Analysis of the Clinical Application Effect of Psychological Counseling in Functional Dyspepsia

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Abstract: To observe and analyze the clinical effectiveness of psychological counseling in functional dyspepsia. A total of 100 patients diagnosed with functional dyspepsia in the Department of Gastroenterology of our hospital from May 2023 to June 2024 were selected as the study subjects. According to the order of admission, the patients were randomly divided into two groups: a control group and an observation group, each consisting of 50 cases. The control group received conventional treatment for gastroenterology, while the observation group received conventional treatment plus psychological counseling. The Self-Rating Depression Scale (SDS) and the Self-Rating Anxiety Scale (SAS) were used as assessment tools to evaluate the levels of depression and anxiety before and after different treatment regimens, and comparisons and analyses were conducted. Patient satisfaction with the visit was assessed using a satisfaction survey. The decrease in SDS and SAS scores in the observation group was significantly greater than that in the control group, with significant differences in data ($P < 0.05$). In terms of medical satisfaction, the observation group had a satisfaction rate of 96.00% (48/50), compared to 80.00% (40/50) in the control group, with a statistically significant difference ($P < 0.05$). For patients with functional dyspepsia, psychological counseling intervention can effectively improve negative psychological states such as anxiety and depression, and enhance patient satisfaction with their medical visits.

Keywords: Functional Dyspepsia; Psychological Counseling; Depression, Anxiety; Satisfaction

1. Background

Functional dyspepsia (FD) is a prevalent digestive disorder with a global prevalence exceeding 10% [1]. According to the Rome IV criteria for functional gastrointestinal disorders (FGID) published by the Rome expert committee in 2016, the diagnostic criteria for FD include: (1) postprandial fullness; (2) early satiation; (3) epigastric pain; and (4) epigastric burning. Clinically, there is no definitive organic disease to explain the bothersome symptoms of postprandial satiety, early satiation, and/or upper abdominal pain [2]. Recent studies have demonstrated a clear association between psychosocial factors and FD [3]. The incidence of psychiatric comorbidities is high among FD patients, including anxiety, depression, and neuroticism [4]. This study aimed to observe the positive clinical effects of a psychological counseling model in the treatment of FD, and the results are reported as follows.

2. Materials and Methods

2.1 Study Population

This study enrolled 100 patients diagnosed with functional dyspepsia in the Department of Gastroenterology of our hospital between May 2023 and June 2024. These patients were randomly divided into two groups: the observation group (receiving psychological counseling intervention) and the control group (without psychological counseling intervention), with 50 patients in each group. This study was reviewed and approved by the Ethics Committee of our hospital.

2.2 Inclusion and Exclusion Criteria

2.2.1 Inclusion criteria

(1) Diagnosis of functional dyspepsia (FD) was established based on the Rome IV criteria, requiring the manifestation of one or more of the following symptoms: postprandial fullness, early satiety/anorexia, epigastric pain, belching, nausea, abdominal distension, or vomiting; (2) No history of abdominal surgery within the past three months, with normal cardiac, renal, and

hepatic function tests, and no relevant treatment records or pathological changes; (3) No recent use of any medications affecting gastrointestinal motility or psychotropic drugs; (4) Normal mental status assessed by evaluation, and voluntary participation with signed informed consent after full understanding of the study purpose, methods, and potential risks.

2.2.2 Exclusion criteria

(1) Previous abdominal surgery history; (2) Pregnant or lactating women; (3) Pre-existing psychiatric disorders or current use of hypnotics or psychotropic medications; (4) Confirmed organic diseases of the esophagus, stomach, small intestine, liver, gallbladder, or pancreas identified through endoscopy and medical imaging.

2.3 Interventions

In this study, the control group received standard gastroenterology treatment interventions, including but not limited to: medication guidance according to physician orders, maintenance of healthy lifestyle and dietary habits, reduction of excessive fatigue, appropriate clothing adjustment according to climate changes, and moderate exercise based on individual physical capacity to enhance immune function.

The treatment group received individualized interventions based on psychological counseling in addition to the control group treatment:1)Psychological Counseling: Medical professionals conducted psychological assessments through questionnaire administration and, in collaboration with patients' family members, effectively alleviated patients' negative emotions to reduce psychological burden. During communication, medical staff maintained smiling expressions and gentle tone to avoid provoking patients' resistance. Patients were guided to open up and share their inner feelings with medical staff, establishing harmonious physician-patient relationships, facing treatment protocols with understanding and supportive attitudes, enhancing treatment confidence, and improving treatment compliance. 2) Medication Guidance: Medical personnel supervised patients' medication process, informed them of potential drug side effects in advance, and prepared corresponding mitigation measures for possible adverse reactions. 3) Dietary Nursing: During treatment, reasonable dietary plans were formulated according to patients' individual dietary preferences, primarily consisting of easily digestible, light foods while avoiding high-oil, high-salt, and irritating foods. Combined with viscera conditioning concepts, colorful health education tools were utilized to provide dietary guidance for different disease stages. Meanwhile, combined with local dietary habits, recommended food types and portions were displayed to patients through pictorial forms to facilitate understanding and compliance.4) Lifestyle Modification: Medical staff guided patients to correct unhealthy lifestyle habits such as staying up late, alcohol consumption, smoking, preference for irritating foods, and overeating, cultivating healthy lifestyles to improve physical constitution and prevent disease recurrence.

2.4 Outcome Measures

1) Psychological Status Assessment: Before and after treatment, the Self-Rating Depression Scale (SDS) and Self-Rating Anxiety Scale (SAS) were used to quantitatively analyze the mental health status of patients in both groups. Higher scores indicated more severe depression/anxiety.

2) Medical Satisfaction: A questionnaire designed by our hospital was used to quantitatively evaluate patient satisfaction. Higher scores directly corresponded to higher satisfaction with medical services. The questionnaire categorized satisfaction as: dissatisfied (<80 points), relatively satisfied (80-90 points), and very satisfied (90-100 points), with scores above 80 points counted as satisfied.

2.5 Statistical Methods

Data analysis was performed using SPSS 26.0 software. Normality tests (Shapiro-Wilk test), homogeneity of variance tests (Levene’s test), t-tests for normally distributed data, Mann-Whitney U tests for non-normally distributed data, chi-square tests or Fisher's exact test for categorical data, and Wilcoxon rank-sum tests for ordinal data were used. A P-value<0.05 was considered statistically significant.

3. Results

3.1 Comparison of Negative Emotions between Two Groups

Comparison of negative emotion assessment results between the two groups before intervention showed no statistically significant

difference (P>0.05). After intervention, patients in the observation group demonstrated significantly lower SAS scores (Table 1) and SDS scores (Table 2) compared to the control group (P<0.05).

Table 1. Comparison of SAS Scores Before and After Intervention between Two Groups ($\bar{x}$±s, points)

Group	SAS		t	p
	Pre-intervention	Post-intervention		
Observation Group	56.68±6.30	36.06±2.69	21.634	<0.05
Control Group	56.00±6.54	45.26±7.36	8.195	<0.05
t	0.539	8.294		
p	0.598	<0.05		

Table 2. Comparison of SDS Scores Before and After Intervention between Two Groups ($\bar{x}$±s, points)

Group	SDS		t	p
	Pre-intervention	Post-intervention		
Observation Group	56.54±6.02	38.68±2.51	22.284	<0.05
Control Group	56.22±5.83	44.32±6.03	8.953	<0.05
t	0.270	6.110		
p	0.788	<0.05		

3.2 Comparison of Nursing Satisfaction Scores between Two Groups

According to questionnaire survey results, patients in the observation group showed significant improvements in service attitude, health education, outcome satisfaction, and overall scores compared to the control group, with statistically significant differences (P<0.05, Table 3).

Table 3. Comparison of Nursing Satisfaction between Two Groups (n/%)

Group	Very Satisfied	Relatively Satisfied	Dissatisfied	Satisfaction Rate [%]
Observation Group	27	20	3	96
Control Group	14	26	10	80
χ^2				6.061
p				0.014

4. Conclusion

Functional dyspepsia represents a highly prevalent gastrointestinal condition, affecting 5–40% of the global population [5]. Despite its benign prognosis in terms of life expectancy, the resulting decline in quality of life, together with the expenses associated with hospital visits and medical care, places patients under prolonged psychological stress. The coexistence of psychiatric disturbances—including anxiety, depression, and somatization—is markedly more common in FD patients [6]. A prevailing view in the literature is that such psychological manifestations typically antedate the gastrointestinal diagnosis and may serve as predisposing factors for its onset [7,8]. Psychological status exerts a modulatory effect on gut function and sensory processing, resulting in disturbed gastrointestinal motility and altered sensitivity to innocuous stimuli, which represents a disturbance of the brain–gut axis. The patient's psychological state may affect intestinal sensorimotor function via descending vagal and sympathetic trunk pathways, alongside stress hormone-mediated modulation of nociceptive processing [9]. Additionally, it modulates cerebral cortical areas governing visceral sensation and pain perception (e.g., insula), vigilance (prefrontal cortex), and emotional regulation (limbic system, prefrontal cortex, anterior cingulate cortex) [10]. Therefore, it is evident that addressing underlying psychological dysfunction will be beneficial in alleviating patients' symptoms. Psychotherapy aims to treat mental health problems using non-pharmacological, talk-based methods; commonly used therapeutic approaches encompass cognitive behavioral therapy (CBT), hypnotherapy, and interpersonal psychotherapy. These psychological interventions have been modified and implemented in brain–gut axis disorders, including irritable bowel syndrome (IBS), with the goal of controlling gastrointestinal symptoms. In some IBS studies, psychological therapy has proven as effective as

established pharmacological treatments such as tricyclic antidepressants [11,12].

4.1 Individualized Intervention Primarily Based on Psychological Counseling Can Alleviate Negative Emotions and Improve Inpatient Comfort

In this study, the study group received individualized intervention primarily based on psychological counseling in addition to standard treatment protocols. The results showed that both before and after treatment, the control group exhibited symptoms of depression and anxiety, indicating that patients with functional dyspepsia commonly suffer from psychological anxiety and depression, and that negative emotions intensified during hospitalization. Although SAS and SDS scores improved in both cohorts following the intervention, significantly lower anxiety and depression levels were observed in the study group relative to the control group, suggesting that the addition of psychological counseling intervention to conventional treatment can significantly reduce negative emotions during hospitalization. The mechanisms of action of psychological counseling intervention may include the following aspects:1)Personalized communication: By increasing communication with patients, comprehensively understanding their condition and psychological state, and providing targeted guidance, patients feel respected and attended to, thereby enhancing the trust of patients and their families in medical staff and their confidence in treatment. 2)Emotional guidance: Helping patients correctly understand their disease, providing guidance on diet, rest, medication, and activity, and promptly alleviating negative emotions to promote physical and mental relaxation.3) Psychological support: Through adequate comfort and care, enabling patients to receive treatment in a positive psychological state, reducing physiological stress responses, and thereby optimizing treatment outcomes.

4.2 Individualized Intervention Primarily Based on Psychological Counseling Can Alleviate Clinical Symptoms and Enhance Patient Satisfaction

The present study demonstrated that post-intervention satisfaction ratings were significantly higher among patients in the observation group compared with those in the control group. Previous investigations have similarly demonstrated that holistic, high-standard clinical management can substantially mitigate multifactorial adverse psychological states—including anxiety and tension—thereby fostering more constructive patient attitudes and enhanced treatment compliance. By combining psychological counseling, pharmacological treatment, environmental intervention, and other means, not only can patients' psychological stress and actual physical pain be reduced, but pain thresholds can also be elevated, subjective pain caused by psychological stress can be alleviated, and patients' compliance with medical advice and recovery of bodily functions can be enhanced [13]. Meanwhile, this study showed that the satisfaction of the observation group was significantly higher than that of the control group, indicating that through intervention measures and detailed discharge guidance, a long-term and effective communication channel can be established with patients, enhancing their sense of trust and belonging. Furthermore, these measures not only deepen the connection between doctors and patients but also promote rapport and a sense of responsibility among the healthcare team, stimulating their work enthusiasm and thereby improving the efficiency and quality of healthcare services.

4.3 Physician–Family Collaboration Model

In this study, the researchers observed that family members' understanding of the disease and their grasp of medical information had multifaceted effects on patients. The physician–family collaboration model is a patient-centered comprehensive intervention strategy in which healthcare professionals provide education on disease-related knowledge to both patients and their families and encourage family members to actively participate in the patient's health management. Under this collaborative model, family members can not only assist patients in translating theoretical knowledge into actual health behaviors but also provide continuous encouragement and support during the recovery process, thereby strengthening patients' confidence in recovery and improving their understanding of and engagement with the disease and recovery process [14]. When undergoing relevant medical examinations, especially invasive procedures, patients may experience varying degrees of

psychological stress responses. Changes in the patient's psychological state and physical health may also impose significant psychological pressure on family members, increasing their risk of developing negative emotions such as anxiety. Family members play an important role in patient care; they are not only responsible for daily care but also face financial pressures [15]. The mental health status of family members affects not only their own health but also has a potential impact on the patient's recovery process. Poor psychological states may indirectly negatively affect patient diagnosis and treatment through negative caregiving behaviors and emotional transmission. Therefore, providing psychological support and intervention for family members has become a critical component in improving the overall quality of patient care. By identifying and addressing the mental health needs of family members, the patient's recovery process can be promoted, and the quality of life of the entire family can be enhanced.

This study is based on the core concepts of "patient-centered care" and "provision of humanized and individualized services," embodying humanistic care in diagnosis, treatment, and nursing, respecting and caring for patients, and providing humanized services. In summary, the implementation of psychological counseling intervention can not only significantly improve patients' quality of life, alleviate adverse psychological states such as anxiety and depression, and reduce patient suffering, but also greatly enhance patient satisfaction with medical services. By improving patients' mental health status and healthcare experience, we can provide patients with more comprehensive and humanized medical services, which merits the attention and promotion of clinical practitioners.

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