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Assessment of Quality of life in irritable bowel syndrome patients and detecting the factors that are associated with QoL in Thi-Qar- Iraq

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ABSTRACT

Background: Patients with irritable bowel syndrome have significantly worse quality of life (QOL) in contrast with the predominant community, and QOL is a typical measure of outcomes in treatment trials, cost effectiveness analysis, and clinical practice. The goals of this research were to: employing a 34-item self-report questionnaire, we analyzed QOL in IBS subtypes in a group of Iraqi patients, and identify the elements that are inversely related to quality of life in this patient population.

Methods: Between February and September of 2022, a cross-sectional research was conducted on 80 patients with IBS who were all aged 18 or older, with a mean (SD) age of 38.89 (13.16) years. Laboratory tests, a physical examination, and the patient's history were used to identify gastrointestinal disorders. Rome-3 criteria were used to divide sufferers into three groups: those that are irritable bowel syndrome with constipation (IBS-C), those that are irritable bowel syndrome with diarrhea (IBS-D), and those that are irritable bowel syndrome with mixed symptoms (IBS-M). QOL is measured using a self-report questionnaire, anxiety with the (Stait-trait anxiety assessment), and depression with the Beck depression inventory.

Results: There was no significant difference between the mixed subtype of IBS (2.68± 0.29), the constipation predominant subtype (2.83± 0.23), and the diarrhea predominant subtype (2.71± 0.27) in terms of mean QOL ratings (P value: 0.05). Severity of anxiety symptoms was inversely associated with QOL. There was a negative correlation between age [Standardized beta: 0.138, (95% confidence interval: -1.006, -4.518) and QOL scores, [Standardized beta: 0.753, (95% confidence interval: 0.365, 0.557)]. The probability is less than zero .05]

Conclusion: QOL was not difference between IBS subtyps and the other it was independently associated with Anxiety and gender while the ages, depression symptom, IBS subtypes, geographic distribution, educational, and marital status didn't have any relate to QOL.

Keywords: *Anxiety, Irritable bowel syndrome, gender, Quality of life*

BACKGROUND

(IBS) Irritable bowel syndrome could be define as a collection of complaints that happened coincidentally, included repeat abdominal pain also change in the bowel movements, may be diarrhea, constipationn or both without an underlying pathology structural. IBS is a frequent condition that affects 9-23% of the general society with considerable impact on quality of life (1). the Rome-3 criteria was applied to asses IBS and its subtypes that are recognized IBS into three difference subtypes according to the dominant kind of bowel usual way of behaving (2). Quality of life (QOL) is a standard scale of outcomes in clinical trials, cost effective analysis and practice of clinical, Patients with IBS experience significance impairments in quality of life (QOL) comparable to general population (3,4) Irritable bowel syndrome sufferers have health-related qualms of life (HRQOL) that is considerably worst than patients with permanent stage of chronic kidney disease or hyperglycemia or hypoglycemia (5) according to the finded, a recent guideline suggests routine HRQOL screening in patients with IBS, and recommending initiating treatments when the symptoms of IBS diminish functionalize prominence and reduce overalllHRQOL (6,7) . proportional to the results of prior studies some importance variable which appeared to effect QOL in IBS patients (like a geographic distribute, ages, gender, anxiety symptoms and depression educational status, marital status, , and IBS subtype) were chosen and appraised in this study (8,9). Eventually: our survey was planned to: 1) assess QOL in subtypes of IBS in cases of patients of Iraqi uses thirty four item self-report questionnaire , 2) determine the factor that are inversely associated with QOL in these patients .

PATIENTS AND METHODS

Eighty adults (aged 18 and over) with IBS were included in a cross-sectional study that ran from February to September 2022. The average age of these participants was 38.89 (13.16) years. Digestive problems were diagnosed with the use of diagnostic tests, a thorough physical examination, and the patient's history.

Patients who did not meet the following criteria were not included in the analysis: aggravation of The lower part of the alimentary channel symptoms after consuming milk or milk products; abnormal laboratory (hematological and biochemical profiles); history of abdominal trauma or surgery, presence of recognized organic gastrointestinal illnesses; Alarm symptoms include sudden start of symptoms at age 50 or over, weight loss, nightly diarrhea, anemia, swallowing difficulties, a diagnosis of celiac disease, hospitalization for the examination of stomach discomfort and hematochezia.

In the absence of warning symptoms, the Rome-3 criteria was applied to asses IBS and its subtypes (10). Irritable Bowel Syndrome (IBS) with constipation (IBS-C) subtype is detected if the stool is coarse or laborious and present in more than 26% of bowel movements and doughy or soft and present in not more than 26% of bowel movements during the previous three months. If the stool is coarse or arduous and present in not more than 26% of bowel movements and doughy or humdrum and present in further than 26% of bowel movements for the prior three months, Irritable Bowel Syndrome (IBS) with the diarrheal (IBS-D) subtype is recognized. If the stool is coarse or arduous and present in further than 26% of bowel movements and doughy or humdrum and present in in further than 26% of bowel movements for the prior three months, The Mixed Irritable Bowel Syndrome (IBS) M subtype is recognized (10). On a Bristol form scale, patients rated the stool's consistency, Stools that were firm or rough were compared to nuts (ambitious to move onward) or sausages (round but knobbly). Bowel movements that were either unconstrained (soft) or humdrum (no solid particles present) were classified as these (11).

Questionnaires
1-Health related quality of life questionnaire
The Irritable Bowel Syndrome Quality of Life Scale ((IBS-QOL)) is a self-reporting questionnaire with 34 items. Individuals with IBS may receive a precise reading on how they're doing in terms of quality of life using this tool.

Health anxiety, activity interference, body image disturbance, dysphoria, food avoidance, social reaction, sexual function, and relationship quality were the eight dimensions measured by the questionnaire. (12). The final tally was calculated by adding together the points received for each item. A greater sum score reflected a better perceived quality of life. The five-point Likert scale used to gauge the extention to which respondents agreed with each one of statement (from 0 to 4). (completely not, barely, somewhat, fairly, to a good extent, and very, very much).

2- Social characteristics

In order to categorize people, low-degree and high-degree groups were established. People having just a high school graduation or less were considered to be of low degree. People with extensive training beyond the typical academic background make up the high degree group. The participants were separated into two groups, one for married people and one for the rest of us. People who are never married, divorced, or widowed are all considered single. Both urban and rural areas were categorized. Those who, traditionally speaking, have made their homes in cities are what we mean by "urban" (in the region under study). Rural residents were defined as those who lived away from major urban centers.

3- Depression questionnaire

All participants' depression symptom presence and severity was measured using the Beck Depression Inventory 2. For adults above the age of 13, the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-4) is the diagnostic bible. This valid instrument is a twenty one item self-report questionnaire that evaluate the potent and severeness of depressive symptoms (for rapid diagnosis). patients were asked to reflect on how each phrase related to their moods throughout the preceding two weeks. On every item, the minimum and maximum possible scores are separated by 3. To give you an idea of how the scale works, consider that a score of 0 means that the statement is completely irrelevant to your circumstance, while a score of 1 means that it is relevant to you in some manner.

I find that number 2 often or substantially applicable to my situation. The severity of depressive symptoms may be anticipated by the total score, which can range from 0 to 63. "Frequently" or "frequently," I feel the impacts of 3. Depression levels range from minimal (score of 0-13) to moderate (score of 14-19) to severe (score of 20-28) to utterly hopeless (score of 62-63) to be determined by the patient's response to the questionnaire. (14).

4- Anxiety questionnaire

Those who were anxious and the extent to which they felt anxious were identified using the Spielberger State/Trait Anxiety Inventory (15). This self-report instrument measures both state and trait anxiety with a total of 40 questions and two separate score systems. One's trait anxiety is a reflection of their innate propensity to worry, whereas one's state anxiety is a reflection of their immediate experience during the testing period. Items can be rated on a scale from 0 to 4, with 0 indicating never or rarely and 4 indicating always or nearly always. The T-anxiety scale reads: $0 =$ almost never, $1 =$ sometimes, $2 =$ often, and $3 =$ almost always. The S-anxiety scale reads: $0 =$ not at all, $1 =$ somewhat, $2 =$ moderately, and $3 =$ very much. All state and trait anxiety totals were calculated by summing the scores from each item. If the total score was higher, it meant that the anxiousness was severe. For this purpose, we averaged people's scores on tests of both state and trait anxiety and defined mild anxiety mild anxiety as a score of 20–31, moderate anxiety as a score of 32–53, and severe anxiety as a score of 54 or higher (15). Therefore, in this investigation, the anxiety scale was between 40 and 160. Before filling out the questionnaires independently, participants were able to discuss the issues with a trained psychiatrist. Participants' self-report questionnaires were reviewed by a qualified psychiatrist to ensure accuracy.

Statistical data analysis

If you want to be sure your continuous variables are normally distributed, you may apply the Kolmogorov-Smirnov test. Frequency distributions, averages, and standard deviations

were only some of the descriptive and inferential statistics used to examine the data. We used correlational statistics to dig deeper into the data and find out more about the links between the different factors. We utilized the chi-squared test to look at how different forms of IBS correlate with age, race/ethnicity, marital status, and country of residence. Age, gender, IBS subtype, education, marital status, geographic region, anxiety, and depressive symptoms were all tested in a multivariate linear regression analysis, with standardized beta used to determine the significance of the results. We used SPSS 24.0 to conduct the statistical analysis. We considered a difference between the dependent and independent variables to be statistically significant if and only if the corresponding P value was less than 0.05.

TABLE 1: Comparisonn of demographicc and psychosociall characteristics between irritable bowel subtypes

| | | Irritable Bowel Syndrome sub | types | | p-value |
		IBS-C N=17	IBS-D N=23	IBS-M N=40	
Age ±year		40.41 ±14.06	35.73 ± 11.23	40.55 ±14.20	0.12
Gender	Male	1	8	14	0.13
	Female	16	15	26	
Educational status	High degree	11	11	19	0.63
	Low degree	6	12	21	
Marital status	Single	5	5	10	0.24
	Married	12	18	30	
Geographic distribution	Urban	6	14	22	0.08
	Rural	11	9	18	
QOL		2.83 ±.23	2.71 ±0.27	2.68 ±.29	0.31
Anxiety		0.95 ±.15	0.905 ± .17	0.86 ±.177	0.13
Depression		2.274 ±.028	2.27 ±.022	2.28 ±.019	0.21

TABLE 2: The relationship between quality of life and demographic and psychosocial characteristics in the study population

| | Standardized Beta | 95% Confidence Interval for beta | | p-value |
		Lower	Upper	
Age	0.056	-.002-	.004	0.4
Gender	0.753	0.365	0.557	0.001
Educational status	0.032	-.066-	0.114	0.71
Marital status	-0.089-	-0.152-	0.027	0.21
Geographic distribution	0.005	-.069-	0.086	0.94
QOL	-0.093-	-.089-	0.031	0.3
Anxiety	-0.181-	-0.683-	-.056-	0.028
Depression	0.138	-1.006-	4.518	0.22

RESULTS

Overall quality of life (QOL), anxiety, and depressive symptom ratings all followed normal distributions (Z = 1.5, 1.2, and 1.2, respectively; all P values > 0.05). Table 1 shows statistically significant differences across IBS subtypes in terms of demographics, quality of life, anxiety and depression symptoms, level of education, marital status, and location. Table 2 displays the correlations between quality of life ratings and demographic variables such as age, gender, level of education, marital status, location, presence or absence of anxiety and depression symptoms, and irritable bowel syndrome subtype.

DISCUSSION

According to the findings of this analysis, there were no significant variations in health-related QOL or bowel-habit subtypes among those with IBS. This finding is in line with the findings of earlier studies that evaluated quality of life using a variety of questionnaires tailored to individual diseases (16,17). Other research has shown that patients with IBS-D have a higher IBS-QOL than those with IBS-C or IBS-M (18.19), and that patients with IBS-D and IBS-M have a lower IBS-QOL than those with IBS-C. (20).

No significant differences were seen in the mean ratings of depression and anxiety symptoms across IBS subtypes. This accords with the findings of prior research, which evaluated IBS patients' anxiety and sadness using a variety of questionnaires. (18,21). However, Elsa M. Eriksson presented Using the "Psychosocial Rating Scale," we found that patients with C-IBS had higher levels of psychological discomfort than those with D-IBS. (18), At the same time, Muscatello et al. demonstrated, using the Anxiety Status Index and the Hamilton Sadness Rating Scale, that IBS-C patients reported much greater levels of anxiety and depression than IBS-D patients(19).

This discrepancy might be attributed to the cultural variety of the sample groups as well as the questionnaire's open-ended character. The aforementioned discrepancies in the results of research examining QOL, anxiety, and depression symptoms amongst IBS subtypes may have a common cause. It's important to bear in mind that subtypes of IBS might transition between one other during the course of observation, which can be lengthy or brief. Because of this, it is possible that differences in the comparison of these characteristics across IBS subtypes will appear in the findings of cross-sectional investigations. Anxiety and gender were shown to have a significant effect on QOL, but age, depressive symptoms, IBS subtypes, regional distribution, level of education, and marital status had no role. Jerndal et al. hypothesized that worry was a major contributor to the decline in QOL experienced by IBS patients (22), Simrén et al., and Kim et al., found that quality-of-life (QOL) in IBS is influenced by gender. (23, 24) however Kanasawa et al. discovered that QOL was not connected with gender, IBS subtypes, level of education, or marital status (25).

CONCLUSIONS

As mention The cross sectional study conducted on a sample from Iraqi IBS patients which were referred to a secondary health care center showed that : 1) the mean QOL, anxiety and depression symptommscores were not difference among subtypes. 2)In addition, QOL was inversely correlated with anxiety and gender ; As a result finally Its seems reasonable to manage anxiety symptom in IBS patients to increase their QOL and application of other QOL questionnaire design for male and female and detect each one are suffered from low QOL.

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