

Quality of Life among Adolescent Patients with Irritable Bowel Syndrome

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Abstract

Aims: The study aims to assess the quality of life for adolescent patients with irritable bowel syndrome in the city of Baghdad, and determine the relationship between quality of life level and demographic characteristics for adolescent patients with irritable bowel syndrome.

Patients and Methods: A descriptive study, using the assessment approach was conducted on a purposive "non-probability" sample of (100) patients (males and females) who are attending the Centre of diseases of the digestive system and liver / Medical City. A questionnaire was adapted from the World Health Organization quality of life questionnaire (1998) for the purpose of the study. It is comprised of (3) parts. The part I includes the demographic characteristics of the study sample (such as age, sex, marital status, educational level and employment status) and the part II includes the (nine) questions related to the medical information of a sample of the study, and Part III includes questions related to the quality of life of adolescent patients who suffer from irritable bowel syndrome. Data were collected through a self-administration method, during the period of the first of July to the sixteenth of August, 2012. Data were analyzed through the application of the descriptive statistical data analysis approach (frequency, percentage, mean of scores) and inferential statistical data analysis approach (Pearson correlation coefficient and chi-square).

Results: The findings of the study indicated that quality of life was affected in environment domain, social domain and psychological domain and that age, gender, marital status, and employment status had significant relationship with quality of life domains.

Conclusion: The study concluded that environment domain, social domain and psychological domain of quality of life were affected by the disease.

Keywords: Quality of Life, Adolescence, Irritable Bowel Syndrome, Bloating

INTRODUCTION

Irritable bowel syndrome (IBS) is a symptom-based diagnosis characterized by chronic abdominal pain, discomfort, bloating, and alteration of bowel habits. As a functional bowel disorder, IBS has no known organic cause [1]. Diarrhea or constipation may predominate, or they may alternate. Historically a diagnosis of exclusion, a diagnosis of IBS can now be made on the basis of symptoms alone, in the absence of alarm features such as age of onset greater than 50 years, weight loss, gross hematochezia, systemic signs of infection or colitis, or family history of inflammatory bowel disease. Onset of IBS is more likely to occur

after an infection, a stressful life event, or onset of maturity [2,3].

IBS can occur at any age, but it often begins in the teen years or early adulthood. It is twice as common in women as in men.

About 1 in 6 people in the United States of America have symptoms of IBS. It is the most common intestinal problem that causes patients to be referred to gastroenterologist [4].

There's no cure for IBS, but the symptoms can be relieved by changing diet and lifestyle. Sometimes medication can help [5].

IBS has no effect on life expectancy. However, it is a source of chronic pain, fatigue, and other symptoms

and contributes to work absenteeism. The high prevalence of IBS and significant effects on quality of life make IBS a disease with a high social cost ^[6].

Living with irritable bowel syndrome presents daily challenges. IBS may be painful or embarrassing and can seriously affect the quality of life ^[5].

In addition, several studies have suggested that the impact of IBS on health-related quality of life is equally as significant as congestive heart failure and dialysis-dependent renal failure; patients with IBS have higher rates of absenteeism from work and school. In one U.S.-based study, the direct healthcare costs for patients with IBS were estimated at \$8 billion, while indirect costs were estimated at \$25 billion per year, such studies overlook the significant societal impact of IBS in terms of physical and emotional function, interpersonal relationships and psychological distress ^[7].

Health-related quality of life has diminished over recent years. IBS and all of its subgroups have a significant negative impact on health related quality of life, such as sleep disruptions, mood, diet, intimacy, work activities, and leisure activities. Decrements in health related quality of life attributable to IBS have been reported to be similar to other major illnesses, such as hypertension, diabetes, and kidney disease ^[8,9]. World Health Organization (WHO) defines Quality of Life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment ^[5].

Nurses in a variety of clinical settings are often involved in educating and managing patients with irritable bowel syndrome, the nurses' perceptions of the effect of irritable bowel syndrome on the patient's lifestyle and the severity of symptoms were compared to those of irritable bowel syndrome patients. There was close agreement between the nurses and the patients with regard to the impact of irritable bowel syndrome. With increased public attention on irritable bowel syndrome as a common problem affecting women, there is a need for nurses working in a variety of settings to have increased knowledge regarding the syndrome and improving the quality of life for those patients ^[10]. It is for these reasons that the researcher has prepared this research.

PATIENTS AND METHODS

A descriptive approach is carried out to achieve the purpose of the study. The study is conducted at Centre of diseases of the digestive system and liver/ Medical City.

A purposive "non-probability" sample of (100) patients (males and females) who are attending to Centre of diseases of the digestive system and liver / Medical City, the sample of study was selected according to the following criteria:-

1. Age of sample in adolescent stage (11 - 18 years).
2. Diagnosis of Patients with IBS according (Rome Criteria for Irritable Bowel Syndrome Diagnosis).
3. Both sexes.

The data were collected through a self- administration method by using questionnaire was adapted from the World Health Organization quality of life questionnaire (1998) for the purpose of the study, includes three parts: ^[4]

Part I: includes the demographic characteristics of the study sample (such as age, sex, marital status, educational level and employment status).

Part II: includes the (nine) questions related to the medical information of a sample of the study.

Part III: includes questions related to the domains of quality of life of adolescent patients who suffer from irritable bowel syndrome.

The domains of quality of life obtained from (WHO) which it, with the aid of (15) collaborating centres around the world, has therefore developed instrument for measuring quality of life (the WHOQOL-100), that can be used in a variety of cultural settings whilst allowing the results from different populations and countries to be compared. These instruments have many uses, including use in medical practice, research, audit, and in policy making. The structure of the WHOQOL-100 reflects the issues that a group of scientific experts as well as lay people in each of the field centres felt were important to quality of life. The six broad domains of quality of life, and the twenty-four facets covered are shown below.

Domain	Number of facets incorporated within domains
1. Physical Health	3
2. Psychological	5
3. Level of Independence	4
4. Social Relations	3
5. Environment	8
6.Spirituality/Religion/Personal beliefs	1

The questionnaire was measured on a Likert type scale of (always, sometimes and never) and it was rated as (3) for always, (2) for sometimes, and (1) for never, data collection from 1st, Jul. to 16th, Aug., 2012.

A panel of (14) experts has reviewed a questionnaire for its content validity. A pilot study was carried out for the period 3rd to 28th, Jun., 2012, to determine the

reliability of the questionnaire through the use of (test – retest). The reliability coefficient for the questionnaire was (0.84).

Appropriate statistical approach is used that includes (frequency, percentage, mean of scores), and inferential data analysis approach such as (chi-square). The data were analyzed through the use of Statistical Package of Social Sciences (SPSS) version 16.

RESULTS

Table(1) shows that the distribution of age indicated that the majority of sample's ages were between 14 and 18 years old who were accounted for (67 %), more than half (52 %) were male. (48%) of adolescent patients were single and (47%) were married. (50%) of adolescent patients were Intermediate School graduates. (50%) of adolescent patients were Employed and (68%) of adolescent patients had insufficient income.

Table 1. Distribution of sample by their demographic characteristics

Variables	No.	%
Age (years)		
Early Adolescence (11 – 13)	33	33
Middle Adolescence (14 – 18)	67	67
Total	100	100
Gender	No.	%
Male	52	52
Female	48	48
Total	100	100
Marital status	No.	%
Single	48	48
Married	47	47
Widowed	5	5
Total	100	100
Level of education	No.	%
Read & Write	25	25

Table 3. Distribution of the study sample according to clinical characteristic

Variables	Yes		No	
	No.	%	No.	%
Cigarette smoking	75	75	25	25
Drinking Alcohol	4	4	96	96
Checking doctor about disease during the past month	61	61	39	39
Dealt with anti-spasm drugs	65	65	35	35
Using an alternative treatment for the treatment of disease (Non-drugs) such as acupuncture or herbal medicine	4	4	96	96
Family history	23	23	77	77
Beginning of the disease after acute gastrointestinal inflammation	72	72	28	28

Table (4) indicates that the higher percentage in environment domain (44.5%) was accounted for always.

Table 4. Distribution of quality of life for adolescent patients with irritable bowel syndrome according to the level of effect

Domains \ Level of effect	Always (3)		Sometimes (2)		Never (1)	
	No.	%	No.	%	No.	%
Physical health	109	27.25	173	43.25	118	29.5
Psychological	445	40.45	429	39	226	20.54
Level of Independence	215	35.83	244	40.66	141	23.5

Primary	9	9
Intermediate	50	50
Secondary	16	16
Total	100	100
Employment status	No.	%
Student	11	11
Employee	50	50
Don't employee	39	39
Total	100	100
Income	No.	%
Sufficient	32	32
Insufficient	68	68
Total	100	100

Table (2) indicates that (53%) of sample suffer from disease for 3 to 4 months.

Table 2. Distribution of sample by duration of the disease

Duration of the disease	No.	%
1 – 2 months	28	28
3 – 4 months	53	53
5 months and more	19	19
Total	100	100

Table (3) show that (75%) of sample were smokers, and (96%) of the sample don't drink alcohol, (61%) of the sample see a doctor about a disease in the past month. Most of them (65 %) take drugs for abdomen colic,(96%) of the sample don't used alternative therapy for the treatment of disease, most of them (77 %) had no family history of disease, (72%) of the sample became ill with IBS after acute gastroenteritis .

Social relationships	306	43.71	226	32.28	167	23.85
Environment	89	44.5	69	34.5	42	21
Spirituality/Religion/Personal beliefs	147	36.75	159	39.75	94	23.5

Table (5) shows that there is high significant relationship between quality of life level and demographic characteristics for adolescent patients with irritable bowel syndrome including (level of education and employment status) at P. value ≤ 0.05 respectively, and significant relationship between quality of life level and (gender, marital status) of the sample studied at P. value ≤ 0.05 respectively, but there is no significant relationship between quality of life level and (age, income) of the sample studied at P. value ≤ 0.05 respectively.

Table 5. Relationship between quality of life level and demographic characteristics for adolescent patients with irritable bowel syndrome include (age, gender, marital status, level of education, employment status, and income)

Quality of life level Age(year)	Good		Accept		Bad		Total		χ^2 obs.	Sig.
	No.	%	No.	%	No.	%	No.	%		
Early Adolescence (11 – 13)	6	18.75	13	40.62	13	40.62	32	100	4.59	NS
Middle Adolescence (14 – 18)	20	29.41	14	20.58	34	50	68	100		
Total	26	26	27	27	47	47	100	100		
P=0.006		df =2								

Table 5. (Continued)

Quality of life level Gender		Good		Accept		Bad		Total		χ^2 obs.	Sig.
		No.	%	No.	%	No.	%	No.	%		
Male		14	26.92	20	38.46	18	34.61	52	100	8.84	S
Female		12	25	7	14.58	29	60.4	48	100		
Total		26	26	27	27	47	47	100	100		
P=0.012 df =2											
Quality of life level Marital status		Good		Accept		Bad		Total		χ^2 obs.	Sig.
		No.	%	No.	%	No.	%	No.	%		
Single		5	10.2	17	34.69	27	55.1	49	100	15.611	S
Married		21	45.6	10	21.73	15	32.6	46	100		
Widowed		1	20	1	20	3	60	5	100		
Total		27	27	28	28	45	45	100	100		
P=0.004 df = 4											
Quality of life level Level of education		Good		Accept		Bad		Total		χ^2 obs.	Sig.
		No.	%	No.	%	No.	%	No.	%		
Read & Write		2	8	9	36	14	56	25	100	34.364	HS
Primary		1	11.11	2	22.22	6	66.66	9	100		
Intermediate		11	51.56	13	25.49	27	52.94	51	100		
Secondary		13	86.66	1	6.66	1	6.66	15	100		
Total		27	27	25	25	48	48	100	100		
P=0.000 df = 6											
Quality of life level Employment status		Good		Accept		Bad		Total		χ^2 obs.	Sig.
		No.	%	No.	%	No.	%	No.	%		
Student		1	9.09	3	27.27	7	63.63	11	100	30.030	HS
Employee		24	48.97	14	28.57	11	22.44	49	100		
Don't employee		2	5	9	22.5	29	72.5	40	100		
Total		27	27	26	26	47	47	100	100		
P=0.000 df =4											
Quality of life		Good		Accept		Bad		Total		χ^2	Sig.

level Income	No.	%	No.	%	No.	%	No.	%	obs.	
Sufficient	10	31.25	9	28.12	13	40.62	32	100	0.93	NS
Insufficient	16	23.52	18	26.47	34	50	68	100		
Total	26	26	27	27	47	47	100	100		
P=0.629		df =2								

df = degree of freedom; f= frequency; %= percentage ; P= level of probability; χ^2 obs = observed chi square, ; sig. = significance; S=significance; NS= Non significance; HS= High significance

DISCUSSION

The findings of the present study showed that the majority of sample's ages were between 14 and 18 years old who accounted for (67 %). This result is similar to the results obtained from study that indicate the majority of IBS patients ages can occur at any age, but it often begins in the teen years especially in middle Adolescence (14 – 18) years old ^[11]. More than half of them were males (52%) and the remaining were females. This result is in disagreement to the results obtained from another study which indicate that IBS occur twice as common in women than men ^[12], because in Iraq female are more likely to consult private clinic than the Centre of diseases of the digestive system and liver / Medical City. Concerning the marital status (48%) of adolescent patients was single and (47%) were married. This result is in agreement with the results obtained from another study that indicate the single person may be more likely to have IBS than a married person ^[13]. Concerning their level of education, (50%) of adolescent patients were Intermediate School graduates. This result is in disagreement to the results obtained from another study that indicate most IBS patients were had a higher level of education ^[14]. Concerning the employment status, (50%) of adolescent patients were employee. This result is in disagreement to the results obtained from another study which indicate that most IBS patients were unemployed ^[14]. (68%) of adolescent patients had insufficient income. The proportion is similar in study done by Noorbala, et al. ^[14]

The finding of the present study shows that (53%) of the sample suffer from the disease for 3 to 4 months. Table (2)

The findings of table (3) show that (75%) of the sample were smokers. This result supported by another study done by Greg which indicates that the tobacco is one of the worst factors that trigger Irritable Bowel Syndrome symptoms, it is generally affects almost all parts of the digestive system ^[15], because Iraq is one of the communities in which there is a high percentage of adolescent smokers.

High percentage of the sample doesn't drink alcohol. This result is in disagreement to the results obtained from another study that indicate consumption of alcohol can worsen symptoms of IBS, alcohol is a major factor responsible for worsening of IBS

symptoms. Alcoholic drinks such as wine or beer pose a threat for IBS patients ^[16].

The prevalence of alcohol intake is lower in Iraq because the role of religion. High percentage of the sample consults a doctor about the disease in the past month. This result is in agreement to the results obtained from another study that indicate majority of the patients consults a doctor about the disease in the past month ^[13]. Most of the sample takes anti-spasm drugs. This result is in agreement to the results obtained from another study that reveals high percentage of the patients take drugs to control abdominal pain ^[10].

Majority of the sample don't use alternative therapy for the treatment of the disease. This result is in agreement to the results obtained from another study that reveals high percentage of the patients don't use alternative therapy without consult a doctor for the treatment of the disease ^[6]. Most of them had no family history of the disease. This result is in agreement to the results obtained from another study that reveals the family history for IBS risk it's not clear ^[17]. (72%) of the sample became ill with IBS after acute gastroenteritis. This result is in agreement with another study which shows that Post-infectious irritable bowel syndrome is a common disorder wherein symptoms of IBS begin after an episode of acute gastroenteritis but the reported another studies have much less percentage range between 5% and 32% ^[18].

Table (4) indicates that the level of effect (always) in environment domain have first rank (44.5%) , social relationships domain account for always in second rank (43.71%), and psychological domain occupied the third rank(40.45%) . This result disagreed with other study who concluded that social relationships domain and psychological domain of quality of life were affected in first rank by the disease ^[8].

The environmental factors such as changes of routine, emotional stress, infection and diet can trigger an attack. Research has shown that the neurotransmitter serotonin may be important in the symptoms of IBS, by altering the function of nerve cells in the bowel and causing changes in pain sensation and bowel function ^[7].

The findings of table (5) show that there is high significant relationship between quality of life level and demographic characteristics for adolescent patients

with IBS including (level of education and employment status). This result is in disagreement to the results obtained from another study which indicate that there is no relationship between quality of life level and demographic characteristics for adolescent patients with IBS including (level of education and employment status)^[14].

Also, the current study shows that there is significant relationship between quality of life level and (gender, marital status) of sample study. This result is in agreement to the results obtained from another study which indicate that there is association between marital status and levels of quality of life for patients with IBS^[13].

While, the current study shows that there is no significant relationship between quality of life level and age and income of sample study. This result is in disagreement to the results obtained from another study that reveals that there is association between quality of life level with age and income of patients with IBS^[11]. So, in conclusion the study shows that environment domain, social domain and psychological domain of quality of life were affected by the disease.

Finally, the study recommends encouraging patients with IBS to change his / her environment, increase social relations through special sessions and decrease stress in daily life activities.

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