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IDENTIFICATION OF NEUROTIC DISORDERS IN IRRITABLE BOWEL SYNDROME AND THE EFFECTIVENESS OF COGNITIVE BEHAVIORAL THERAPY IN THEM

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Abstract: *This article studies the prevalence of neurotic disorders in patients with irritable bowel syndrome (IBS), their impact on the clinical course, and their correlation with visceral sensitivity index (VSI) and quality of life indicators. The relevance of the study is explained by the leading role of psychoemotional factors in the pathogenesis of IBS, as well as the fact that these disorders exacerbate the symptoms of the disease and reduce the effectiveness of treatment. The study used clinical-psychological methods and standardized psychodiagnostic scales. The effectiveness of medical-psychological assistance based on elements of cognitive behavioral therapy was assessed. The results obtained showed that neurotic disorders are associated with the severity of IBS symptoms and a decrease in quality of life. The use of cognitive behavioral therapy confirmed that it improves the psychoemotional state, reduces visceral sensitivity, and increases the effectiveness of treatment. The results of the study justify the need to manage IBS based on a comprehensive, biopsychosocial approach.*

Keywords: *irritable bowel syndrome, neurotic disorders, psychoemotional state, medical and psychological intervention, cognitive behavioral therapy, quality of life*

Research objective: affected intestine syndrome with sick in patients neurotic violations determination and medical-psychological of help efficiency from evaluation consists of . Research results TIS complex, psychosomatic approach based on treatment scientific and practical importance based on gives.

Introduction: In gastroenterological practice, irritable bowel syndrome (IBS) is one of the most common clinically encountered disorders and at the same time one of the most resource-demanding conditions in terms of diagnosis and treatment among disorders related to the “gut–brain axis.” The core criterion of IBS is recurrent, persistent abdominal pain accompanied by bowel habit disturbances (diarrhea, constipation, or mixed type); in modern classifications, it is included in the group of disorders of gut–brain interaction (DGBI) [3,8].

Anxiety and depressive spectrum conditions—such as generalized anxiety disorder (GAD), panic disorder, social phobia, dysthymia, and mild to moderate depression—significantly modulate symptom severity, healthcare-seeking behavior, and treatment response in IBS [4,12]. Somatization—the expression of psychological stress and affective states through somatic symptoms (pain, meteorism, general weakness)—in IBS is linked with visceral hypersensitivity, catastrophizing, and mechanisms of “visceral anxiety,” thereby contributing to symptom persistence [7,5].

The Visceral Sensitivity Index (VSI) measures IBS-specific anxiety (symptom-specific anxiety) and is important for analyzing therapeutic mechanisms. For example, a reduction in VSI following cognitive behavioral therapy (CBT) or hypnotherapy may be associated with decreased pain and improved quality of life. Its limitation is the need for parallel use with general anxiety scales; otherwise, the transdiagnostic anxiety component may be overlooked [7,1]. In the management of IBS comorbid with neurotic spectrum disorders, the integration of psychotherapy and psychopharmacotherapy should be regarded not as a “secondary adjunct,” but as a key strategy determining clinical outcomes [2,6,9,10,11].

Our study aims to improve patients' quality of life by early psychodiagnostic identification of psychoemotional disturbances in patients diagnosed with IBS and by treating these disturbances using cognitive behavioral therapy.

Materials and methods: The research was conducted between 2021 and 2023 at the Department of Gastroenterology of the Multidisciplinary Clinic of the Tashkent Medical Academy and included 80 patients treated with a diagnosis of irritable bowel syndrome (IBS). The cohort consisted of patients aged 20–50 years, with a mean age of 35 ± 9.2 years. The diagnosis was established at the time of hospital admission based on patients' complaints, medical history, objective findings, and laboratory and paraclinical data. In accordance with the aims and objectives of the dissertation. Group 1 comprised 40 patients (50%) who received basic therapy combined with cognitive behavioral therapy (CBT) and psychopharmacotherapy (PFT) (antidepressants and anxiolytics); Group 2 included 40 patients (50%) who received basic therapy combined with rational psychotherapy and PFT; Group 3 (control group) consisted of 40 individuals (100%) without identified organic or mental disorders (practically healthy subjects). All patients underwent objective clinical, gastroenterological, and paraclinical examinations on the day of hospital admission.

The medical and psychological status of patients was assessed using a medical–psychological questionnaire (Ibodullayev Z.R., 2018, Patent No. 001031). To objectively evaluate psychoemotional disturbances over time, standardized psychological tests were applied. For this purpose, the “Clinical Questionnaire for the Detection and Assessment of Neurotic States” developed by K.K. Yakhin and D.M. Mendelevich was selected. To assess gastroenterological (IBS-specific) anxiety in patients with IBS, the short-form Visceral Sensitivity Index (VSI), developed by J. Labus in 2003 to evaluate anxiety related to gastrointestinal symptoms in IBS patients, was used. Patients' quality of life was assessed using the disease-specific IBS-QOL (Irritable Bowel Syndrome Quality of Life) questionnaire. Psychocorrection methods included psychological counseling, cognitive therapy, and autogenic training. Each counseling session lasted an average of 45–60 minutes and was conducted once every 4–5 days over a one-month period, totaling 4–5 sessions per patient, depending on the patient's condition. Two sessions were conducted in an inpatient setting, while the remaining sessions were carried out on an outpatient basis.

Results and discussion: Neurotic disorders observed in irritable bowel syndrome (IBS) constitute one of the main psychoemotional pathologies forming the clinical picture of the disease. It has been established that untimely identification and insufficient correction of these disorders lead to reduced treatment effectiveness and negatively affect patients' return to a full and active life. Therefore, early detection and psychocorrection of psychoemotional disturbances associated with IBS represent one of the pressing issues in modern gastroenterology. During the study, prior to treatment, patients in both groups were evaluated with regard to their life history, the clinical stage of the disease, results of physical and laboratory examinations, and the presence of comorbid conditions. The subjective manifestations of neurotic disorders were assessed using a medical–psychological questionnaire. The presence and types of neurotic disorders in patients diagnosed with IBS were analyzed using the “Clinical Questionnaire for the Detection and Assessment of Neurotic States” developed by K.K. Yakhin and D.M. Mendelevich. According to the analysis of neurotic disorder types based on this questionnaire in the main and control groups, patients diagnosed with IBS in groups A and B ($n = 80$) demonstrated the following prevalence rates: neurasthenia in 78.7%, anxiety in 67.5%, neurotic depression in 17.5%, hysteria in 13.7%, obsessive–phobic disorders in 32.5%, and autonomic (vegetative) disorders in 72.5% of cases (Figure 1).

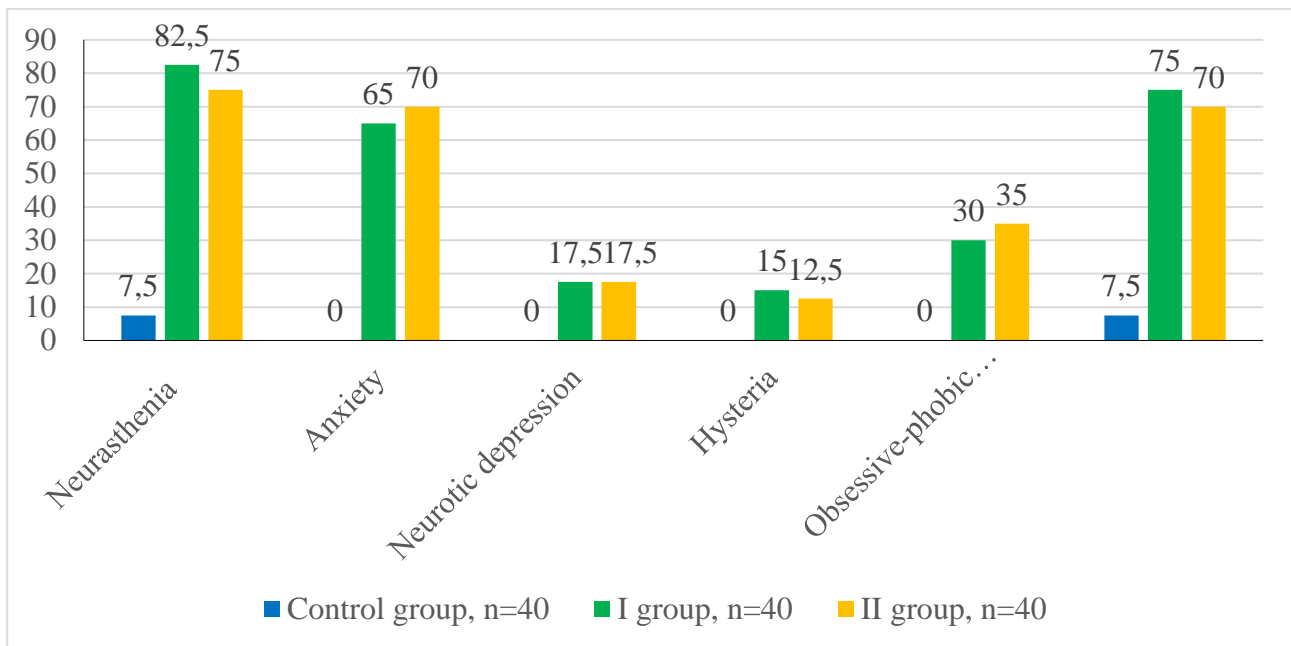


Figure 1. Neurotic disorders in the main and control groups before treatment using the “Clinical Questionnaire for the Identification and Assessment of Neurotic Conditions” (K.K.Yakhin, D.M.Mendeleyevich)

Based on the overall data regarding the manifestation of the above-mentioned neurotic disorders, patients in the main group were distributed into subgroups A and B as follows. In subgroup A (n = 40), the prevalence of neurasthenia was 82.5%, anxiety 65%, neurotic depression 17.5%, hysteria 15%, obsessive–phobic disorders 30%, and autonomic (vegetative) disorders 75%. In subgroup B (n = 40), neurasthenia was observed in 75% of patients, anxiety in 70%, neurotic depression in 17.5%, hysteria in 12.5%, obsessive–phobic disorders in 35%, and autonomic disorders in 70% of cases. The results indicate that the majority of patients with IBS demonstrated neurasthenia (82.5% and 75%), autonomic disorders (75.0% and 70.0%), and anxiety. These symptoms acted as leading manifestations and markedly aggravated the overall psychological condition of the patients. According to the findings of our study, the prevalence of different types of neurotic disorders varied depending on the clinical course of IBS, namely the hypomotor (constipation-predominant) and hypermotor (diarrhea-predominant) types, whereas no neurotic disorders were identified in the control group. When patients in subgroups A and B of the main group were stratified according to hypomotor and hypermotor IBS types, the distribution of neurotic disorders was as follows.

In subgroup A with the hypomotor type of IBS (n = 11), neurasthenia was detected in 8 patients (72.7%), anxiety in 4 patients (36.4%), neurotic depression in 6 patients (54.5%), hysteria in 4 patients (36.4%), obsessive–phobic disorders in 2 patients (18.2%), and autonomic disorders in 7 patients (63.6%). Thus, in the hypomotor type of IBS, neurasthenia, neurotic depression, hysteria, and autonomic disorders were predominant.

In subgroup A with the hypermotor type of IBS (n = 29), neurasthenia was identified in 25 patients (86.2%), anxiety in 22 patients (75.9%), neurotic depression in 1 patient (3.4%), hysteria in 2 patients (6.9%), obsessive–phobic disorders in 10 patients (34.5%), and autonomic disorders in 23 patients (79.3%). These findings demonstrate that in the hypermotor type of IBS, neurasthenia and autonomic disorders also predominated; additionally, anxiety and obsessive–phobic disorders were more prominent among neurotic disturbances in this clinical subtype (Figure 2).

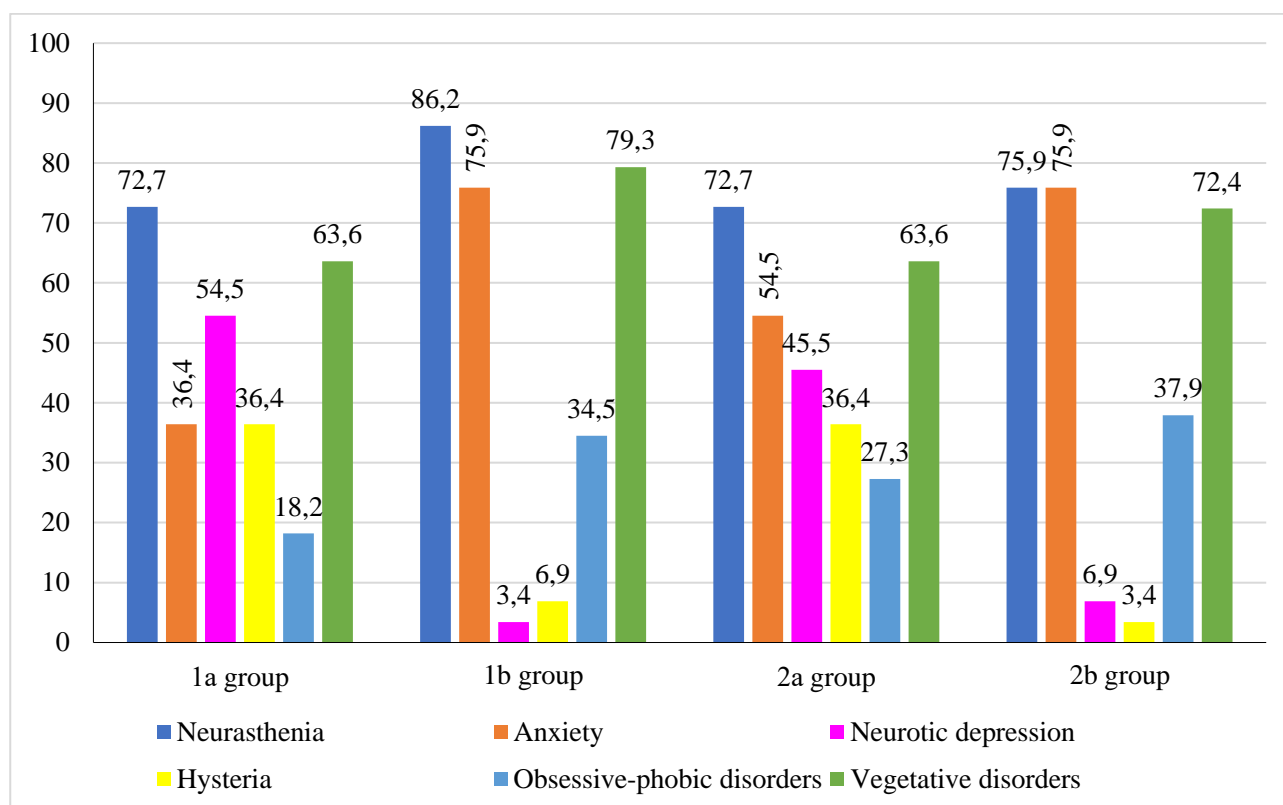


Figure 2. In the main groups A and B neurotic disruption types of TIS according to distribution

Analytical treatment, remained at 35% after 1 In subgroup B with the hypomotor type of IBS, neurasthenia was identified in 8 patients (72.7%), anxiety in 6 patients (54.5%), neurotic depression in 5 patients (45.5%), hysteria in 4 patients (36.4%), obsessive-phobic disorders in 3 patients (27.3%), and autonomic (vegetative) disorders in 7 patients (63.6%). Similar to subgroup A, this group also demonstrated high rates of neurasthenia, neurotic depression, hysteria, and autonomic disorders.

In the hypermotor type within subgroup B, neurasthenia was observed in 22 patients (75.9%), anxiety in 22 patients (75.9%), neurotic depression in 2 patients (6.9%), hysteria in 1 patient (3.4%), obsessive-phobic disorders in 11 patients (37.9%), and autonomic disorders in 21 patients (72.4%).

The next key objective of our study was to evaluate the effectiveness of systematic desensitization within cognitive behavioral therapy (CBT) in the correction of neurotic disorders in IBS. We believe that effective treatment of neurotic disorders in IBS depends not only on basic therapy and psychopharmacotherapy, but also on their combined use with psychotherapeutic interventions.

For the psychocorrection of neurotic disorders, cognitive behavioral therapy and rational psychotherapy were applied. To assess treatment effectiveness, patients were divided into two groups.

In Group A (n = 40), a psychotherapeutic algorithm based on systematic desensitization within cognitive behavioral therapy was applied in combination with basic therapy and psychopharmacotherapy (PFT). In this group, systematic desensitization was conducted in three stages using individualized techniques for each patient.

In Group B (n = 40), rational psychotherapy was added to standard treatment procedures. Rational psychotherapy primarily consisted of psychological counseling and problem identification. In accordance with the objectives of the dissertation, anxiety disorders in patients from groups A and B were reassessed using the Visceral Sensitivity Index (VSI) questionnaire at 1 and 3 months after

the application of basic therapy, PFT, and psychocorrection. A marked reduction in clinical manifestations of anxiety was observed in Group A, which received basic therapy, PFT, and systematic desensitization.

Specifically, the proportion of patients with very high levels of anxiety in Group A decreased from 7.5% before the initiation of PFT and cognitive behavioral therapy to 2.5% after 1 month of treatment, and reached 0% at the 3-month follow-up. The prevalence of high anxiety levels in this group declined from 37.5% before treatment to 15% after 1 month and to 5% after 3 months.

In Group B, very high anxiety levels were observed in 5% of patients before treatment, decreased to 2.5% after 1 month, and remained at 2.5% after 3 months. High anxiety levels were recorded in 40% of patients before treatment, decreasing to 27% after 1 month and to 22.5% after 3 months. Moderate anxiety levels accounted for 35% before month, and decreased to 27.5% after 3 months (Figure 3).

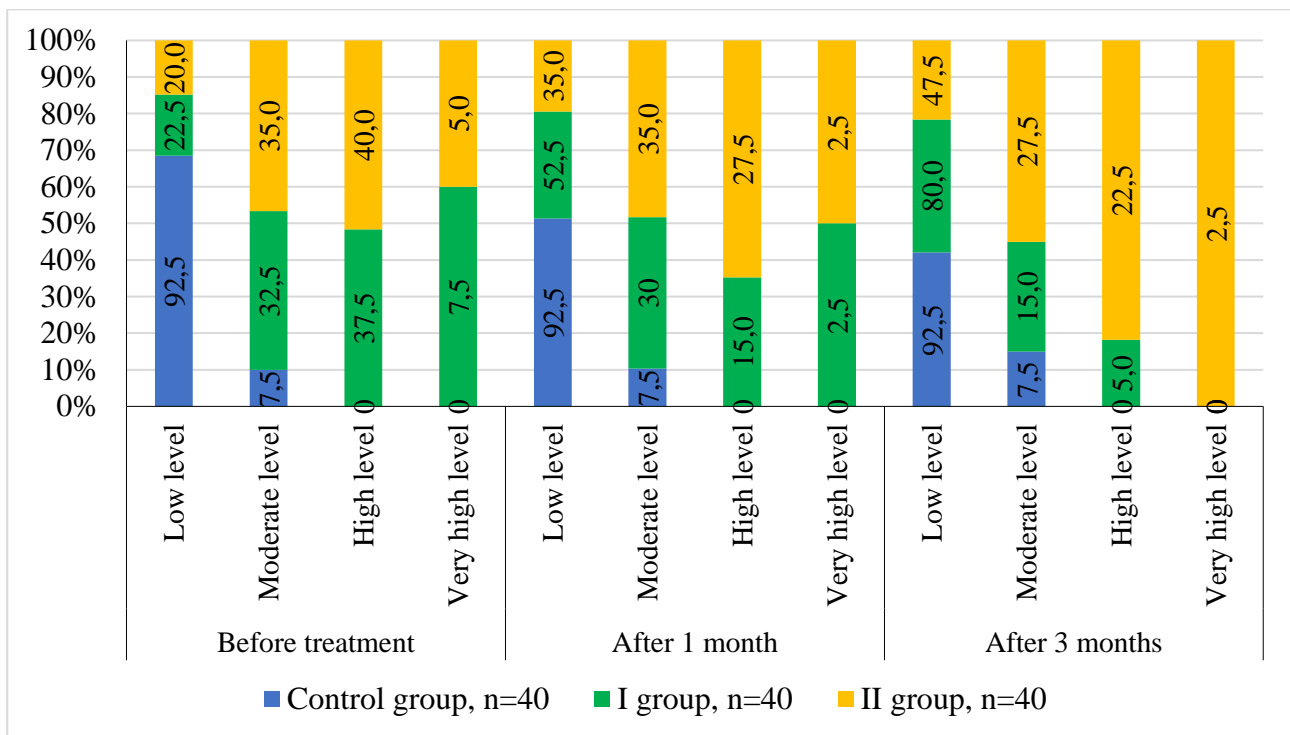


Figure 3. VSI “A” and “B” groups before and after treatment

According to our research results, it was found that after the use of PFT and Cognitive Behavioral Therapy in patients with a diagnosis of TIS in group “A”, when re-examined for depression, i.e. dysphoria (DYS), 1 month later, the indicators increased from 38.6 ± 1.7 to 57.2 ± 2.0 . It was noted that when patients in group “A” were re-examined for this indicator after 3 months, the indicators increased to 76.9 ± 1.3 .

In group “B”, the depression, i.e. dysphoria (DYS) increased from 36.5 ± 1.1 to 50.4 ± 1.5 when re-examined after 1 month; and when re-examined after 3 months, it was 60.3 ± 1.0 .

When analyzing the results of the activity impact on the quality of life decline (INT), the indicators in group “A” patients after 1 month of PFT and Cognitive Behavioral Therapy were 42.8 ± 2.7 . It was noted that the increase was 63.1 ± 2.9 . When the patients were re-examined after 3 months, the increase was 79.9 ± 1.3 .

In group “B”, the results of the analysis of the impact of activity on the quality of life (INT) showed that after 1 month, the indicators increased from 39.5 ± 0.93 to 52.3 ± 0.72 , and after 3 months, these indicators were 60.2 ± 0.72 .

When analyzing the results of the IBS-QOL questionnaire on the patients' body image indicators (BOI), the indicators in group "A" patients after 1 month of PFT and Cognitive Behavioral Therapy were 38.4 ± 2.6 . It was noted that the increase was 59.1 ± 2.8 . When the patients were re-examined after 3 months, the increase was 78.6 ± 1.3 .

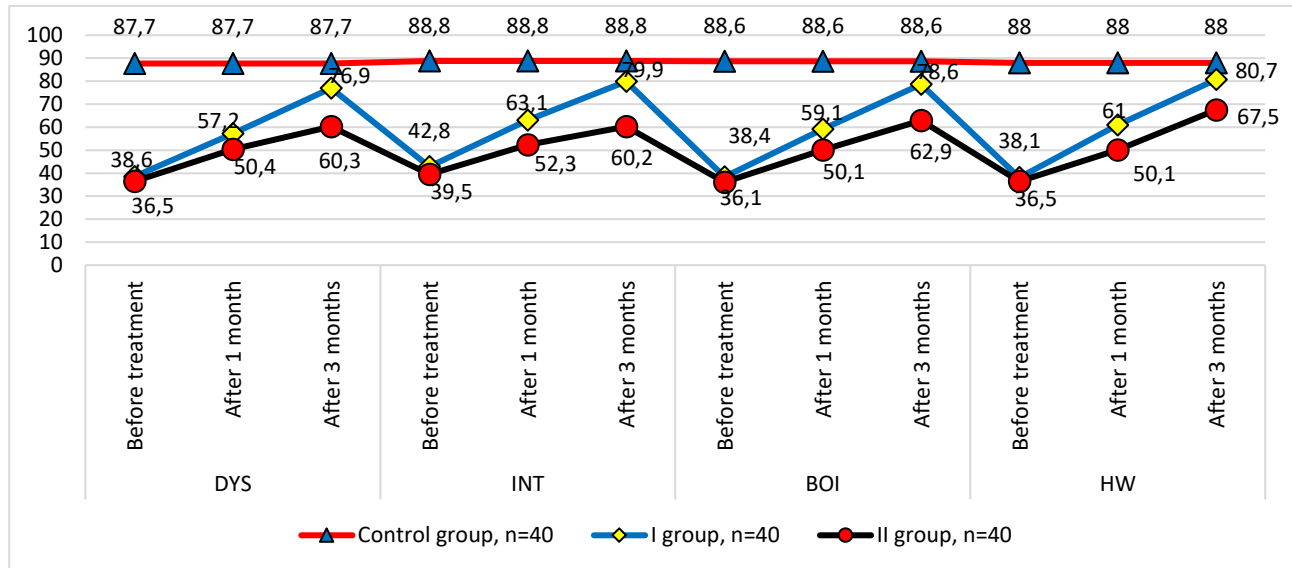


Figure 4. IBS-QOL “A” and “B” groups pre- and post-treatment indicators

In Group B, analysis of the impact on daily functioning due to reduced quality of life, assessed by the Body Image/Body Impact (BOI) domain, demonstrated an increase in scores from 36.1 ± 1.0 to 50.1 ± 0.82 after 1 month, and to 62.9 ± 0.81 after 3 months.

Assessment using the Health Worry (HW) scale is considered one of the most important indicators among quality-of-life measures, as lower values reflect a more severe overall condition of the patient.

According to the analysis, in Group A, after one month of combined psychopharmacotherapy (PFT) and cognitive behavioral therapy, the HW score increased from 38.1 ± 1.8 to 61.0 ± 2.4 . At the 3-month follow-up, this indicator reached 80.7 ± 1.1 . These findings indicate that in Group A, the Health Worry (HW) index improved by approximately 2.1-fold within three months following the application of psychocorrection methods (Figure 4).

At the same time, in Group B, the HW score increased from 36.5 ± 0.65 to 50.1 ± 0.93 after one month of psychocorrection and reached 67.5 ± 1.0 after three months.

Evaluation of the Food Avoidance (FA) domain of the IBS-QOL questionnaire showed that in Group A, one month after the application of PFT and cognitive behavioral therapy, the FA score increased from 35.4 ± 2.3 to 50.0 ± 2.1 . Upon reassessment after three months, this indicator reached 75.8 ± 0.73 . Thus, in patients of Group A, the Food Avoidance (FA) index increased by nearly 2.2-fold within three months following psychological correction.

In Group B, one month after medical–psychological correction, the FA score increased from 32.4 ± 1.0 to 42.7 ± 0.85 , and after three months reached 55.0 ± 1.0 . These data indicate that following PFT and rational psychotherapy in Group B, the FA score increased by approximately 1.7-fold.

The Social Relationships (SOR) domain of the IBS-QOL questionnaire assesses the extent to which patients feel affected in social interactions, work, and social situations due to their illness. According to the analysis, in Group A, the SOR score increased from 44.2 ± 2.3 to 63.8 ± 2.1 one month after PFT and cognitive behavioral therapy. At the 3-month follow-up, this indicator reached 80.7 ± 0.81 . These changes demonstrate a marked improvement in social relationships among patients in Group A compared with baseline.

In Group B, the Social Relationships (SOR) index increased from 43.4 ± 1.1 to 52.8 ± 1.1 at the one-month follow-up, and further increased to 69.1 ± 1.2 three months after PFT and rational psychotherapy. Thus, in Group B, the applied psychocorrection approaches resulted in an average 1.6-fold increase in social activity indicators.

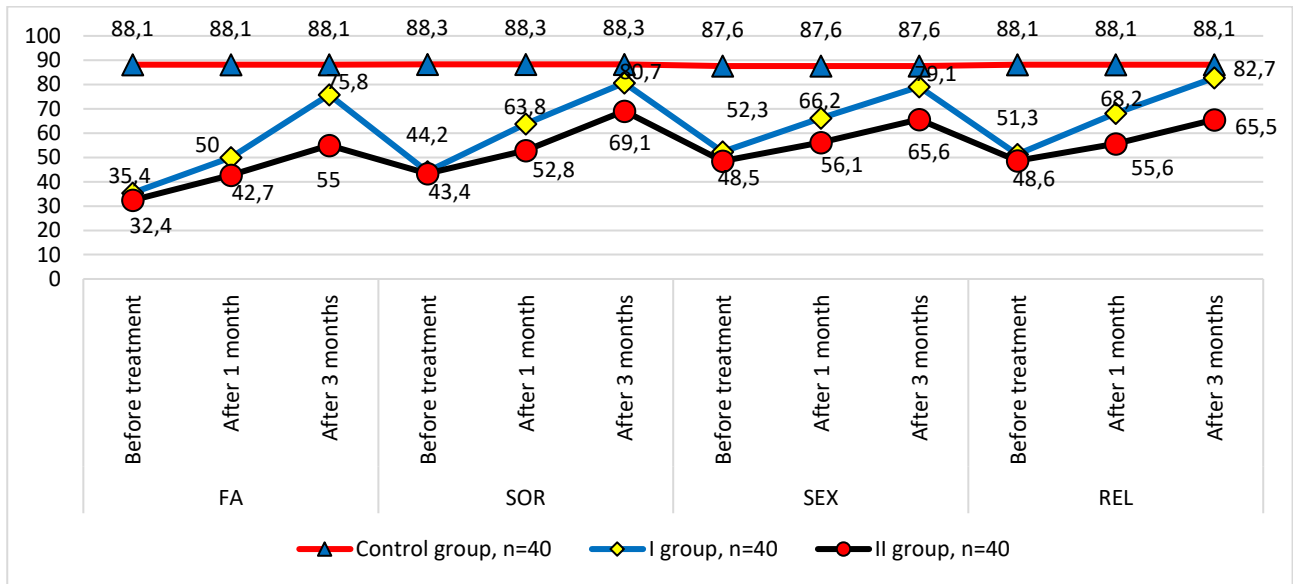


Figure 5. IBS-QOL “A” and “B” groups pre- and post-treatment indicators

Evaluation of the Sexual Relations (SEX) domain of the IBS-QOL questionnaire demonstrated that in Group A, one month after the application of psychopharmacotherapy (PFT) and cognitive behavioral therapy, the SEX score increased from 52.3 ± 1.4 to 66.2 ± 1.2 . Upon reassessment at three months, this indicator reached 79.1 ± 0.66 .

In Group B, following medical and psychological correction, the SEX score increased from 48.5 ± 1.0 to 56.1 ± 1.0 after one month and reached 65.6 ± 0.81 after three months.

Analysis of the Personal Relationships (REL) domain of the IBS-QOL questionnaire revealed that in Group A, one month after the implementation of PFT and cognitive behavioral therapy, the score increased from 51.3 ± 1.7 to 68.2 ± 1.3 . Reassessment at three months showed a further increase to 82.7 ± 0.62 .

In Group B, analysis of the Personal Relationships (REL) domain indicated that the score increased from 48.6 ± 0.95 to 55.6 ± 1.0 after one month, and reached 65.5 ± 1.0 after three months (Figure 5).

Conclusion: The results of the present study confirmed a high prevalence of neurotic disorders among patients with irritable bowel syndrome (IBS), their association with an increased visceral sensitivity index, and the consequent negative impact on the clinical course of the disease and patients’ quality of life. In accordance with the aims and objectives of the study, patients’ psychoemotional status was assessed, and a significant relationship was identified between the severity of neurotic symptoms and the level of visceral sensitivity. The implementation of medical and psychological interventions contributed to the stabilization of the psychoemotional state, a reduction in neurotic manifestations, and an overall improvement in treatment effectiveness. The obtained results fully addressed the research questions and substantiated the appropriateness of a comprehensive psychosomatic approach to the management of IBS. These findings provide a scientific and practical basis for the integration of medical and psychological interventions into routine clinical practice for the management of patients with irritable bowel syndrome.