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Research Paper

Gender Differences in Automatic Negative Thoughts, Anxiety Depression and Quality of Life Among Patient with Irritable Bowel Syndrome

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ABSTRACT

The present study aimed to assess the gender differences in Automatic Negative thoughts, Anxiety, Depression, and Quality of Life among Patients with Irritable Bowel Syndrome. The study was descriptive in nature. The data was collected from civil hospital Bhiwani, Haryana. The sample size of the study was 60 participants with irritable bowel syndrome, among them 30 were male and 30 females under the age range of 18 – 35 years selected through the purposive sampling technique. The data were obtained by using the DASS scale by (Lovibond & Lovibond 1995), quality of life scale WHOQOL-BREF by (World Health Organization in 1996) Automatic Thought Questionnaire 1980by (Hollon& Kendall, 1980). The study found that the highest percentage of individuals with irritable bowel syndrome fall in the severe level of depression while as in anxiety, the majority of the respondents fall in extremely severe level. Further, anxiety was found negatively and insignificantly correlated with quality of life among individuals with irritable bowel syndrome whereas depression was found significant and negatively correlated with quality of life. No significant difference was found between male and female individuals with irritable bowel syndrome in anxiety, depression, quality of life, and automatic negative thought. This research could be helpful for doctors, psychiatrists, counsellors to provide the treatment and interventions that would facilitate better the quality of life among individuals with irritable bowel syndrome.

Keywords: *Automatic Negative thoughts, Anxiety, Depression, Quality of Life, Irritable Bowel Syndrome*

Irritable bowel syndrome (IBS) is one of the most common disorder seen at gastroenterology clinics. It's a chronic functional disorder characterized by abdominal pain or discomfort associated with disordered defecation, constipation (IBS-C), diarrhoea (IBS-D), or mixed symptoms of constipation or diarrhoea (IBS-M) (Longstreth et al., 2006). The definition of IBS has been evolving over the years in order to integrate new information that has been developing about this complex disorder. According to Rome III diagnostic criteria, onset of symptoms should be at least six months before the patient is

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diagnosed, abdominal pain or discomfort should be present at **least three days per month for 3 months** and should be associated with two or more of the following symptoms-improvement with defecation, onset associated with a change in stool frequency and onset associated with a change in stool form.

The American College of Gastroenterology (ACG) guidelines emphasizes on clinically oriented approach and defines IBS as lower abdominal pain, discomfort with disordered defecation (Brandt et al., 2009). The diagnostic evaluation of patients with IBS can be very challenging. It is generally agreed that the initial diagnosis of IBS can be fulfilled by symptom-based diagnostic criteria such as Rome III, it's important to exclude organic causes of symptoms compatible with IBS, to avoid unnecessary and costly testing; the diagnosis of IBS should not be made simply by excluding organic disorders. Emphasis is placed on identifying a symptom complex compatible with IBS and using prudent, although not exhaustive, testing to make a positive diagnosis.

IBS is complex in nature due to its incompletely defined aetiology and various pathogeneses, like abnormal motility, inflammation, abnormalities of autonomic activity, and central nervous system modulation. Besides these physiological factors, psychological factors also play a vital role in irritable bowel syndrome (Almay & Tulin, 1947).

The path physiology of IBS is not completely understandable; no physiologic mechanism unique to IBS has been identified. Evidence supports that bio psychosocial disorder resulting from an interaction among number of factors i.e., visceral hyperalgesia, genetic and environmental factors, inflammation, gut motility, and psychological factors. (Drossman, Camilleri, Mayer, & Whitehead, 2002). Genetic factors, chronic stress and enteric infections are few of the predispositions to develop irritable bowel syndrome. Deregulations in the brain gut axis, referred to as enteric nervous system (ENS), have been established as a cause of IBS.

Evidence exists for a diagnostic and treatment approach based on the predominant severe symptoms, and associated with psychosocial features; various studies are needed to understand the mechanism to develop effective treatments.

REVIEW OF LITERATURE

The role of anxiety and depression in the irritable bowel syndrome

The role of anxiety and depression in irritable bowel syndrome was examined a study conducted to understand the role of anxiety and depression in irritable bowel syndrome depending upon the gender. The results suggests that the number of anxiety patients was higher with the patients who diagnosed with irritable bowel syndrome in comparison to the patients with inflammatory bowel disease and the comparable level of psychiatric disorder among parents of probands were also found in this. (Blanchard, Scharff, Schwarz, Suls, & Barlow, 1983).

Relationship between Depression and Irritable Bowel syndrome

A study was conducted on prevalence rate of irritable bowel syndrome in patients who experience major depressive disorder. So, the results of the study suggested that patients of major depressive disorder with irritable bowel syndrome had higher probability of having a personal and family history of bowel disease, back pain, weakness, and heart bum and noctumal bowel movements in comparison to patients of major depressive disorder without

irritable bowel syndrome. It can be stated that IBS is very common in patients seeking treatment for major depressive disorder. (Masand, et al., 1995).

Relationship between IBS, Anxiety and Depression

According to Lydiard R. Bruce (2001) the study on the link of Irritable bowel syndrome, Anxiety and Depression depicts the higher level of prevalence rate of psychiatric disorders in patients with irritable bowel syndrome. While few than half of individuals with IBS seeks treatment and of those who do 50%to 90% have psychiatric disorders such as panic disorder, generalized anxiety disorder, social phobia, and major depression automatic negative thoughts, poor quality of life. Both physiologic and psychosocial variables occur to play an important role in the development and also the maintain of irritable bowel syndrome.

Quality of life and irritable bowel syndrome (IBS)

According to Monnikes, Hubert Md (Journal of Clinical Gastroenterology, August 2011) IBS has a great impact on an individual's functioning and quality of life. The general health status of young as well as adult individuals with irritable bowel syndrome is generally poorer than that the general population. It reveals that the patients with irritable bowel syndrome seem to have poor health related quality of life than patients with certain other conditions. The individuals who show their therapeutic response to therapy for irritable bowel syndrome have an improvement in their health-related quality of life. In addition to this careful consideration of factors such as sexual functioning and psychological conditions and physical health may help to optimize long term outcomes.

Porcelli ET. al. (1999) examined the relationship between alexithymia and functional gastrointestinal disorder (FGIDs) in a group of 116 irritable bowel syndrome (IBS) patient and a group of 112 healthy Ss. The Ss completed the 20-item Toronto Alexithymia Scale and the Hospital Anxiety and Depression Scale. The FGID group was significantly more alexithymia than the IBS group, and the 2 gastrointestinal groups were more alexithymia than the normal healthy group. These differences remained even after controlling for the influences of education, gender, anxiety, depression and gastrointestinal symptoms. The finding of a high rate of alexithymia (66%) in the group of FGID patients is consistent with the propensity of these patients to somatization and to high levels of poorly differentiated psychological distress.

METHODS

The aim of the study is to explore the relationship between anxiety, depression, quality of life and an automatic negative thought among people with in irritable bowel syndrome. The second aim of the study is to explore the gender differences in automatic negative thoughts, anxiety, depression and quality of life among patient with irritable bowel syndrome, and a total of 60 (n1=30 male with irritable bowel syndrome and n2= 30 female) with irritable bowel syndrome) Patients within the age range of 18 – 35 years with formal diagnosis of irritable bowel syndrome with duration of illness 3 month was taken. Sample was taken from the Department of Gastro center in Civil Hospital Bhiwani Haryana, India. Purposive sampling strategy (non-probability sampling technique) was used.

Inclusive -Individuals taking consent to be the part of samples for the study. Adult with IBS irrespective of Gender. Individuals with the age range 18 years to 35 years, education level of 12th STD cleared. Sample taken according to ICD-10 criteria of diagnosis.

Exclusive- Individuals below the minimum education level of 12th Std. Individuals not with the age range between the ages of 18 years to 35 years. Individuals not falling within the diagnostic criteria of ICD-10. Individuals not taking consent to be the part of samples for the study. Excluding the patients with any kind of physical illness.

Tool Used

DASS 21	Lovibond and Lovibond in 1995	21 items	Cronbach alpha value 0.81 to 0.89
WHOQOL-BREF (Quality of life)	WHO in 1996	26 items in 4 domains	
Automatic thought Questionnaire	Hollon and Kendall, 1980	30 items	alpha coefficient of 0.97

Procedure

After the selection of the participants through the method of purposive sampling from the psychiatric hospital setting, each participant has given an elaborate explanation about the objective, procedure and expected outcome of the study.

The participants were asked to sign an informed consent form, declaring their voluntary participation in the study. Any participant who is unable to consent to the study procedure was dropped out. Clinical interview was conducted on the selected participants and their socio demographic profile and brief case history was taken.

Rapport Formation: The researcher was visited Civil Hospital Bhiwani Haryana to establish a friendly relationship with the participants. All the participants were informed that their participation in the present study is voluntary and they may quit the present study any time.

Scoring and Data Analysis

After collection of information related to depression, anxiety stress scale, and quality of life given by WHOQOL BREF, and automatic negative thought scale and socio-demographic data sheet, the researcher has entered all the data item wise in excel sheet. Appropriate test statistics was used to analyse the data with the aid of SPSS 20(statistical package for social science20 version).

RESULTS

Data is not meaningful unless analysis and discussions were made. The analysis and discussion of results represents the function of deductive and inductive logic to the research process. Data analysis is most essential and critical step in research work. It means, in order to study the classify material in order to determine inherent facts. To quote F.N. Kerlinger "data analysis means ordering, categorizing, manipulating and summarizing of data to get answer to research questions". Presentation of results and discussion of the data follows the sequences given below:

The present study was undertaken with the purpose to conduct a study of gender Differences in Automatic Negative Thoughts, Anxiety, Depression and Quality of life among Patient with Irritable Bowel Syndrome. The data pertaining to Automatic Negative Thoughts, Anxiety, Depression and Quality of life were collected from 60Patients with irritable bowel syndrome, among them, 30 were male and 30females on gender distribution. In order to screen the data for meaningful purpose and to test the hypotheses, the data was analysed

with the help of various statistical techniques. Two types of analysis were carried out for this purposei.e., descriptive and inferential analysis.

Description of the scores presented in terms of the frequency distribution, mean, median, mode, S.D. for inferential purpose.

To find out the relationship between Anxiety, Depression, Quality of life and automatic negative thoughts among people with irritable Bowel Syndrome, Pearson's Product Moment correlation technique was employed;

To find out the differences in anxiety, Depression, Quality of life and Automatic Negative thought among individuals with irritable bowel syndrome on the basis of gender and socio-economic status, t-test and ANOVA has been applied.

Table 1: Summary of correlation between anxiety, depression and Quality of Life among individuals with irritable bowel syndrome

Independent variables ↓			**Dependent variable**		**n**	**r**	**P- Value**
			Quality of Life				
Variables	Mean	SD	Mean	SD	60	-.201	
Anxiety	11.75	1.525	59.63	22.128			.123
Depression	10.85	1.686			6 0	-.304*	.018

The above table 1 shows that the coefficients of correlation between anxiety, depression and quality of life among individuals with irritable bowel syndrome. The table 5 shows that anxiety was negatively and insignificantly correlated with quality of life among individuals with irritable bowel syndrome (-.201), whereas depression is also significantly and negatively correlated with quality of life (r=-.304*) at 0.05 level at significance**.**

Table 2: Summary of correlation between anxiety, depression and Automatic negative thought among individuals with irritable bowel syndrome.

Independent variables ↓			**Dependent variable**		**n**	**r**	**P-Value**
			Automatic negative thought				
Variables	Mean	SD	Mean	SD	60	-.006	.961
Anxiety	11.75	1.525	2.48	1.308			
Depression	10.85	1.686			60	-.159	.226

The table 2 shows that the coefficients of correlation between anxiety, depression and automatic negative thought among individuals with irritable bowel syndrome. The table 6 shows that anxiety was insignificantly and negatively correlated with an automatic negative thought (r=-.006) at 0.05 level at significance. Similarly, depression was insignificantly and negatively correlated with an automatic negative thought (r=-.159) at 0.05 level at significance.

Table3: Summary of t-test between males and females on Anxiety, Depression, Quality of life and Automatic negative thought among individuals with irritable bowel syndrome

Variable	Groups	N	Mean	SD	DF	t-value
Anxiety	Male	30	11.93	1.530	58	.930
	Female	30	11.57	1.524		
Depression	Male	30	11.00	1.819	58	.686
	Female	30	10.70	1.557		
Quality of Life	Male	30	61.27	23.666	58	.568
	Female	30	58.00	20.751		
Automatic Negative Thought	Male	30	2.47	1.279	58	-.098
	Female	30	2.50	1.358		

The table 3 shows the mean difference between male and female scores on anxiety, depression, quality of life and automatic negative thought among individuals with irritable bowel syndrome. However, it has been observed from the above table that there is no significant difference between male and female individuals with irritable bowel syndrome in anxiety. It refers that the means scores of males (mean = 11.93) and female (mean = 11.57) didn't differ significantly. Similarly, it has been observed that there is no significant difference between male and female individuals with irritable bowel syndrome in depression. The mean scores of both genders are same as the mean score of males are 11.00 and females are 10.70 respectively.

Moreover, in quality of life, there is also no significant difference between male and female individuals with irritable bowel syndrome. Male and female participants have shown same quality of life as the mean score of males are 61.27 whereas the mean score of femalesis 58.00. This also indicates that there exists no difference in quality of life among individuals with irritable bowel syndrome. In addition, in automatic negative thought, there exists no significant difference between male and female individuals with irritable bowel syndrome. There is also no significant mean difference between these groups.

Table 4: Summary of one-way ANOVA in depression, anxiety, quality of life and automatic negative thought among individuals with irritable bowel syndrome in relation of socio-economic status.

Depression	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	8.380	3	2.793	.982	.408
Within Groups	159.270	56	2.844		
Total	167.650	59			
Anxiety	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.897	3	1.299	.546	.653
Within Groups	133.353	56	2.381		
Total	137.250	59			
Quality of Life	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2320.809	3	773.603	1.631	.193
Within Groups	26569.124	56	474.449		
Total	28889.933	59			
Automatic negative thought pattern	Sum of Squares	Df	Mean Square	F	Sig.

Between Groups	3.815	3	1.272	.733	.537
Within Groups	97.168	56	1.735		
Total	100.983	59			

An examination of the Table 4 depicts that depression, anxiety, quality of life and automatic negative thought among individuals with irritable bowel syndrome in relation of socio-economic status. In depression, there is no significant difference among high, average and low socio-economic status individuals as f-value came out to be .982 and p-value is .408 which is insignificant at 0.05 level of significance. Similarly, on anxiety, no significant difference was found among high, average and low socio-economic status individuals as f-value came out to be .546 and p-value is .653 which is insignificant at 0.05 level of significance.

Furthermore, on quality of life, no significant difference was found among high, average and low socio-economic status individuals as f-value came out to be 1.631 and p-value is .193 which is insignificant at 0.05 level of significance. Additionally, on automatic negative thought, no significant difference was found among high, average and low socio-economic status individuals as f-value came out to be .733 and p-value is .537 which is insignificant at 0.05 level of significance.

CONCLUSION

The results found that highest percentage of the individuals with irritable bowel syndrome fall in severe level followed by moderate, mild, severe and extremely severe level of depression respectively. In anxiety, majority of the respondents fall in extremely severe level followed by severe, moderate, mild, moderate and normal level respectively.

The finding of the study found that the highest percentage of the individuals with irritable bowel syndrome fall in average level of automatic negative thought. The highest percentage of the individuals with irritable bowel syndrome falls in below average level of quality of life. Anxiety was found negatively and insignificantly correlated with quality of life among individuals with irritable bowel syndrome (r = -.201), whereas depression was found significant and negatively correlated with quality of life (r=-.304) at 0.05 level at significance.

Anxiety was found insignificantly and negatively correlated with an automatic negative thought (r= -.006) whereas depression was also found insignificant and negatively correlated with an automatic negative thought (r= -.159) at 0.05 level at significance. No significant difference was found between male and female individuals with irritable bowel syndrome in anxiety, depression, quality of life and automatic negative thought.

On the basis of Analysis of variance, no difference was found among high, middle and low socio-economic status individuals with irritable bowel syndrome in anxiety, depression, quality of life and automatic negative thought.

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Conflict of Interest

The author(s) declared no conflict of interest.

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