RESEARCH ARTICLE

Prevalence, Characters and Determinants of Irritable Bowel Syndrome

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Abstract

Aims: To generate reliable estimates of the prevalence of IBS by age, sex and symptom group in Thiqar Governorate in APRIL 2022. **Justification:** Due to the high prevalence of Irritable Bowel Syndrome and between early ages, I thought that I would conduct this research to find out the reason for its spread . **Method:** This is an cross sectional analytical study to determine the prevalence of irritable bowel syndrome. **Results:** Independent sample t-test Table2 comparison of classical symptoms of IBS between males and females. 245 females suffer from nausea and 23 males, there is a statistically significant difference between males and females p=0.009. Also, 171 males have constipation, and 23, there is a statistically significant difference between males and females p=0.001. on the other hand, there is no statistically significant difference between males and females in other symptoms. demographic and clinical data for 595 participants. The mean age was 27.28 (±9.53), with height and weight 159.78 (±14.94) and 65.62 (±15.62) respectively. The majority of study participants were females 522 (83.9%), and only 73 (11.7%) were males. Around one-half have an average income 307 (49.4%). 390 (62.7%) were single. 569 (91.5%) was a non-smoker. 261 (42.0%) were working, while 243 (39.1%) students. In this study, the blood group observed was O blood group 229 (36.8%). 344 (55.3%) have irritable bowel syndrome and 531 (85.4%) don't have any chronic disease. symptoms of IBS. 280 (45.0%) state that flatulence is related to eating. Also, 222 (35.7%) and 195 (31.4%) had shortness of breath and felt incompatible bowel movements respectively. The most frequent location of IBS pain in this study was at the right of the abdomen 229 (38.4%). Around one-half have bloating 305 (49.0%). Most of them do not have pain 222 (37.3%). **Conclusion:** IBS is a complex disorder with a pathophysiology that is poorly understood. symptoms according to the limited evidence-based medicine supporting specific agents in the treatment of IBS symptomatology. The monitoring, education, and support of patients that doctors provides renders their role vital in IBS management.

Key words: IBS, ThiQar, determinants, 2022

1 | INTRODUCTION

IBS, also called spastic colitis Or nervous colon, is a chronic gastrointestinal (GI) disorder characterized by change or disturbance in the bowel habits that lead to abdominal pain and discomfort in absence of specific structural pathology. The change in bowel movements that can include diarrhea, constipation or both. IBS is a multifactorial disorder though its causes and risk factors remain unclear, but the stress is the most common case that has marked effect on sensitivity and stimulation of colon spasms in patients with IBS.

Epidemiology of IBS: IBS is prevalent in both developed and developing countries. It affected about 10-20% of people, and it occurs in all- our age group, but it is more prevalent in those under 25 years old related to effects of physiological change in adolescence period and psychological factors related to study, working and family and then modestly declines with increasing age.world-wide prevalence of IBS has been reported as 10 and 25.0%. South Africa has the lowest prevalence of 4.2% and South America has the highest prevalence of 21%. Moreover, globally the prevalence in female is 67% higher than male. In Saudi Arabia 2012 Prevalence of IBS 31.8% .

The most common symptoms of IBS Include:- diarrhea, constipation, excessive of abdominal gas, abdominal pain and discomfort with cramping which often relieve after passing stool, incomplete defecation (feeling the bowels aren't empty after defecation), feeling of sudden, urgent need to use bathroom, abdominal flatulence, persistent fatigue, nausea.The conditions that may increase risk of Irritable bowel syndrome gastroenteritis, depression, stress anxiety and others...).

IBS CLASSIFIED into three types according to bowels habit:-
IBS WITH CONSTIPATION (IBS-C)
IBS WITH DIARRHOEA (IBS-D)
IBS WITH BOTH CONSTIPATION AND DIARRHOEA (IBS-M)

Risk factors:-
-age (youngers age are more be affected than alderly due to exposure to stress and depression).
-family history of IBS.
-history of gastroenteritis.
-history of depression and anxiety.
-smoking.

2 | CAUSES

1. Dietary factors: Certain foods can increase colon irritation such as (legumes, pastries, spicyfood, citrus fruits,dairy products, some candies,caffeine).

2. strees: there is a connection between brain and gut, when someone exposure to strong emotions like depression or anxiety or stress that triggers a chemicals in brain that may cause the colon to react .

3. Infection and food poisoning: microbes that lead to infectious gastroenteritis may be in collision with immune system lead to long term change in gut.

4. Other causes: hormonal ,genetical ,response to medication affect The CNS to control digestive system.

DIAGNOSTIC TEST

IBS diagnosed by
-Assess symptoms (abdominal pain, abdominal distended, increase abdominal gases, diarrhea, constipation and weight loss).
- Review medical and family history (history of ceilac disease, colon cancer and inflammatory bowel disease , history of recent infections , diet,medicines taken and stressful associated with being the symptoms.
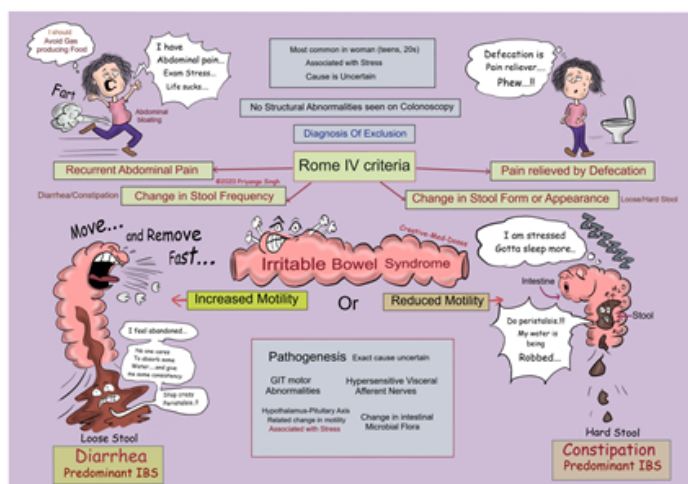-Did investigation in the form of blood test and stool test and maybe endoscopy .
-Physical examination .

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Prevention of Irritable bowel syndrome:-

-Avoid anxiety and stress.

-reduce intake of carbohydrates, sweeteners, legumes, spicy foods.

-exercising regularly. -getting adequate sleep.

Aims:

To generate reliable estimates of the prevalence of IBS by age, sex and symptom group in Thiqar Governorate in APRIL 2022.

Justification:

Due to the high prevalence of Irritable Bowel Syndrome and between early ages, I thought that I would conduct this research to find out the reason for its spread.

Method:

Type of study This is an evaluative study to determine the prevalence of irritable bowel syndrome.

Study design analytical cross sectional by online questionnaire in period from 15th OF APRIL2021 to 14th of MAY 2022.

Place in Thiqar govern ate .

Study population the study population included all adult in Nasiriya city for both sex.

Sample size

The following simple formula used for calculating the adequate sample size in prévalence study.

$n = z^2 \, p(1-p) \div d^2$

Where n is the sample size, Z is the statistic corresponding to level of confidence, P is expected prevalence (that can be obtained from same studies or

a pilot study conducted by the researchers), and d is precision (corresponding to effect size).

The level of confidence usually aimed for is 95%, most researchers present their results with a 95% confidence interval (CI). However, some researchers wants to be more confident can chose a 99% confidence interval.

Ethical considerations informed consent was obtained from all participants before collection of data. Ethical Committee in College of Medicine, Basra University approved the current study.

Statistical analysis

Table 1: prevalence of IBS among male and female

		Suffer from irritable bowel syndrome		Total	p-value*
		Yes	No		
Gender	Male	40	29	69	
	Female	304	212	516	0.49
Total		344	241	585	

Chi-Square test

Table 1 represents the prevalence of IBS among males and females in this study. 304 females suffer from irritable bowel syndrome and 40 males, there is no statistically significant difference between males and females p=0.490.

Table 2: Comparison in classical symptoms of IBS between male and female

Classical symptoms	Male 73 (11.7%)	Female 522 (83.9%)	p-value*
Nausea	23	245	٠,٠٠٩
Constipation	23	171	٠,٠٠١
Diarrhea	20	١١٩	٠,٦٦٢
Heartburn	40	٢٦٣	٠,٢٩٧
Reflux	42	٢٧٦	٠,٢٨٩

Independent sample t-test Table2 comparison of classical symptoms of IBS between males and females. 245 females suffer from nausea and 23 males, there is a statistically significant difference between males and females p=0.009. Also, 171

constipation, and 23, there is a statistically significant difference between males and females p=0.001. on the other hand, there is no statistically significant difference between males and females in other symptoms.

Table 3: *Demographic and clinical data (N=595)*

Characteristics	N (%) or Mean (±SD)
Age	27.28 (±9.53)
Weight (kg)	65.62 (±15.62)
Height (cm)	159.78 (±14.94)
Gender o Male o Female	73 (11.7%) 522 (83.9%)
Economic status o Low income o Average income o Good income	72 (11.6%) 307 (49.4%) 215 (34.6%)
Social status o Single o Married o Divorce or widower	390 (62.7%) 187 (30.1%) 17 (2.7%)
Smoker o Yes o No	26 (4.2%) 569 (91.5%)
Job o Not work o Work o Students	90 (14.5%) 261 (42.0%) 243 (39.1%)
Blood group o A o B o AB o O	132 (21.2%) 106 (17.0%) 43 (6.9%) 229 (36.8%)
Irritable bowel syndrome o Yes o No	344 (55.3%) 241 (38.7%)
Chronic disease o HTN o DM o Asthma o CVD o Don't have	23 (3.7%) 13 (2.1%) 22 (3.5%) 6 (1.0%) 531 (85.4%)

Table 3 shows the demographic and clinical data for 595 participants. The mean age was 27.28 (±9.53), with height and weight 159.78 (±14.94) and 65.62 (±15.62) respectively. The majority of study participants were females 522 (83.9%), and only 73 (11.7%) were males. Around one-half have an average income 307 (49.4%). 390 (62.7%) were single. 569 (91.5%) was a non-smoker. 261 (42.0%) were working, while 243 (39.1%) students. In this study, the blood group observed was O blood group 229 (36.8%). 344 (55.3%) have irritable bowel syndrome and 531 (85.4%) don't have any chronic disease.

Table 4: *Symptoms of irritable bowel syndrome*

Symptoms	N (%)
Nausea	268 (43.1%)
Indigestion	429 (69.0%)
Do you have flatulence	435 (69.9%)
Constipation	294 (47.3%)
Diarrhea	139 (22.3%)
Abdominal pain	338 (54.3%)
Heartburn	303 (48.7%)
reflux	318 (51.1%)
Feeling lethargic and tired	503 (80.9%)
Incomplete defecation	353 (56.8%)
Fecal incontinence	64 (10.3%)
burping	64 (10.3%)
Increase in abdominal gas	409 (65.8%)

Table 4 represents the symptoms of irritable bowel syndrome. 503 (80.9%) state that feeling lethargic and tired. Also, constipation and diarrhea were observed in 294 (47.3%) and 139 (22.3%) respectively. In addition, increase in abdominal gas in 409 (65.8%) participants. 435 (69.9%) answered that have flatulence. 268 (43.1%) have nausea.

Table5: Characteristics of symptoms

Characteristics of symptoms	N (%)
Type flatulence	
o Continues	158 (25.4%)
o Not continues	16 (2.6%)
o Related to eating	280 (45.0%)
o I don't suffer from flatulence	141 (22.7%)
Nature of the pain	
o Abdominal cramps	177 (28.5%)
o Feeling incompatible bowel movements	195 (31.4%)
o Shortness of breath	222 (35.7%)
Location of the pain	
o Middle of abdomen	170 (28.5%)
o Under the diaphragm	195 (31.4%)
o Right of abdomen	229 (38.4%)
Beginning of the pain	
o Suddenly	177 (29.7%)
o Gradually	195 (32.8%)
o No pain	222 (37.3%)
Occurrence of bloating	
o Yes	305 (49.0%)
o No	92 (14.8%)
o Maybe	195 (31.4%)

Table 5 shows the characteristics of symptoms of IBS. 280 (45.0%) state that flatulence is related to eating. Also, 222 (35.7%) and 195 (31.4%) had shortness of breath and felt incompatible bowel movements respectively. The most frequent location of IBS pain in this study was at the right of the abdomen 229 (38.4%). Around one-half have bloating 305 (49.0%). Most of them do not have pain 222 (37.3%).

Table 6: Examinations of IBS

Examinations	N (%)
Blood	67 (10.8%)
Urine	42 (6.8%)
Endoscope	40 (6.4%)
Ultrasound	49 (7.9%)
X-ray	58 (9.3%)
Stool	26 (4.2%)
No examinations	313 (50.3%)

Table 6 represents the examinations of IBS. The majority of participants did not exam 313 (50.3%), and only 67 (10.8%) by blood.
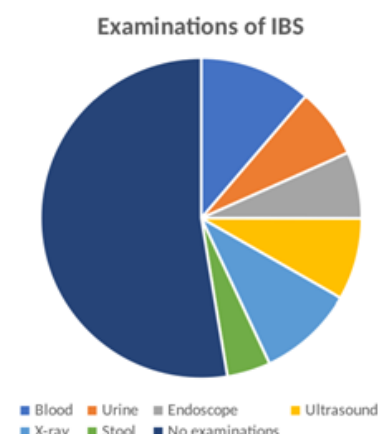
Figure 1: Examinations of IBS

Table 7: Medication

Medication	N (%)
Have you visited a doctor	233 (37.5%)
Antidepressants	107 (17.5%)
H2 blocker	40 (6.4%)
Antacid	49 (7.9%)
Spasmolytic	58 (9.3%)
PPI	100 (16.8%)
Combination	313 (50.3%)

Table 7 shows the medication for IBS. One-half of the participants 313 (50.3%) took a combination of these drugs. 107 (17.5%) took Antidepressants, while 40 (6.4%) took H2 blockers. On the other hand, only 58 (9.3%) receive spasmolytic, and Antacid 49 (7.9%). Also, 100 (16.8%) receive PPI
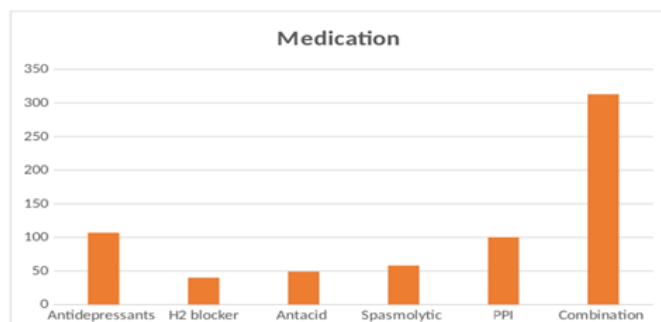
Figure 2: distribution according to Medication

Table 8: Condition get irritated IBS and how to relive

The condition gets irritated IBS	N (%)
Vegetable	10 (1.6%)
Legumes	9 (1.4%)
Sour food	22 (3.5%)
Spicy food	16 (2.6)
Dairy product	31 (5.0%)
Sweet	13 (2.1%)
Fat	101 (16.2%)
Eating in general	113 (18.2%)
More than 1	280 (45.0%)
Relive	
Sport	66 (10.6%)
Medication	245 (39.4)
Soft drink	137 (22.0)
Relaxation	50 (8.0%)
Herbal drink	70 (11.3%)
Nothing	27 (4.3%)

Table 8 the condition get irritated IBS and how to relieve it. 280 (45.0%) more than on conditions that irritate the IBS. 101 (16.2%) when eating fat and 113 (18.2%) when eating in general. Most of the relievers the IBS by medications 245 (39.4), and 137 (22.0) by soft drinks. Also, 70 (11.3%) by herbal drinks.

3 | DISCUSSION

IBS is a common chronic gastrointestinal disorder. As its name indicates, IBS is a syndrome a combination of signs and symptoms. IBS has been called by many names, among them colitis, mucous colitis, spastic colon, or spastic. In this study, the prevalence of IBS Is 57.8%, 304 of females and 40 males suffer from IBS out of 595 of population samples .The sex distribution in the current study showed that the prevalence of IBS was significantly more common among females at younger age. Bowel Symptoms of IBS are different for different people, constipation and diarrhea were observed in 294 (47.3%) and 139 (22.3%) respectively.280 (45.0%) state that flatulence is related to eating, Also, 222 (35.7%) and 195 (31.4%) had shortness of breath and felt incompatible bowel movements respectively. The most frequent location of IBS pain in this study was at the right of the abdomen 229 (38.4%). Around one-half have bloating 305 (49.0%). Most of them do not have pain 222 (37.3%).In addition, increase in abdominal gas in 409 (65.8%) participants. 435 (69.9%) answered that have flatulence. 268 (43.1%) have nausea. The study showed the effect of some foods on the irritation of the condition, 101 (16.2%) affected by eating fat, 280 (45.0%) affected by more than one type of food like Legumes, spicy food, sour food, dairy products and 113 (18.2%) affected by Eating in general. Most of the relievers the IBS by medications 245 (39.4), and 137 (22.0) by soft drinks. Also, 70 (11.3%) by herbal drinks, some studies demon-strated a significant association between regu -lar medication intake and IBS. study shows high prevalence of Irritable bowel syndrome in yonger age and lower prevalence of irritable bowel syndrome in older age groups suggests that symptoms may resolve over time, but this is contradicted by natural history studies, which imply chronicity of symptoms. A significant amount of evidence also suggests that patients with IBS are more likely to also

have other functional conditions. Evidence suggests that 'symptom shifting' occurs in a proportion of patients, where resolution of functional bowel symptoms sees development of functional symptoms in another system.

4 | CONCLUSION

IBS is a complex disorder with a pathophysiology that is poorly understood. With its wide array of symptoms ranging from constipation to diarrhea and a multitude of possible presentations, a one-size-fits-all approach to treatment is inappropriate for most patients. Instead, the initial treatment approach for IBS should involve non pharmacologic management and then focus on drug therapy for the individual patient's predominant symptoms according to the limited evidence-based medicine supporting specific agents in the treatment of IBS symptomatology. The monitoring, education, and support of patients that doctors provides renders their role vital in IBS management.

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