

# ROLE OF PSYCHOSOCIAL FACTORS, PSYCHIATRIC MORBIDITY AND PERSONALITY PATTERNS IN GASTROINTESTINAL DISORDERS - A COMPARATIVE STUDY

## Psychiatry

Article Submitted on: 01  
September 2019  
Article Accepted on: 06  
September 2019

### Corresponding Author

Dr. Alexander Martin Alphonse  
Professor  
Department of Psychiatry  
Varun Arjun Medical College  
Banthra,  
District Shahjahanpur,  
(U.P) - 242307

Alexander Martin Alphonse<sup>1</sup>,

<sup>1</sup> - Professor, Dept. of Psychiatry, Varun Arjun Medical College, Banthra, Dist. Shahjahanpur, (U.P.)

### Abstract:

**Background:** Irritable bowel syndrome (IBS) is a chronic psychosocial disorder, causes psychiatric morbidity and various personality patterns. IBS is considered to be the most common gastrointestinal disorder and above 50 to 90% of IBS patients have associated psychiatric morbidity and change in personality patterns.

**Aims and Objectives:** The aim of this study is to evaluate psychiatric morbidity and change in personality patterns in patients with gastrointestinal disorders, especially IBS and role of psychosocial factors.

**Materials and Methods:** This was a cross-sectional study conducted on 65 patients of IBS between the age group of 18 to 51 years after obtaining written informed consent. Healthy attendants of the cases were selected as controls. A total of 75 controls were selected. Rome-III criteria were used to diagnose IBS. For diagnosing psychiatric disorders, we used the Mini International Neuropsychiatric Interview Schedule Plus.

**Results:** Psychiatric disorders were seen in 82.5% patients of IBS as compared to 41.2% of controls. Major psychiatric disorders seen in our study were generalised anxiety disorder (30%) and depression (25%).

**Conclusion:** The psychosocial role in majority of the patients with IBS who presented to a tertiary care center caused the psychiatric morbidity and personality changes. We needed to screen these patients for such co-morbidities and personality pattern changes to develop a holistic approach for better outcome in such cases.

**Keywords:** Anxiety disorders, co-morbidity, depression, gastrointestinal disorders, IBS.

### Introduction:

Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder characterised by diffuse or localised abdominal pain, constipation, diarrhea and urgency.<sup>1</sup> It has an approximate prevalence of 1.1 - 29.2% in community.<sup>2-5</sup> This disorder amounts to a major burden on healthcare and nearly half of the referrals are made

to gastroenterology clinics.<sup>6-8</sup> Psychological distress, adverse life events and alteration in brain-gut axis are suggested explanations for development of this syndrome.<sup>9-11</sup> Cognitive behavioural therapy is most effective for treatment of IBS.<sup>12</sup> 50 to 90% patients of IBS have anxiety disorders and depression.<sup>13</sup> Patients with severe disease have higher prevalence of quality of life impairment and change in personality

pattern.<sup>14</sup> Patients seeking medical consultation have a severity of symptoms<sup>15</sup> and are more likely to be depressed and anxious.<sup>16</sup>

### **Aims and Objectives:**

The aim of this study is to evaluate psychiatric morbidity and change in personality patterns in patients with gastrointestinal disorders, especially IBS and role of psychosocial factors.

### **Materials and Methods:**

This was a cross-sectional study conducted on 65 patients of IBS between the age group of 18 to 51 years after obtaining written informed consent. Healthy attendants of the cases were selected as controls. A total of 75 controls were selected.

All of the cases were interviewed for socio-demographic parameters like gender, age, educational level, marital status and socioeconomic level. The socioeconomic class was established by means of Kuppaswamy's scale.<sup>17</sup> Education and occupation of the family did not change with time, but income has to be updated from time to time. 18 Subjects aged 18 years or above who satisfied the Rome-III diagnostic criteria for IBS were included in our study as cases. Healthy attendants accompanying the patients were included to serve as controls. Patients diagnosed with any psychiatric disorder were referred to outpatient department for treatment.

Rome-III criteria were used to diagnose IBS.<sup>19</sup> For diagnosing psychiatric disorders, we used the Mini International Neuropsychiatric Interview Schedule Plus.<sup>20,21</sup>

### **Results:**

Psychiatric disorders were seen in 82.5% patients of IBS as compared to 41.2% of controls. Major psychiatric disorders seen in our study were generalised anxiety disorder (30%) and depression (25%).

Among the cases, 85% males and 82% females had a psychiatric co-morbidity and change in personality pattern.

While among controls, 25% males and 55% females had co-morbid psychiatric illness and change in personality pattern. Major psychiatric disorders seen in our patients were GAD and MDE. GAD was seen in 28% of patients having IBS, while MDE was present in 25%. Our control also had GAD and MDE as the major psychiatric disorder. GAD was present in 13% and MDE in 15% of our controls. Mixed anxiety depression was the next common psychiatric disorder.

### **Discussion:**

IBS is often considered to be the prototype of functional gastrointestinal disorder with about 50 to 90% of patients having psychiatric co-morbidity.<sup>22,23</sup> Females outnumbered males in our study by a ratio of almost 2:1 which is quite similar to the results seen in other studies, thereby showing that the disorder predominantly affects women.<sup>24,25</sup> Researchers have hypothesized that sex hormones may affect the mechanisms that regulate the brain-gut-microbiota axis, which is finally involved in the development of IBS.<sup>26</sup>

IBS is well thought to have shared etiopathogenesis with other functional and somatic symptom disorders.<sup>27</sup> In a study done in 2004 by Haug et al,<sup>28</sup> it was found that female patients were having high number of somatic symptoms than their male counterparts.

The most frequent subtypes of IBS in our study are in consistent with the results of some European and North American studies,<sup>29,30</sup> while they differ from several other studies.<sup>31,32</sup> It has been seen that the type of IBS is largely determined by population under study and varies among different regions.<sup>33</sup> In our study, psychiatric disorders were seen in about 80% of IBS patients. This is quite high compared to the prevalence seen in western studies, where the percentage of psychiatric disorders ranges from 40 to 60%,<sup>34,35</sup> but is comparable to the rates seen in Indian studies.<sup>36</sup>

The major psychiatric disorders seen in our cases were GAD and MDE which have been found in many other studies done on IBS. In a study done by Mayer et al,<sup>37</sup> 32% patients of IBS presented with GAD symptoms. In a study done by Kabra and Nadkarni<sup>38</sup> in India, the prevalence of depression in IBS patients was about 37% which is slightly higher than our study.

Keeping in view of high rates of psychiatric co-morbidity and change in personality pattern in patients of IBS as compared to the general population, all patients of IBS should be scrutinized for associated psychiatric disorders in order to build a holistic approach for managing these patients.

Our study had a few limitations. We selected cases from tertiary care speciality center where severe forms of illness are referred, therefore there is a higher chance of associated psychiatric co-morbidities in these patients compared to the ones in the general population or, those presenting to the primary care physicians.

### Conclusion:

Majority of patients with IBS which present to a tertiary care center have co-morbid psychiatric disorders and change in personality pattern. Only few of them receive specific psychological treatment. We recommend timely to refer these cases to psychiatrists for appropriate treatment.

### References:

1. Corney RH, Stanton R. Physical symptom severity, psychological and social dysfunction in a series of outpatients with irritable bowel syndrome. *J Psychosomatic Res.* 1990;34:483–491. doi: 10.1016/0022-3999(90)90022-V.
2. Talley NJ, Zinsmeister AR, Van Dyke C, Melton LJ. Epidemiology of colonic symptoms and the irritable bowel syndrome. *Gastroenterology.* 1991;101:927–934. doi: 10.1016/0016-5085(91)90717-Y.
3. Jones R, Lydyard S. Irritable bowel syndrome in the general population. *BMJ.* 1992;304:87–90. doi: 10.1136/bmj.304.6819.87.
4. Saito YA, Locke GR, Talley NJ, Zinsmeister AR, Fett SL, Melton LJ, 3rd A comparison of the Rome and Manning criteria for case identification in epidemiological investigations of irritable bowel syndrome. *Am J Gastroenterol.* 2000;95:2816–2824. doi: 10.1111/j.1572-0241.2000.03192.x.
5. Oshima T, Miwa H. Epidemiology of functional gastrointestinal disorders in Japan and in the world. *J Neurogastroenterol Motil.* 2015;21:320–329. doi: 10.5056/jnm14165.
6. Harvey RF, Salih SY, Read AE. Organic and functional disorders in 2000 gastroenterology outpatients. *Lancet.* 1983;1:632–634. doi: 10.1016/S0140-6736(83)91802-0.
7. Ferguson A, Sircus W, Eastwood MA. Frequency of “functional” gastrointestinal disorders. *Lancet.* 1977;2:613–614. doi: 10.1016/S0140-6736(77)91466-0.
8. Fielding JF. A year in out-patients with the irritable bowel syndrome. *Ir J Med Sci.* 1977;146:162–166. doi: 10.1007/BF03030953.
9. Quigley EM. Changing face of irritable bowel syndrome. *World J Gastroenterol.* 2006;12:15. doi: 10.3748/wjg.v12.i1.1.
10. Tanaka Y, Kanazawa M, Fukudo S, Drossman DA. Biopsychosocial model of irritable bowel syndrome. *J Neurogastroenterol Motil.* 2011;17:131–139. doi: 10.5056/jnm.2011.17.2.131.
11. Sykes MA, Blanchard EB, Lackner J, Keefer L, Krasner S. Psychopathology in irritable bowel syndrome: support for a psycho physiological model. *J Behav Med.* 2003;26:361–372. doi: 10.1023/A:1024209111909.
12. Drossman DA, Toner BB, Whitehead WE, et al. Cognitive-behavioral therapy versus education and desipramine versus placebo for moderate to severe functional bowel disorders. *Gastroenterology.* 2003; 125:19–31. doi: 10.1016/S0016-5085(03)00669-3.
13. Lydiard RB, Falsetti SA. Experience with anxiety and depression treatment studies: implications for designing irritable bowel syndrome clinical trials. *Am J Med.* 1999;107(5A):65S–73S. doi: 10.1016/S0002-9343(99)00082-0.
14. Jafari P, Asadollahi Z, Moini M, Seyed Mirzaie M. Health related quality of life in Iranian patients with irritable bowel syndrome: reliability and validity of the persian version of the IBS-QOL. *Iran Red Crescent Med J.* 2013;15:723–728. doi: 10.5812/ircmj.4605.
15. Heaton KW, O'Donnell LJ, Braddon FE, Mountford RA, Hughes AO, Cripps PJ. Symptoms of irritable bowel syndrome in a British urban community: consulters and nonconsulters. *Gastroenterology.* 1992;102:1962–1967. doi: 10.1016/0016-5085(92)90320-X.
16. Masand PS, Kaplan DS, Gupta S, et al. Major depression and irritable bowel syndrome: is there a relationship? *J Clin Psychiatry.* 1995;56:363–367.
17. Kuppuswamy B. *Manual of Socioeconomic Status (urban) Delhi: Manasayan; 1981. pp. 66–72.*

18. Mishra D, Singh HP. Kuppaswamy's socioeconomic status scale - A revision. *Indian J Pediatr.* 2003; 70: 273–274. doi: 10.1007/BF02725598.
19. Drossman DA. ROME III: The functional gastrointestinal disorders. McLean, VA: Degnon Associates; 2006.
20. Amorim P. Mini International Neuropsychiatric Interview (MINI): validation of a short structured diagnostic psychiatric interview. *Revista Brasileira de Psiquiatria.* 2000;22:106–115. doi: 10.1590/S1516-44462000000300003.
21. Sheehan DV, Lecrubier Y, Sheehan KH, et al. The Mini International Neuropsychiatric Interview (M.I.N.I.): the development and validation of structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry.* 1998;59(suppl 20):22–33.
22. Fukudo S, Kaneko H, Akiho H, et al. Evidence-based clinical practice guidelines for irritable bowel syndrome. *J Gastroenterol.* 2015;50:11–30. doi: 10.1007/s 00535-014-1017-0.
23. Spiller R, Aziz Q, Creed F, et al. Guidelines on the irritable bowel syndrome: mechanisms and practical management. *Gut.* 2007;56:1770–1798. doi: 10.1136/gut.2007.119446.
24. Lovell RM, Ford AC. Effect of gender on prevalence of irritable bowel syndrome in the community: systematic review and meta-analysis. *Am J Gastroenterol.* 2012;107:991–1000. doi: 10.1038/ajg.2012.131.
25. Kibune Nagasako C, Garcia Montes C, Silva Lorena SL, Mesquita MA. Irritable bowel syndrome subtypes: clinical and psychological features, body mass index and comorbidities. *Rev Esp Enferm Dig.* 2016;108:59–64.
26. Earls F. Sex differences in psychiatric disorders: origins and developmental influences. *Psychiatr Dev.* 1987;5:1–23.
27. Mulak A, Taché Y, Larauche M. Sex hormones in the modulation of irritable bowel syndrome. *World J Gastroenterol.* 2014;20:2433–2448. doi: 10.3748/wjg.v20.i10.2433.
28. Haug TT, Mykletun A, Dahl AA. The association between anxiety, depression, and somatic symptoms in a large population: the HUNT-II study. *Psychosom Med.* 2004;66:845–851. doi: 10.1097/01.psy.0000145823.85658.0c.
29. Saito YA, Schoenfeld P, Locke GR., 3rd The epidemiology of irritable bowel syndrome in North America: a systematic review. *Am J Gastroenterol.* 2002;97:1910–1915.
30. Lin S, Mooney PD, Kurien M, Aziz I, Leeds JS, Sanders DS. Prevalence, investigational pathways and diagnostic outcomes in differing irritable bowel syndrome subtypes. *Eur J Gastroenterol Hepatol.* 2014; 26: 1176–1180. doi: 10.1097/MEG.000000000000171.
31. Su AM, Shih W, Presson AP, Chang L. Characterization of symptoms in irritable bowel syndrome with mixed bowel habit pattern. *Neurogastroenterol Motil.* 2014;26:36–45. doi: 10.1111/nmo.12220.
32. Keshteli AH, Dehestani B, Daghighzadeh H, Adibi P. Epidemiological features of irritable bowel syndrome and its subtypes among Iranian adults. *Ann Gastroenterol.* 2015;28:253–258.
33. Yao X, Yang YS, Cui LH, et al. Subtypes of irritable bowel syndrome on Rome III criteria: a multicenter study. *J Gastroenterol Hepatol.* 2012;27:760–765. doi: 10.1111/j.1440-1746.2011.06930.x.
34. Hausteiner-Wiehle C, Henningsen P. Irritable bowel syndrome: relations with functional, mental, and somatoform disorders. *World J Gastroenterol.* 2014;20:6024–6030. doi: 10.3748/wjg.v20.i20.6024.
35. Toner BB, Garfinkel PE, Jeejeebhoy KN. Psychological factors in irritable bowel syndrome. *Can J Psychiatry.* 1990;35:158–161. doi: 10.1177/070674379003500210.
36. Singh P, Agnihotri A, Pathak MK, et al. Psychiatric, somatic and other functional gastrointestinal disorders in patients with irritable bowel syndrome at a tertiary care center. *J Neurogastroenterol Motil.* 2012;18:324–331. doi: 10.5056/jnm.2012.18.3.324.
37. Mayer EA, Craske M, Naliboff BD. Depression, anxiety and the gastrointestinal system. *J Clin Psychiatry.* 2001;62(suppl 8):28–36. discussion 37.
38. Kabra N, Nadkarni A. Prevalence of depression and anxiety in irritable bowel syndrome: a clinical based study from India. *Indian J Psychiatry.* 2013;55:77–80. doi: 10.4103/0019-5545.105520.