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Knowledge, attitude and practice towards irritable bowel syndrome among young adults in Jeddah, Saudi Arabia

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ABSTRACT

Background: A non-organic gastrointestinal disorder called irritable-bowel-syndrome (IBS) is characterized by recurring stomach pain or discomfort and irregular stool habits. Many academics have taken an interest in it since it is a global issue that affects people's health and economies. This paper intends to identify knowledge, attitude and practice regarding irritable bowel syndrome among young adults in Jeddah city. **Methodology:** In Jeddah city, cross-sectional research was conducted. All individuals who volunteer to participate in this study filled a self-administered anonymous questionnaire in Arabic and in English. In the survey, demographic data was collected, and IBS knowledge, attitude and practice of participants were evaluated. Data was statistically analyzed using the (SPSS) program, version 25. **Results:** The study consisted of 542 participants 39.5% of them were males and 60.5% were females. 56.6% of participants aged between 20- 25 years old. 56.5% have heard of irritable bowel syndrome. Only 18.5% have been diagnosed with irritable-bowel-syndrome (IBS) by a doctor. 67.3% of participants think that IBS Reduces Quality of Life. **Conclusion:** This study shows that the general Saudi population knows insufficient about irritable bowel syndrome. Enhanced quality of life for IBS patients may encourage them to seek medical care as soon as possible, while also lowering anxiety and reducing the number of times they need to visit the hospital. These benefits could result from educating the general public about IBS to improve understanding and reduce misconceptions about the serious disease's development.

Keywords: Irritable Bowel Syndrome, IBS, General population, gastrointestinal.

1. INTRODUCTION

Irritable-bowel-syndrome (IBS) is a non-organic gastrointestinal illness characterized by recurrent stomach pain or distress and abnormal bowel habits (Al-Hazmi, 2012). Not only is the clinical presentation ambiguous and

correct diagnosis difficult, but the therapy for IBS is inadequate and ineffective (Brown-Lieberson, 2019). Interventions in diet, lifestyle, healthcare, and behavior all play a role in managing patients with IBS (Alharbi, 2019). In the absence of specific biological markers, IBS is usually diagnosed using symptom-based criteria (Brown-Lieberson, 2019). It is a global problem that has an impact on people's health and economies, thus it has drawn the attention of many academics (Algabr et al., 2018). Despite years of research, the cause of the disorder remains unknown, although it is frequently linked to noncolonic symptoms (Lavekar et al., 2019).

A study showed that the prevalence of IBS ranges greatly from 15% to 24% of the total world's population, including 10-15% of the western predominantly female (Lavekar et al., 2019) population (Alhazmi, 2011). Moreover, studies conducted on IBS prevalence among school students, school instructors and university students in the Kingdom of Saudi Arabia showed the prevalence rates ranging from 9% to 40% (Arishi et al., 2021). It is important to mention that prevalence is noticeably higher in youthful adults than different age groups (Khan et al., 2019). In a research conducted on Saudi patients with IBD to evaluate their KAP toward IBS, it was discovered that the majority of the patients had misunderstandings regarding the nature and etiology of the illness (Algabr et al., 2018). Also the public's knowledge base and attitudes regarding irritable bowel syndrome were assessed in Jeddah in 2016, and the findings revealed a lack of understanding of the causes and consequences of irritable bowel syndrome (Qari, 2016).

In a study that was done at Alahsa, Saudi Arabia found that a large percentage of participants were well aware of the symptoms, indicators, risk factors, prognosis and disease management (Khan et al., 2019). IBS impairs the quality of life and could affect the physical function, emotional and social life resulting in depression, loss of confidence and deterioration in work status. Despite the importance of the subject, there were very few studies conducted in Jeddah. Furthermore, they had several gaps; the sample size was small, the research that was conducted is outdated, and the issue remains unclear to the majority of people in Jeddah.

Our aim is to assess knowledge, attitude and practice regarding irritable bowel syndrome among young adults in Jeddah city to detect common misconceptions and develop future plans to correct them such as educational programs.

2. METHODOLOGY

Study design

This is an observational, cross-sectional study using an anonymous, self-administered online questionnaire, and was conducted from August 2021–July 2022 on young adults in Jeddah, KSA.

Subject

Participants, recruitment and sampling procedure: The study's population consisted of young adults aged 18-34 who are living in Jeddah, Saudi Arabia.

Sample size

The sample size was estimated using the Raosoft calculator with a confidence level of 95%, margin of error 5%; a sample size of 385. Inclusion criteria are as follows: (1) Residents of Jeddah, (2) Young adults aged 18-34, (3) Male or Female, (4) Foreigners and (5) Fully completed surveys. Exclusion criteria are as follows: (1) Residents outside of Jeddah, (2) Age younger than 18 or older than 34, (3) physicians, and (4) incomplete surveys.

Method for data collection and instrument

All individuals who volunteer to participate in this study were given a self-administered anonymous questionnaire in Arabic and in English. In the survey, demographic data was collected, and IBS knowledge attitude and practice of participants were evaluated.

Data analysis

The "Microsoft Office Excel Software" program (2016) for Windows was used to input data on the computer. After that, the data was statistically analysed using the Statistical Package of Social Science Software (SPSS) program, version 25 (IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.)

3. RESULTS

As illustrated in table (1); the study consisted of 542 participants 39.5% of them were males and 60.5% were females. 56.6% of participants aged between 20- 25 years old, 16.8% less than 20 and 15.1% aged between 26- 30 years old. As for educational level,

75.5% of study participants had university degree and 18.8% had secondary school degree. 78.6% of participants were married and 19% were single.

Table 1 Sociodemographic characteristics of participants (n=542)

Parameter		No.	%
Gender	Male	214	39.5
	Female	328	60.5
Age	Less than 20	91	16.8
	20 - 25	307	56.6
	26 - 30	82	15.1
	31 - 35	62	11.4
Education level	Preparatory	5	.9
	secondary	102	18.8
	university	409	75.5
	Diploma	5	.9
	Master's	21	3.9
Marital status	Married	426	78.6
	Single	103	19.0
	Divorced	13	2.4

Table 2 shows that almost half participants (53.1%) have a family history of irritable bowel syndrome. 56.5% have heard of irritable bowel syndrome. Only 18.5% have been diagnosed with irritable-bowel-syndrome (IBS) by a doctor. Regarding IBS symptoms, 29% identifies change in the nature of the stool (diarrhea or constipation) as a symptom, 20.3% reported change in the frequency of defecation (increasing or decreasing). 18.6% of participants reported that symptoms do not subside until after defecation.

Table 2 Knowledge and prevalence of participants of IBS (n=542)

Parameter		No.	%
Family history of IBS	Yes	288	53.1
	No	254	46.9
Read/watched about IBS	Yes	306	56.5
	No	236	43.5
Diagnosed with IBS by a doctor	Yes	100	18.5
	No	442	81.5
Symptoms	Change in the nature of the stool (diarrhea or constipation)	229	29.0
	Change in the frequency of defecation (increasing or decreasing)	160	20.3
	Symptoms do not subside until after defecation	147	18.6
	Do not know	254	32.2

Table 3 shows that, 67.3% of participants think that IBS Reduces Quality of Life. 29.9% think that is more common than diabetes and hypertension. 9.2% think that Colon cancer is more common than IBS. 70.3% think that Dietary factors, sensitivity to and intolerance to certain foods are associated with a higher incidence of IBS. 45.9% think that Genetic factor and bacterial and viral infections are among the most common causes of IBS. 83.9% think that Psychological and emotional effects are disorders frequently associated with IBS. 80.4% reported that Common symptoms of irritable-bowel-syndrome (IBS) are diarrhea, constipation, stomach pain, and flatulence. 80.1% think that change in diet may improve symptoms of IBS. 77.7% think that therapeutic recipes have a role in improving the symptoms of IBS. Almost half participants knew that Alternative treatment methods (acupressure - herbal treatment - tea - roots - ...) have a role in improving the symptoms of IBS. Only 10.9% reported that Surgeries can improve irritable bowel syndrome. 67.9% knew that IBS is diagnosed based on symptoms. 81.2% think that medical diagnoses help quickly detect IBS. As illustrated in table (4), there was an association between gender and knowledge of IBS.

Table 3 Attitude and practice of participants towards IBS (n=542)

Parameter	Yes	No	Do not know
IBS reduces Quality of Life	365 67.3%	66 12.2%	111 20.5%
IBS is more common than diabetes and hypertension	162 29.9%	150 27.7%	230 42.4%
Colon cancer is more common than IBS	50 9.2%	166 30.6%	326 60.1%
Dietary factors, sensitivity to and intolerance to certain foods, are associated with a higher incidence of IBS	381 70.3%	40 7.4%	121 22.3%
Genetic factors and bacterial and viral infections are among the most common causes of IBS	249 45.9%	61 11.3%	232 42.8%
Psychological and emotional effects are disorders frequently associated with IBS	455 83.9%	16 3.0%	71 13.1%
Common symptoms of IBS are diarrhea, constipation, stomach pain, and flatulence:	436 80.4%	12 2.2%	94 17.3%
A change in diet may improve symptoms of IBS	434 80.1%	26 4.8%	82 15.1%
Some therapeutic recipes have a role in improving the symptoms of IBS	421 77.7%	20 3.7%	101 18.6%
Alternative treatment methods (acupressure - herbal treatment - tea - roots - ...) have a role in improving the symptoms of IBS	259 47.8%	50 9.2%	233 43.0%
Surgeries can improve IBS	59 10.9%	123 22.7%	360 66.4%
IBS is diagnosed based on symptoms	368 67.9%	45 8.3%	129 23.8%
Possible medical diagnoses help quickly detect IBS	440 81.2%	10 1.8%	92 17.0%

Table 4 Association between participants knowledge of IBS with sociodemographic characteristics

		Know of IBS		Total	P value
		Yes	NO	(N=542)	
Gender	Male	92 30.1%	122 51.7%	214 39.5%	0.001
	Female	214 69.9%	114 48.3%	328 60.5%	
Age	Less than 20	41 13.4%	50 21.2%	91 16.8%	0.060
	20 - 25	178 58.2%	129 54.7%	307 56.6%	
	26 - 30	53 17.3%	29 12.3%	82 15.1%	
	31 - 35	34 11.1%	28 11.9%	62 11.4%	
Education level	Preparatory	3 1.0%	2 0.8%	5 0.9%	0.345
	secondary	52 17.0%	50 21.2%	102 18.8%	
	university	238 77.8%	171 72.5%	409 75.5%	
	Diploma	4 1.3%	1 0.4%	5 0.9%	
	Master's	9 2.9%	12 5.1%	21 3.9%	
Marital status	Married	236 77.1%	190 80.5%	426 78.6%	0.502
	Single	61 19.9%	42 17.8%	103 19.0%	
	Divorced	9 2.9%	4 1.7%	13 2.4%	

4. DISCUSSION

IBS is very common, and self-reported "IBS" is three times more common than according to Rome IV criteria. Self-reported IBS has a similar impact on health care utilisation and quality of life, but a greater impact on work absence (Houte et al., 2019). The patient's comprehension of the care process is critical to improved outcomes. IBS patients have knowledge gaps in terms of prevalence, natural history, risks, etiology, symptoms, modes of diagnosis, treatment, and the impact IBS has on quality of life (Halpert et al., 2007; Lacy et al., 2007). Because of the syndrome's complexity, patients are more likely to seek help from their social networks. Individuals in the social network are frequently non-professionals who share common experiences, exchange facts, and offer advice or other forms of support. These social networks frequently empower recipients to act on their own behalf and maintain control, and they are influential in care decisions (Halpert et al., 2007).

In our study, only 18.5% have been diagnosed with irritable-bowel-syndrome (IBS) by a doctor. This was lower than reported in previous Saudi studies as some cross-sectional studies, reports from Jeddah and Riyadh, KSA found that 31.8% and 21% of medical students, respectively, met the criteria for an IBS diagnosis (Alaqeel, 2017; Khamis et al., 2013). Even so, IBS prevalence rates vary, and some factors, such as study methods, diagnostic criteria, and sample size, should be considered. According to Hasosah et al., (2017) the prevalence of IBS among medical students and interns in Jeddah, Saudi Arabia, is 15.6 percent. High levels of stress; this

paper identifies important risk factors for IBS, particularly a lack of exercise and a family medical history of the condition. It has been suggested that the large differences studies' differences in IBS prevalence are a result of the use of diverse diagnostic criteria (Khamis et al., 2013). As for knowledge of IBS, according to our study results almost half participants reported that they know IBS. 83.9% think that psychological and emotional effects are disorders frequently associated with IBS. This was lower than a previous cross-sectional study on university students to assess awareness about irritable-bowel-syndrome (IBS) reported that, 74% students have basic information about IBS, 26% students have knowledge about the complications of IBS, 33% have knowledge about the risk factors of IBS, 7% have information about the prognosis of IBS and 53% students have knowledge about the treatment strategies of IBS (Hameed & Limited, 2015).

IBS is defined by the incidence of abdominal-pain associated with changes in bowel habits in the absence of organic intestine damage. IBS's aetiology has yet to be determined. However, some risk factors associated with it have been linked to its development. Furthermore, there are no diagnostic tests or biomarkers for IBS, and the condition can only be diagnosed clinically using symptom-based criteria (Caroline Canavan, 2014). According to our results, 29% of participants identified change in the nature of the stool (diarrhea or constipation) as a symptom, 20.3% reported change in the frequency of defecation (increasing or decreasing). 18.6% of participants reported that symptoms do not subside until after defecation. Diarrhea was identified as the single "most common identifies symptom" of IBS in another study (48 %). The participants correctly identified additional IBS symptoms. These included abdominal pain (62%), flatulence (62%), bloating (57%), and constipation (57%). (53%) Other symptoms not typically associated with IBS, such as muscle pain (12%), anemia (11%), joint pain (5%), rashes (5%), arthritis (3%), and fevers (8%), were also endorsed as signs and symptoms of IBS (Sherwin, 2018). IBS may influence the health-related-quality of life (HRQOL), reduce work productivity, and add to the already spiraling health expenditures (Butt et al., 2012).

In our study, 67.3% of participants think that IBS Reduces Quality of Life. IBS is detected clinical symptoms because there are presently no bio-markers for diagnostic. Patients with symptoms that meet the established criteria for its diagnosis but lack the warning signs can be diagnosed with IBS through the PHC physician without the need for additional testing beyond a thorough clinical history, overall physical exam, and regular laboratory tests (with the exception of a colonoscopy) (Article, 2001). However, the risk of discovering organic illnesses including IBD, colon cancer, or infectious diarrhoea was less than 1% among individuals who satisfied the symptom-based criteria for IBS. For the best care of IBS, prompt and correct diagnosis as well as the right intervention is essential. In the absence of warning signs, PHC doctors can reliably diagnose IBS on the first or second patient visit without significant testing or specialist guidance (Agarwal & Spiegel, 2011; Karantanos et al., 2010). 67.9% of our study participants knew that IBS is diagnosed based on symptoms. 81.2% think that medical diagnoses help quickly detect IBS.

IBS is a diverse condition with numerous treatment options, each of which benefits only a small percentage of IBS patients. The treatment of associated depression and anxiety frequently improves bowel and other symptoms. Randomized trials revealed the following benefits: Cognitive behavioural therapy and psychodynamic interpersonal therapy help with coping, while hypnotherapy helps with overall symptoms. Antispasmodics and tricyclic antidepressants can help IBS patients with their pain. Ispaghula can help IBS patients with their pain and bowel habits. 5-HT₃ antagonists help IBS patients with their overall symptoms, diarrhoea, and pain. It can result in unexplained colitis. 5-HT₄ agonists help IBS patients with overall symptoms, bloating, and constipation. In IBS patients, selective serotonin reuptake inhibitors improve overall symptoms (Spiller et al., 2007). Treatment success is determined not only by the patient's understanding of the treatment and disease, but also by their willingness. Incorporating patient preferences and values with clear, concise communication necessitates clinical expertise and patience on the part of the healthcare provider. Inviting patients to be active participants in their care emphasises the patient's illness experience, which improves treatment adherence and results (Siminoff, 2013). The duration of IBS treatment should be tailored to each patient based on the severity of their symptoms. For example, in patients with mild symptoms for one or two days, an entire treatment course for IBS is unnecessary, whereas patients with symptoms for a couple of weeks require a long-term treatment course (Evangelista, 2012). There are alternatives to surgery, and therapy can start right away, with only a small percentage of patients requiring referral to gastroenterologists.

In our study, 80.1% think that change in diet may improve symptoms of IBS. 77.7% think that therapeutic recipes have a role in improving the symptoms of IBS. Almost half participants knew that Alternative treatment methods (acupressure - herbal treatment - tea - roots) have a role in improving the symptoms of IBS. Only 10.9% reported that Surgeries can improve irritable bowel syndrome. Another study found that the majority of participants (86%) preferred "changing the diet" as the primary treatment for IBS symptoms. Taking prescription medications (69%), alternative medications (44%) such as herbal supplements, and over-the-counter medications (42%) were also endorsed as potential symptom-reducing treatments. One-quarter of those polled believed that psychiatric counseling or support group participation would be beneficial. Surgery was the least commonly recommended treatment. A sizable proportion of those polled believed that some form of treatment was available to alleviate IBS symptoms

(Sherwin, 2018). In attendance was a strong link between understanding of IBS and gender. Previous research found that most subjects' knowledge, attitudes, and beliefs were adequate and were associated with a high level of education (Algabr et al., 2018).

However, in a study of Saudi patients with IBD to assess their KAP toward IBS, it was discovered that the majority of the patients had misconceptions about the nature and etiology of the syndrome (Lacy et al., 2007). Other studies found similar results, owing to most subjects' lack of knowledge about the development of IBS and its symptoms, as well as the various risk factors (Al-Hazmi, 2012; Camilleri et al., 2002; Lacy & Lee, 2022).

5. CONCLUSION

According to this study, Saudi general populations have insufficient knowledge of irritable bowel syndrome. Providing education on IBS to improve the understanding and reduce the misconceptions of serious disease development to general population has the potential benefit of increase quality of life of IBS patients for seeking medical care as soon as possible, decreasing anxiety and reducing patient care visits.

Ethical approval

The study was obtained from the research ethics committee of Taif University, Saudi Arabia with (Ref. No. 43-750).

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Conflict of interest

The authors declare that there is no conflict of interests.

Data materials availability

Data that support the findings of this research are embedded within the manuscript.

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