, 8, 10]. Most studies indicate a higher prevalence of this disorder among women, as well as the severity of symptoms, which is also higher in the female population [4, 8]. However, information about the prevalence of social anxiety disorder cannot be unified. Cross-cultural studies indicate that cultural traditions and country's developmental level can influence the prevalence and features of clinical picture [10, 12].

This disorder entails economic losses for the individual and his family very often, which is related to the avoidance or significant difficulties in the professional and educational functioning, weakness of social activity, formation of a certain dependence on the special conditions and circumstances in which the individual could feel comfortable. At the same time, high comorbidity with other anxiety disorders, depression and the use of psychoactive substances creates an additional financial burden [7]. Despite the prevalence of social anxiety disorder, the large amount of information and possibilities of psychotherapy and drug treatment, many patients for various reasons do not receive help. Surveys conducted in a number of European countries indicate that people with social anxiety disorder are not likely to seek help from specialists neither with this nor concomitant mental health disorders [8]. A small percentage of people with this disorder (3-7%) are found during appeals to primary care physicians for long-term somatic complaints, and only 15% of them apply for psychotherapeutic assistance on social phobia [5, 10].

Unfortunately, in Ukraine, we do not have high-quality epidemiological studies to highlight the prevalence of sociophobia and its impact.

Etiology and neurobiological correlates of the disorder

A number of etiologic factors are common for the most mental health disorders, and they support, activate or modify the conditions for their occurrence and development in one way or another.

The genetic factor for social phobia plays an important role, just as it is with other anxiety or affective disorders. Studies show that there is a connection between direct relatives who had a social phobia in anamnesis, especially for generalized forms, and/or signs of agoraphobia [6].

Innate peculiarities of temperament are seen as important determinants of social phobias development, which according to the model of R. Cloninger is connected with neurobiological bases. A positive correlation between the features of temperament and the formation of social anxiety and social anxiety disorder was noted. Thus, avoiding the threat and reducing the initiative before gaining a new experience are due to a decrease in the activity of serotonergic and dopaminergic systems, described in some studies [11, 12]. For the last decade has been intensively studied the hypothesis about the connection between recognition of facial emotional expressions and the abnormalities in the metabolism of monoamines (dopamine, noradrenaline) and indolamines (serotonin) [2] with the help of neuroimaging research methods. At the same time, the use in the clinical practice of the serotonin and norepinephrine reuptake inhibitors and monoaminoxidase inhibitors have led to a decrease in the main manifestations of social anxiety, which gave rise to a thought that neurotransmitters' imbalance plays a pivotal role in the development of this disorder.

A critical review of various neurobiological models by Mathew S.J. indicates a decrease in

serotonergic and dopaminergic activity, a disturbance of the oxytocin metabolism and activity of the hypothalamic-pituitary-adrenal system [6]. As a result, the author and his colleagues point out that such changes are responsible for the disruptive behavior, deterioration of social competence (in particular, autistic and schizoid behavior patterns) accompanied by anxiety and depressive symptoms, as well as features of the activation of the nervous system typical for people who were subjected to psycho-traumatic events [6].

It is believed that people with this disorder will be more sensitive to the facial expressions recognition in situations of social interaction. Usually, they tend to interpret them as signs of hostility or assumption that these people do not like something about them. In accordance to the integrative model of etiology and the maintenance of social phobias, proposed by S.H. Spence and R.M. Rapee (2004), social assessment factors (emotional expression evaluation, visual contact, posture assessment, situational behavior or social position/role of the environment) reflect individual neurobiological and cognitive aspects [11].

The deterioration of the activity and control of the prefrontal cortex causes the perturbation of the amygdala (reducing its protective functions) in response to the recognition of conditionally hazardous signals that arise in social interaction. Such evidence suggests that the activation of the amygdala in the emergence of "threat" during an interpersonal interaction may be caused by the severity of the symptoms of social anxiety of individual patients, and not by the general state of anxiety or tension [9]. In this way, it should be assumed that the amygdala is activated in response to both negative expressions of a person, and to the neutral, and even to the expectation of a situation associated with public speeches. The growing number of publications that analyze the data of functional MRI can be a confirmation of this thesis. The obtained data implies the dysfunction of the prefrontal cortex, the neural bond of the amygdala and the interaction between them under social activity and communication [2, 3, 12]. The investigation led by M.V. Stein points the typical increase in the level of norepinephrine in blood plasma in similar situations, which correlates with the manifestations of hypersensitivity and alertness, and the general manifestations of social anxiety [10].

The review of the literature also shows an increase in the activity of the insular cortex, which participates in the visual recognition of manifestations of negative emotions and behavior, including at once, anger and fear during public appearances [2]. J.W. Smoller and colleagues found a connection between the manifestations of introversion (as features of a character structure that is typical for people with social anxiety) and the polymorphism of genes that affect adrenergic and serotoninergic activity [12]. Their further studies indicate that anxiety (including the introversion that accompanies it is associated with the activity of the insular cortex and amygdala that arose in response to the recognition of facial expression [10].

According to experts future studies may be aimed at verifying the effects of neuroendocrine factors (such as vasopressin and oxytocin) that are involved in the process of social affiliation (the desire and need to be in emotionally significant relationships with other people) and the activity of the nervous system in response to the formation of trusting and safe relationships [6, 10].

Reviews of literature on cross-cultural and experimental research show that people who are suffering from social anxiety show a tendency to a more negative perception of themselves, low self-esteem, persistent prejudices and judgments about the social assessment of others, and show a rigorous and negative interpretation of possible consequences when trying to solve these problems [11]. For most of these people, there was a presence of stressful events at an early age (bullying, domestic violence, embarrassment during public speaking or joint activities).

In a number of studies variation of parental behavior or behavior of other meaningful individuals may form the basis for the formation of social phobia, especially in sensitive periods of growing up [7, 11]. Summarizing the results, two strategies can be distinguished: the first reflects the policy orientation in the relationship and the verbalization of the negative consequences in situations

involving an assessment or a critical view. A similar strategy reinforces the child's perception of hostility in the environment, alertness in their reactions to themselves and, accordingly, their deficiency that attracts attention. The second strategy involves learning to avoid the possible negative effects of social interaction. It fixates the behavior aimed at escaping or preventing the occurrence of such situations. Such parental educational style is focused on excessive control and care. At the same time, own anxiety in such situations is demonstrated, as well as the inability to cope with it, except as by avoiding it.

The influence of relationships with peers is also recognized as an important factor in shaping social anxiety [8, 11, 12]. A negative experience in friendly relationships in childhood and adolescence, bullying or criticism from the environment due to sociocultural differences affect the formation of social phobia in the future. However, these circumstances are not distinctive etiological factors, such as family conflicts or physical and emotional abuse by relatives. The factors above influence the formation of ineffective cognitive strategies for assessing social situations and themselves in it. They consolidate the experience of negative and traumatic life events that should be avoided.

Neuroimaging studies confirm the positive effect of cognitive behavioral therapy, aimed at processing rigid cognitive strategies of self-criticism and social evaluation, on changes in the activity and interaction of neural networks, which proves the importance of considering the impact of social and psychological factors in the development of the disorder [5]

At the same time, the peculiarities of occurrence of certain somatic disorders, external defects or physical manifestations of PTSD can also be the cause of social phobia. They are considered as factors that determine the concentration of attention on how people feel while being among others.

Diagnostics and features of the clinical picture

The social anxiety disorder was first isolated from the group of specific phobias in the mid 60's. Over the next few years, the definition of this disorder was refined.

As mentioned above, despite the prevalence of information and the availability of assistance, people continue to live with most symptoms of social anxiety for a long time without asking for help. Feeling the periods of relief and exacerbation, they arrange the restrictions of their own lives.

At the same time, the recognition of signs of social anxiety disorder in their totality usually causes difficulties for specialists in general medical practice and often leads to an erroneous interpretation of clinical signs as manifestations of depression or other neurotic disorders [7]. It should be noted that general practitioners are also inclined to mistakenly underestimate the signs of this disorder. Such bias is caused by a number of false representations, such as:

- social anxiety is a part of a personality structure or temperament, and it is not possible to change it;
- spent personal resources are not relevant for success, and treatment provides sedative drugs at best;
- children can overgrow it, and for teenagers it is a typical sign of their age.

When communicating with specialists, people with sociophobia try to minimize visual contact and usually can easier maintain contact when responding to direct questions than when they are given the opportunity to share their complaints without encouragement. Thoughts about taken individual's complaints not seriously by specialist hinder the maintenance of an effective communicative alliance, reduces the process of interaction to formalities and focuses attention on somatic complaints and physical examination. Along with this constant attention to the manifestations of social assessment (expression of the face, posture, situational behavior or position) by medical personnel create the basis for reinforcing the misinterpretation and

strengthening manifestations of social anxiety.

Diagnostic variants of social anxiety disorder include specific and generalized forms. The first is characterized by fear and avoidance of specific situations and is the most widespread one. The generalized form describes both persistent and recurrent feelings of fear, and a wide range of social situations, and is more maladaptive. With the introduction of DSM-V, the forms of the disorder have been simplified and replaced by an interpretation of the fear of one or more social situations [1].

An understanding that the embarrassment or anxiety that arises in a situation of social relations is not typical for a particular environment and is not proportional to responding to a real danger (regardless of their social or socio-cultural context) was an important point in the new DSM edition [1]. Among the typical situations that can provoke social anxiety, there are meetings with strangers, speeches in front of the audience, the situation when it is necessary to start a conversation during a meeting or to support communication with authoritative persons. In addition to situations requiring communication, prevalent triggers include consuming a meal in public places, using public toilets, school attendance, work or shopping trips, etc.. People who are suffering from social anxiety disorder are characterized by a fear of what they can say or do that can lead to humiliation or confusion, and in this regard they avoid places that can provoke fear. In this way, social situations usually cause fear, anxiety or avoidance that leads to clinically significant emotional suffering (distress) or difficulties in social, professional or other important areas of life [1].

More often, the onset of the disease manifests itself in the adolescence and acquires its peak before 20 years, occasionally begins later [8, 11]. According to the DSM-V, children, adolescents, and adults now have the same diagnostic requirements for the duration of the disorder: at least 6 months or more [1]. However, in children, symptoms of social anxiety can be manifested through crying, numbness or anger in triggered situations. Children are not well aware of the irrationality of their fears of specific places. In most cases, they relate discomfort directly with school activities (educational, social or sports activities) and the need to engage with peers. Typically, the reason for addressing psychologists or psychiatrists is a deterioration in school performance or a significant avoidance of socially expected behavior with suspicion on the psychoactive substances use. An important diagnostic criterion for the social anxiety disorder in children and adolescents is the condition that symptoms should occur in the presence of peers, and not only during interaction with adults [1].

On average, one-third of adolescents who had shown signs of social phobias in childhood have spontaneous remission. However, most of the symptoms of this disorder are eventually accompanied by a generalized anxiety disorder or panic disorder without agoraphobia [8]. Among other comorbid disorders should be noted affective disorders and dependence on nicotine and/or alcohol. Many scientists point out that bipolar disorder often begins with symptoms of social phobia, as well as signs of social anxiety can be a manifestation of the primary psychotic episode, and every year the percentage of such evidence grows [8]. There is a need for differentiation with an avoidable personality disorder in clinical practice, especially in the context of poor support from family or friends.

Modern trends in psychological research indicate that there is a correlation between self-perception and social anxiety. They usually cover a range of persistent and maladaptive beliefs about the existence of negative perceptions about themselves, organized in unconscious or partially conscious cognitive schemes. According to the cognitive model, they are related to schemes of deficiency, social isolation and alienation. In vital situations, the activation of these schemes is accompanied by an increase in anxiety symptoms as a sign that these qualities can be seen (exposed) by the environment [4]. Generalizing cognitive model of social phobia D.M. Clark and A. Wells (1995) suggest the presence of negative perceptions of oneself in social interaction; negative self-perception/self-esteem and problematic cognitive and behavioral strategies that person uses in social situations [8, 10]. When activated, cognitive schemes result in protective behavior, such as

the desire to communicate only with "safe" people. Such a strategy leads to a limitation of the circle of communication (typically, there are several friends or acquaintances and difficulties in dating), the avoidance of people and social situations, which affects other statistics: people with social phobia rarely get married or give birth to children [7]. The tendency to focus on minor impairments or discomforts in social interaction during joint activities increased criticism of their results and dissatisfaction with their achievement is confirmed by their evidence of reduced capacity to work and frequent absenteeism [12].

Critics of nosological psychiatry tend to consider manifestations of social anxiety disorder as a normal personality response and behavior [10]. Their arguments point to the fact that the main manifestations of social anxiety in children and adolescents may be associated with shame that leads to psychological maladaptation. Shyness as a psychological pattern of social anxiety is explained as an opportunity to consciously sense negative, painful feelings in situations that seem complicated. In such situations, a person is inclined to fixate attention on own discomfort symptoms, rather than assess the situation in general or effectively interpret nonverbal environmental cues. In this way, the fragmented interpretation of the reaction of the environment is integrated into the negative perception of what others know about its weaknesses. Such thoughts contribute to the formation of a strategy to avoid this in the future. However, there is still no sufficient evidence that people who were shyer in their childhood have a social anxiety disorder.

Generalization and perspectives

Social phobia is one of the most common anxiety disorders with a lifetime prevalence of more than 12%. Given the combination of a clinical picture with other anxiety disorders, depression or problems with the use of psychoactive substances, this percentage can be higher. Abuse by medications (tranquilizers or other sedative substances) and alcohol in particular often masks the clinical picture of this disorder by depression or panic conditions.

At the same time, the relevance of the aforementioned problem lies in the fact that, despite the existence of effective evidence-based interventions, people who suffer from this disorder do not receive professional care in a timely manner. A false cognitive interpretation of the signs of social assessment and response of the environment, in particular, medical personnel, increases the maladaptive beliefs about oneself. It also correlates with the severity of manifestations of social anxiety and causes an irrational behavior strategy. Children and adolescents can be referred to the specialist providing psychotherapy or other psychological interventions because of anxiety and lower school performance. However, occasionally they include focused psychotherapy for social anxiety disorder.

Also, the current problem lies in the lack of clear and understandable screening skills that a general practitioner should have. Problems with the organization of care for people with mental health disorders in the primary link of health care may be caused by a small number of specialists in medical and clinical psychology that the patient can be referred to. At the same time, pessimism and bias in the effectiveness of psychological/psychotherapeutic interventions in anxiety disorders in general among primary care physicians, as opposed to drug therapy, also reduces the effectiveness of therapy and restricts the involvement of patients.

Appropriate steps may include developing recommendations for specialists in general medical practice in diagnosing and directing people with sociophobia, as well as developing a general guide for professionals from narrow-line hospitals, offices or centers for public mental health. Such developments should take into account, as:

- availability of diagnosis and treatment for the population;
- valid diagnostic tools (including screening) of social phobia;
- effective and proven methods of psychological and psychotherapeutic interventions

(cognitive behavioral therapy, exposure therapy, social skills training, interpersonal psychotherapy, psychodynamic psychotherapy);
- opportunities and limitations of psychopharmacological interventions (selective serotonin reuptake inhibitors, monoamine oxidase inhibitors, and other antidepressants, beta-blockers and benzodiazepines) and their combinations with psychological interventions and psychotherapy;
- group interventions (based on the KPT method, if possible) aimed at supporting parents/relatives and significant others involved in social support for children and adolescents with social anxiety disorder;
- management and prevention of comorbid conditions and disorders;
- alternative methods and means of social, professional and educational adaptation.

The joint efforts of general and mental health professionals, people who suffer from social phobia and communities can overcome the barriers of stigmatization and improve the psychological well-being of this category of patients.

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