

Generalized Anxiety in Uninvestigated Dyspeptic Patients: A GAD-7 Questionnaire-Based Study

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Abstract

Background: Generalized anxiety is the most common mental disorder worldwide. Psychological stress, like anxiety, may cause gastrointestinal distress and lead to dyspeptic symptoms. Moreover, dyspepsia, especially uninvestigated dyspepsia, in turn may cause anxiety among the patients by creating uncertainty about the disease and its future.

Objective: To measure anxiety among patients suffering from uninvestigated dyspepsia.

Materials and Methods: This study was conducted at the outpatient department of Medical Gastroenterology, National Gastroenterology Institute and Hospital from December 2023 to May 2024 over six months. A total of 164 patients of uninvestigated dyspepsia patients were enrolled and by dint of the GAD-7 validated Bengali questionnaire, their generalized anxiety level was measured and categorized. Demographic variables were analyzed by chi-square test and correlation with anxiety and number of symptoms was done by Pearson correlation. P value < 0.05 was regarded as statistically significant.

Results: One hundred and sixty-four patients with uninvestigated dyspepsia attending the outpatient department of National Gastroenterology Institute and Hospital from December 2023 to May 2024 were enrolled. Among the patients, 92 were female and 72 were male, without any significant difference (P = 0.06). The common age group with dyspepsia and anxiety was 18-40 years. The difference with higher age groups was significant (P = 0.02). Most participants were service holders or business professionals without significant differences (P = 0.97). There was a significant positive correlation between anxiety and an increasing number of symptoms of dyspepsia (P = 0.007, r = +.9929).

Conclusion: Anxiety and dyspepsia have a positive relationship. Younger age, female sex and stressful professions like service may contribute to dyspepsia.

Keywords: Generalized anxiety, Uninvestigated dyspepsia, GAD-7 questionnaire.

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Introduction:

Generalized Anxiety Disorder (GAD) belongs to a group of mental health conditions, including panic disorder, phobias, social anxiety disorder, Obsessive-Compulsive Disorder (OCD) and Post-Traumatic Stress Disorder (PTSD).¹ In the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), GAD has been stated to include both psychological symptoms such as persistent worrying and overthinking, difficulty handling uncertainty, restlessness, indecisiveness etc. as well as physiological symptoms such as fatigue, sleeplessness, muscle tension, nervousness, nausea, irritability etc.^{2,3} About 4% population of the world is suffering from generalized anxiety disorder. In the year 2019, 301 million people in the world suffered from anxiety disorder.⁴ So, it is the most common mental disorder worldwide. A study estimated the prevalence of GAD to be around 37.3% among individuals in Bangladesh aged between 13 to 63 years.⁵

Dyspepsia is one of the most common medical conditions observed throughout the world. It affects 20–45% of the general adult population.^{6,7} The term ‘dyspepsia’ was derived from the Greek term ‘dyspeptos’, which means ‘difficult to digest’. ‘Indigestion’ is the non-medical term for dyspepsia. Dyspepsia is used to describe a constellation of symptoms arising from the upper abdomen, such as upper abdominal ‘discomfort’, ‘pain’, bloating, upper abdominal fullness, burning, flatulence, satiation, nausea, vomiting, heartburn, regurgitation, frequent burping (belching) and anorexia.⁸ Dyspepsia may be divided into two types- Organic and functional.⁹ Uninvestigated dyspepsia indicates patients with new or recurrent dyspeptic symptoms in whom no investigations have been previously undertaken.¹⁰

Globally, the prevalence of uninvestigated dyspepsia (UD) varies between 7% - 45%, depending on the definition used and geographical location, whilst the prevalence of FD has been noted to vary between 11% - 29.2%.¹¹ The prevalence of dyspepsia in the adult population of Bangladesh is 61.9% which is very high compared to other countries and also much higher than the prevalence found in our country thirty years back.¹² In an Australian population-based study, it was found that psychological distress was linked to having persistent functional gastrointestinal symptoms and frequently seeking health care for them. However, these subjects were not investigated for structural disease.¹³ In a Finnish study, the risk of having mental distress was nearly 4-fold higher among patients with dyspepsia and functional dyspepsia than among controls.¹⁴ This study aims to measure the generalized anxiety level in uninvestigated dyspepsia patients.

Materials and Methods:

This was a cross-sectional study conducted at the outpatient department of Medical Gastroenterology, National Gastroenterology Institute and Hospital, from December 2023 to May 2024, over six months.

A total of 164 consecutive willing adult patients suffering from uninvestigated dyspepsia were enrolled in the study. Patients suffering from prior anxiety disorders and any neuropsychiatric disorders were excluded from the study. The GAD-7 questionnaire was used to measure generalized anxiety symptoms.¹⁵ It was validated in Bengali and that questionnaire was used here.¹⁶ As per the definition, common upper abdominal symptoms like epigastric pain, epigastric burning, postprandial fullness, early satiety, bloating and anorexia were regarded as dyspeptic symptoms. Ethical clearance was taken from the ethical review committee of the institute. Demographic data, including sex, age and profession, were noted and analyzed by chi-square test. Correlation between the number of patients with one/ two symptoms or three or more symptoms with different levels of anxiety was done by Pearson Correlation. All analyses were performed using the statistical software package SPSS version 26.0. P value < 0.05 was considered statistically significant.

Results:

A total of 164 patients suffering from uninvestigated dyspepsia were enrolled in the study. This study was done in the outpatient department of the National Gastro Liver Institute from December 2023 to May 2024. Among the participants, 92 (56.09%) were female and 72 (43.91%) were male. The difference between the two groups with different levels of anxiety was not statistically significant ($P = 0.06$). Anxiety was found to be higher in the 18-40-year age group. The difference between the age group was statistically significant ($P=0.02$). Among the participants, business and service were the predominant professions. The difference between the participants' professions was not statistically significant ($P = 0.97$).

Table I: Demographic Profile of Uninvestigated Dyspepsia Patients

Parameter	No Anxiety	Mild Anxiety	Moderate Anxiety	Severe Anxiety	P Value
Gender					
Male	12	28	30	2	0.06
Female	16	38	26	10	
Age					
18-40 years	12	38	22	6	0.02
41-60 years	8	20	12	2	
≥ 60 years	8	8	22	6	
Profession					
Business	5	12	13	2	0.97
Farming	5	10	9	3	
Service	13	36	25	6	
Studentship	5	8	9	3	

The correlation between different levels of anxiety and patients with only one/two symptoms was positively correlated and statistically significant ($r = + 0.9929$, $P = 0.007$).

Table II: Correlation between Different Levels of Anxiety with Dyspeptic Symptoms

Parameter	Patients with one/ Two symptoms	Patients with three or more symptoms	Correlation coefficient	P Value
No Anxiety	12	16		
Mild Anxiety	24	42	+0.9929	0.007
Moderate Anxiety	20	36		
Severe Anxiety	6	8		

Discussion:

Dyspepsia is a common but nonspecific complaint in adults seeking medical consultation. In primary care settings, dyspepsia accounts for 2-5% of all consultation among adults¹⁷ and up to 40% of the general population reports symptoms related to dyspepsia.^{6,18} As dyspepsia is a bothersome morbidity, it may cause anxiety among the patients suffering from it. They may feel concerned about the disease, its prognosis and cost for disease free survival. All these factors may contribute to their level of anxiety.

Females are more prone to anxiety among dyspepsia patients.¹⁹ Our study showed the same. Females 92(56.09%) were more in number than males 72 (43.91%). But the difference was statistically insignificant ($P = 0.06$). The age group with the most predominant dyspeptic symptoms in this study was the 18-40 years age group, with a total of 78 (47.56%) patients. In a previous study conducted by Huang et al, among the study participants, 52.04% of patients with dyspepsia were found in the 18-29 and 30-39 year age groups. The difference between the 18-40 years, 41-60 years, and > 60 years age group was found to be statistically significant ($P=0.02$). Among the participants, service and business are the most predominant professions. Dyspepsia may be related to professions with high mental stress. Huang et al showed dyspepsia is more common in manual workers (45.98%).²⁰ However, there was no statistically significant difference ($P=0.97$). A significant positive relationship was found between anxiety and dyspepsia, with p value of 0.007 and a correlation coefficient of 0.9929. One Swedish study showed a significant relationship between uninvestigated dyspepsia and functional dyspepsia with anxiety.²¹ Another study by Tshabalala et al in a hospital in South Africa found that among the 201 participants, 149 had dyspepsia along with anxiety.²²

Conclusion:

According to the result of this study, anxiety and dyspepsia have a significant positive relationship. Moreover, younger age patients are found to be more prone to suffer from anxiety and dyspepsia. Further large-scale population-based study is wanted to find out all the factors leading to dyspepsia in Bangladesh.

Conflict of Interest: None.

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