

## Comparing Irritable Bowel Syndrome and Psychiatric Illness to Inflammatory Bowel Disease

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**Abstract:** Irritable bowel syndrome (IBS) is a prevalent disease that patients report within primary care and contributes approximately 14% - 51% of fresh patients to gastrointestinal centres while inflammatory bowel disease (IBD) which includes ulcerative colitis and Crohn's disease, is among the crippling persistent gastrointestinal disorders that considerably negatively affect a participant's physical, psychological, family, and social aspects. The objective of our research was to compare the effects of IBD and IBS in two groups of outpatients. The study was carried out at Qazi Hussain Ahmed Medical Complex Nowshera from September 2021 to Jan 2022. All outpatients with a confirmed diagnosis of IBS (n=49) and IBD (n=27) were requested to participate in the study. 87.76% of patients (n=43) with irritable bowel syndrome and 18.51% of patients (n=5) with inflammatory bowel disease had at least one of these lifetime diagnoses. 24.48%, 22.44%, and 22.44% of the subjects had lifetime diagnoses of major depression (n = 12), panic (n = 11), or somatization disorder (n = 11). 73.5% of the patients with irritable bowel syndrome (n=36) had a history of panic disorder, generalized anxiety disorder, phobia, major depression, somatization disorder, or a combination of these illnesses before the beginning of their gastrointestinal symptoms. Compared to patients with IBD individuals with IBS had greater sensitivity to modest physical symptoms, more psychological discomfort, and a higher lifetime frequency of mental illnesses

**Key Words:** Inflammatory Bowel Disease, Irritable Bowel Syndrome, Psychiatric Disorders, Anxiety

### Introduction

Irritable bowel syndrome (IBS) affects approximately 10% of persons in North America and Europe and is a frequent issue among the overall population (Drossman, D. A., Sandler, R. S., McKee, D. C., & Loviz A. J. 1982; Müller-Lissner, S. A., Bollani, S., Brummer, R. J., & Vatn, M. H. et. al. 2001). IBS is a prevalent disease that

patients report within primary care and contributes approximately 14% - 51% of fresh patients to gastrointestinal centres (Mitchell, C. M., & Drossman, D. A. 1987; Thompson, W. G. 2000). Health-related quality of life (HRQOL) is greatly affected by functional gastrointestinal disorders and IBS. IBS patients have already been associated with decreasing life quality, as evidenced by impoverished sleep, issues with jobs,

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relationship issues, sexual dysfunction, leisure, travel, and nutrition (Koloski, N. A., Talley, N. J., & Boyce, P. M. [2000](#)); O'Keefe, E. A., Talley, N. J., Zinsmeister, A. R., & Jacobsen, S. J. [1995](#)).

Inflammatory Bowel Disease (IBD), which includes ulcerative colitis and Crohn's disease, is among the crippling persistent gastrointestinal disorders that considerably negatively affect a participant's physical, psychological, family, and social aspects (Azzam, N., Aljebreen, A., Almuhareb, A., & Almadi, M. [2020](#)). Many IBD participants experienced the psychosocial effects of IBD and its pharmacological therapy. Anxiety especially could have a significant impact on life quality, including workability and family life. (Bannaga, A. S., & Selinger, C. P. [2015](#)). According to population-based studies, IBD patients had cumulative incidence levels of depression and anxiety of 19.8 to 21.7% and 25.3 to 32.6%, correspondingly (Marrie, R. A., Walker, J. R., Graff, L. A., et. al. [2016](#)). According to a previous comprehensive study, individuals with IBD had combined prevalence rates of anxiety and depression of 18.2% and 22.3%, correspondingly (Walus, M. A, Pittet, V., Rossel, J. B., & Von, Kanel. R. [2016](#)).

The medical community and the patient populations have distinct perspectives on these two illnesses, though: Due to the patient's unique personality, psychological makeup, and subjective response to physical or psychological stress, IBS is frequently seen as the archetype of gastrointestinal functional disorders, or an "illness without the disease." Some authors have even gone so far as to call IBS a "forme fruste" of psychiatric illness (Anonymous. [1999](#)); Best, W. R., Becketl, J. M., Singleton, J. W., & Kern, F. [1976](#)). IBD, on the other hand, is typically seen as "organic," meaning that the disease itself takes precedence over the role that stress or other psychological variables play, which may be little or nonexistent (Powell-Tuck, J., Day, D. W., Buckell, N. A., [1982](#)).

The objective of our research was to compare the effects of IBD and IBS in two groups of outpatients.

## Material and Methods

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All outpatients with a confirmed diagnosis of IBS were requested to participate in the study between September 2021 to Jan 2022. The majority of the 49 IBS patients who were randomly chosen from the 76 patients in the first sample came from the gastroenterology clinic (n=31; 63.26%) or the private gastroenterologists (n=14; 28.57%); a minor number (n=4; 8.17%) were from the primary care clinic. The 27 first IBD patients showed a similar pattern: primary care clinic (n=6), private practice (n=7), gastroenterology clinic (n=14; 51.86%), and private practice (n=7; 25.92). Within two weeks following their clinic appointment, each patient underwent an evaluation. Patients who had taken oral contraceptives in the month before the interview but not systemic steroids were excluded.

Using the Diagnostic Interview Schedule (DIS) Version III-A and III-R criteria, we conducted interviews with the patients after obtaining their consent. These interviews covered somatization disorder, panic disorder, generalized anxiety disorder, phobia, major depressive disorder, and alcoholism sections. In order to determine whether a subject met the requirements for more than one psychiatric diagnosis, we scored the DIS to allow the most valid DSM-III-R psychiatric diagnoses while omitting the exclusion criteria. During the interview, we asked about the current (during the last month) and lifetime symptoms of psychiatric disorders.

All categorical variables, including psychiatric diagnoses and somatic symptoms, were compared between the group with irritable bowel syndrome and the group with inflammatory bowel disease using chi-square testing with Yates' correction and Fisher's exact tests. To find out if the groups varied in the number of symptoms or the results of the psychological tests, two-tailed t-tests were utilized.

## Results

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Table 1 summarizes the psychiatric diagnoses. Significantly more patients with irritable bowel

syndrome had major depression, somatization disorder, generalized anxiety disorder, panic disorder, and phobic disorder as lifetime diagnoses compared to patients with inflammatory bowel disease; 87.76% of patients (n=43) with irritable bowel syndrome and 18.51% of patients (n=5) with inflammatory bowel disease had at least one of these lifetime diagnoses. In the irritable bowel syndrome group, even after we eliminated generalized anxiety disorder and phobias, 24.48%, 22.44%, and 22.44% of the subjects had lifetime diagnoses of major depression (n = 12), panic (n = 11), or somatization disorder (n = 11).

The patients with Crohn's disease and ulcerative colitis were also compared, and we discovered no significant differences between them in terms of age, sex, marital status, social status, or any psychiatric diagnoses, indicating that they served as a homogenous comparison group for the purposes of this study. We contrasted the age at which gastrointestinal symptoms first appeared with the age at which any mental symptoms that fit the diagnostic mould first appeared. 73.5% of the patients with irritable

bowel syndrome (n=36) had a history of panic disorder, generalized anxiety disorder, phobia, major depression, somatization disorder, or a combination of these illnesses before the beginning of their gastrointestinal symptoms (table 2). Thirteen (26.53%) people did not claim to have experienced severe mental symptoms prior to receiving the irritable bowel syndrome diagnosis. Eight of the thirteen individuals experienced a significant depressive illness, panic disorder, or generalized anxiety disorder following the onset of irritable bowel syndrome. Irritable bowel syndrome affected 49 individuals, only five of whom had no prior history of severe mental symptoms either before or after the onset of gastrointestinal symptoms.

Table 3 lists the psychological exam results. Irritable bowel syndrome patients exhibited substantially higher mean scores on seven of the 11 SCL-90 scales and on the Modified Somatic Perception Questionnaire compared to patients with inflammatory bowel illness, but they did not vary on the Beck Depression Inventory.

**Table 1.** Different Psychiatric disorder analysis of patients with IBS (n=49) and IBD (n=27)

Diagnoses of disorders	IBS (n=49)		IBD (n=27)		Significance <sup>a</sup>
	n	%	n	%	
<b>Depression</b>					
Life-time	19	(38.77)	5	(18.51)	$\chi^2=6.41, p<0.02$
Recent	8	(16.32)	2	(7.41)	$\chi^2=2.31$
<b>Panic Disorder</b>					
Life-time	11	(22.42)	1	(3.71)	P=0.02
Recent	4	(8.16)	1	(3.71)	P=0.43
<b>Generalized anxiety disorder</b>					
Life-time	14	(28.57)	3	(11.12)	$\chi^2=6.13, p<0.05$
Recent	2	(4.08)	2	(7.41)	$\chi^2=0.12$
<b>Panic or Generalized anxiety disorder</b>					
Life-time	16	(32.65)	4	(14.81)	$\chi^2=8.45, p<0.03$
<b>Any phobia</b>					
Life-time	16	(32.65)	3	(11.12)	$\chi^2=5.30, p<0.02$
Recent	9	(18.36)	2	(7.41)	$\chi^2=1.81$
Agoraphobia, life-time	8	(16.32)	1	(3.71)	P=0.12
Simple phobia, life-time	9	(18.36)	3	(11.12)	$\chi^2=0.75$
Social phobia, life-time	4	(8.16)	2	(7.41)	P=0.22
Somatization disorder, life-time	11	(22.42)	1	(3.71)	P=0.04

Diagnoses of disorders	IBS (n=49)		IBD (n=27)		Significance <sup>a</sup>
	n	%	n	%	
Alcohol abuse or dependence, life-time	12	(24.48)	4	(14.81)	$\chi^2=1.32$
Any lifetime analysis	43	(87.76)	5	(22.22)	$\chi^2=21.17, p<0.001$

<sup>a</sup> Fisher's specific test or the chi-square analysis with Yates' adjustment (df=01).

**Table 2.** Psychiatric Signs in patients experiencing IBS (n=49), Predating Gastrointestinal Signs

Patients With Earlier Psychiatric Symptoms Meeting Criteria for Diagnosis		
Disorder Diagnosis	Patient Number	Percentage
Panic disorder	11	22.44
General anxiety disorder	29	59.18
Phobic disorder	17	34.69
Main depression	12	24.48
Somatization disorder	11	22.44
Panic or general anxiety	21	42.85
Panic or general anxiety or phobia	24	48.97
Panic or general anxiety or chief depression	21	42.86
Any of the above detection	36	73.05

**Table 3.** Results of psychological self-report questionnaires of IBS and IBD patients (n=49 and 27 respectively).

Survey	IBS		IBD		2 - Tailed t-Test		
	Mean	SD	Mean	SD	t	df	p
Beck Depression Inventory	8.45	8.6	5.16	7.0	2.49	43	<0.05
Modified Somatic Perception Questionnaire	9.0	7.0	4.7	6.1	3.05	42	<0.05
Hopkins SCL-90	60.7	10.9	51.2	10.7	1.56	41	<0.05
Somatization	62.2	16.1	54.2	11.6	1.97	41	<0.05
Obsessive-compulsive	60.8	12.6	52.4	15.4	2.13	41	<0.05
Interpersonal sensitivity	62.3	12.5	56.7	10.2	1.87	41	<0.05
Depression	59.3	14.1	49.5	14.0	2.32	41	<0.05
Anxiety	57.4	13.2	48.2	14.5	1.98	41	<0.05
Hostility	43.4	19.0	41.2	12.9	0.75	41	<0.05
Phobic anxiety	56.4	19.4	44.7	15.9	2.12	41	<0.05
Paranoia	57.3	19.8	46.7	15.1	2.01	41	<0.05
Psychoticism	61.5	9.8	52.7	7.9	3.28	41	<0.05
Global severity	61.7	8.9	55.6	7.2	2.31	41	<0.05
Total Positive symptom							

## Discussion

According to the findings of this pilot study, people with irritable bowel syndrome had a greater lifetime incidence of mental disorders than patients with other major gastrointestinal diseases. This conclusion is consistent with findings from other studies (Surdea-Blaga, T. 2012). We mixed

Crohn's disease and ulcerative colitis patients in order to control for illness severity, and we eliminated people who were on systemic steroids since they have been linked to organic mental symptoms. In the sample with IBS, we discovered a startlingly high frequency of psychiatric problems (87.76%). Despite being comparable to rates discovered in other research (Fadgyas-Stanculete,

M., Buga, A. M., (2014). The DSM-III-R criteria we used to calculate the maximum number of diagnoses permitted by the DIS revealed that generalized anxiety disorder (59.18%) affected more than half of our individuals. Irritable bowel syndrome and anxiety tend to be mutually reinforcing rather than that one illness directly causes the other, however, the causal link between the two disorders is poorly understood (Palsson, O. S., & Drossman, D. A. 2005). Major depression (24.48%), panic (22.44%), and somatization disorder (22.44%) were the three most common lifetime psychiatric diagnoses for patients, even after excluding generalized anxiety disorder and phobias related to irritable bowel syndrome. Despite being roughly identical to rates discovered in other research (Mykletun, A., Jacka, F., et. al. 2010). Furthermore, the majority (73.05%) of our IBS patients said that the commencement of their psychological symptoms came on before the onset of their gastrointestinal distress.

The SCL-90 revealed that the individuals with irritable bowel syndrome also had a significant level of present psychological distress, despite differences between our two groups of respondents in lifetime psychiatric diagnoses. These findings imply that many IBS patients also suffer from anxiety and depression and that even between acute episodes, they continue to

experience significant yet subclinical psychological suffering. In several research, it has been discovered that patients with high levels of psychological distress or "negative affectivity" (those with high anxiety, despair, and hostility scores on psychological measures of distress) report noticeably more physical symptoms than healthy participants (Locke III, R. G., Zinsmeister, A. R., Schleck, C. D., & Talley, N. J. 2009). According to our research, people with irritable bowel syndrome may exaggerate little physiological symptoms. The Modified Somatic Perception Questionnaire, the SCL-90, and our data from the DIS's section on somatization disorders all show that patients with irritable bowel syndrome reported more mild somatic symptoms than patients with inflammatory bowel disease.

## Conclusion

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Overall, compared to patients with inflammatory bowel disease, individuals with irritable bowel syndrome had greater sensitivity to modest physical symptoms, more psychological discomfort, and a higher lifetime frequency of mental illnesses. These results imply that these individuals may benefit from formal psychiatric assessment and treatment using both psychotherapy and psychopharmacologic techniques.

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