Psychological aspects of infertility: gender aspects (review)

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Abstract Recently, due to the increasing problems in the reproductive sphere of people all over the world, the problem of preserving the reproductive health of the population has become very urgent, which requires the combined efforts of doctors and medical psychologists. This article provides an overview of modern scientific publications devoted to the study of gender, psychological and psychosomatic characteristics of reproductive disorders, as well as psychological predictors and consequences of these problems. The most and least studied psychological aspects of reproductive health disorders are singled out.
Keywords reproductive health disorders, infertility, stress, psychosomatics, anxiety, reproductive psychology, gender characteristics

According to the World Health Organization (WHO), the rate of infertile couples worldwide is about 15% and has no downward trend. Total WHO identifies 22 factors of female and 16 factors of male infertility. It is believed that infertility has a combined effect of physical ill-health social, and psychological distress factors.

The study of infertility in recent decades has been conducted in various fields of biology, medicine, medical psychology, psychiatry, and sociology. Understanding the severity of the problem allowed us to create conditions for the active development, development and improvement of methods for the diagnosis and treatment of infertility, including the introduction of assisted reproductive technologies [28]. The temporary criterion for making a diagnosis of infertility, designated by the World Health Organization, is considered to be a period of 12 months, during which a couple fails to conceive a child with regular unprotected sexual contact.

Information about effective psychological assistance to this group of people in scientific publications is relatively rare. However, after the appearance of data that confirmed the effectiveness of a psychotherapeutic intervention, multidisciplinary assistance programs began to be developed, which involve the cooperation of doctors and medical psychologists at the stages of diagnosis, treatment, the use of assisted reproductive technologies, and further support of pregnancy and childbirth [8].

In the study of infertility, it was revealed that the female factor infertility in marriage in 40% of cases, male – 40%; the remaining 20% approximately equally represented cases of reproductive disorders in both partners and cases of so-called idiopathic infertility (i.e., infertility of unknown origin in which to install the

physiological reason for the impossibility of conception fails). Infertile men define their condition as close to the loss of the meaning of life, while it is common for them to experience anxiety, depression, fear of failure as a successor of the family, a feeling of depression, aggressiveness. In men in infertile marriages, a significantly high level of asthenia is observed, where the severity of asthenic disorders increased with the duration of the treatment of infertility [17].

When analyzing the psychological status of infertility, it should be noted that an infertile marriage leads to severe moral trauma for the spouses themselves and their relatives, and causes serious personal, family and social maladjustment. In the psychological status, the affective sphere most often suffers. Infertility significantly affects psycho-emotional status, causing chronic stress [2]. Additional traumatic factors are family, household and work difficulties due to the time spent visiting medical institutions and financial expenses. The quality of life of infertile men is deteriorating, a state of dominance of thoughts about failure in the reproductive sphere is formed. The state of anxiety and depression is determined from the moment of realizing reproductive failure and lasts throughout all stages of infertility treatment [19].

Men with infertility psychoemotional disorders are expressed, which manifest themselves in increased anxiety, disturbances in emotional tone, situational and personal anxiety. Infertile respondents are more prone to manifestation of asthenic and phobic conditions, which are also accompanied by vegetative disorders, which requires psychological support of patients[16].

Representatives of the psychoanalytic school are actively studying the psychological causes of idiopathic infertility [25].

Recent publications describe the problem of somatization and deep personal conflicts underlying infertility [1, 10, 18, 23]. Let us note the works on the study of secondary infertility separately. M. Notman [26] and M. Vigneri [29, 30] analyze the use of assisted reproductive technologies and their consequences. In these works, the authors presented patients' data on somatic experiences analyzed their ideas about the etymology of these experiences. Nowadays, the personality of men and women is arising a significant interest than the research for psychological causes of infertility.

T. Wischmann together with his colleagues have studied 564 married couples for a typical psychological profile of infertile couples [31]. Various questionairs were used to obtain data on socio-demographic status, the motives for the childbirth, the degree of satisfaction with life and relationships with a partner, physical and psychological complaints; both partners also completed a personal questionnaire. Specific features of the sample were the high educational level of the participants and the frequent occurrence of idiopathic infertility (27%).

The survey results showed that infertile women scored higher on the depression and anxiety scales than women in the comparison group. There were no statistically significant differences between couples with infertility and those in the comparison group for all other psychological indicators. There were also no statistically significant differences between the psychological indicators of couples with idiopathic infertility and couples with other forms of infertility. Based on the

conducted studies, it was concluded that it is impossible to determine the typical psychological profile of an infertile couple using standard psychometric methods. Further, a study was conducted that compared the data obtained in three groups: currently undergoing counselling, planning to undergo counselling, and those who did not want to attend the consultations of clinical psychologists [31]. Almost 2,000 men and women were surveyed, and data were collected again on the socio-demographic conditions of families, the motives for having a child, the form of infertility, the degree of satisfaction with life and relationships with a partner, physical and mental complaints. As a result, in the group undergoing counselling, there were more couples experiencing infertility as severe stress. Women who wanted to take a counselling course were distinguished from patients who did not go to a psychologist by a higher level of psychological stress, which was caused by worries about the inability to have a child and/or, what is especially interesting, a high subjective assessment of their demand. The authors suggested that such a feeling of "increased demand" could be one of the causes of infertility in such women. A higher level of stress was also recorded in men of this group, which was manifested in dissatisfaction with family and sexual relationships and fixation on the depression of their partners.

T. Wischmann concluded that for many couples, the crisis associated with the inability to conceive is the cause of cumulative psychological trauma, and they need medical treatment and a course of psychotherapy.

European scientists have studied the psychological characteristics of couples diagnosed with infertility, depending on their choice of one of the strategies of action: infertility treatment or adoption of a child [11, 12]. The authors conducted a comparative study, which was individual psychological functioning and marital compatibility of partners. Three groups were formed: healthy couples, couples diagnosed with infertility undergoing treatment, and infertile couples who want to adopt a child. In these groups, data were collected on the level of depression, coping strategies, self-acceptance, self-blame, feelings of guilt, the degree of closeness of family relationships, the adaptation of partners to each other, and satisfaction with intimate relationships.

The results showed that infertile couples in comparison to healthy couples and couples wishing to adopt children showed higher levels of depression and anxiety, higher rates of guilt towards others and themselves, as well as a predominance of emotionally-focused coping strategies for the type of avoidance, compared to healthy couples and couples who want to adopt. At the same time, their self-acceptance and self-compassion scores were lower than in the other two groups. In the infertile couples group who wish to adopt a child, the highest scores were found for the indicator "adaptability of partners to each other" and problem-focused rational coping strategies for the type of emotional withdrawal. Compared with the group, both groups, which included couples with infertility, showed higher psychopathological indicators and lowered positive/protective indicators of psychological functioning.

There were no statistically significant differences between the groups in terms of "sexual functioning", but in both groups with infertility, a higher degree of

intimacy between partners was recorded. The authors suggest that infertility may have been a factor contributing to emotional bonding in a couple during treatment.

During the repeated study of the protective mechanisms of emotional regulation in patients with infertility, the obtained data have confirmed previous results, i.e., indicators of self-blame, guilt to others, and self-blame turned out to be statistically significant predictors of depressive symptoms. During the study of the gender differences, women diagnosed with infertility generally showed a higher level of depressive and anxiety symptoms than the group of fertile women [9].

The anxiety and stressful states experienced by women and men diagnosed with infertility are the subjects of study by most researchers [2, 3].

Some studies reveal the impact of psychosocialoro stress on the development of infertility. So, I.Andrews obtained results proving that psychosocial stress is not the cause of infertility [5]. However, in published studies of psychological predictors of male infertility, obtained the opposite result: occupational stress and family functioning characteristics can affect spermatogenesis and sperm quality [15].

There are studies suggesting that infertility causes psychosocial stress [4, 6, 13, 20, 21, 22].

Many studies are devoted to the search for gender differences in the experience of stress associated with infertility. So, J. Beaurepaire with colleagues showed that, in general, men have a more pronounced internal locus of control, lower on the scale of self-blame and guilt for infertility than women [7]. B. Peterson, exploring coping strategies in people with infertility, concluded that men are more likely than females to have used the following strategy of distancing (perception of the situation in a more positive light), self-control (containment of experiences with infertility problems and their prevention in daily life), problem-oriented planning (search for information and solutions to problems). The indicators “search for social support” and “conversations with friends and doctors” were equally represented in the groups of men and women [27]. However, there is evidence that men were significantly less likely than women to share their infertility problems with other people [14]. There are also differences in experiencing infertility-related stress, depending on the cause. Thus, women who are unable to conceive due to male infertility show statistically higher levels of situational anxiety and social pressure than women who have infertility due to the female factor, mutual factor or idiopathic form. The latter, in turn, have higher rates of personal anxiety [24].

The number of studies in the field of infertility genesis has been growing in recent years, and practitioners and medical psychologists actively use new data to create multidisciplinary programs to help people diagnosed with infertility. Thus, the studies emphasize the importance of studying the processes of psycho-emotional regulation for understanding psychopathological symptoms in patients with infertility, taking into account gender differences.

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