



THE PREVALENCE OF IRRITABLE BOWEL SYNDROME AND ASSOCIATED FACTORS AMONG A SAMPLE OF MEDICAL COLLEGE STUDENTS IN BAGHDAD.

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ABSTRACT

Background: Irritable bowel syndrome is a multi-factorial functional gastrointestinal disorder in which abdominal pain and change in frequency and consistency of stool are symptoms of IBS (but not specific) this disorder appear to be common in the third world.

Aim: to shed light on prevalence of IBS among medical students and to assess the risk factors.

Methodology: A cross sectional study was conducted at a college of medicine in Baghdad, the study was done on convenient sample of students, both male and female. To achieve this study a questionnaire form was designed according to Rome's III criteria, and questions regarding life style. Excel was used for data entry and presentation, Chi square test for risk assessment.

Result: The prevalence of IBS among 300 medical students was 20%. Female sex was significantly associated with IBS.

Conclusion: One fifth of medical students suffer from irritable bowel syndrome with females were more likely to develop it.

Key words: IBS-medical students

1 INTRODUCTION

Irritable bowel syndrome (IBS) is defined as "a functional gastrointestinal (GI) disorder characterized by abdominal pain and altered bowel habits in the absence of a specific and unique organic pathology, although microscopic inflammation has been documented in some patients. [1]"

The diagnostic criteria for irritable bowel syndrome have evolved since 1979 till 2016 starting from Manning passing through Rome's criteria I, II, III till IV. [2, 3].

Prevalence of irritable bowel syndrome have been estimated to be 30% globally, 30% of them seek medical help. [4]

Irritable bowel syndrome has been linked to stress & anxiety which represent a major problem in medical students, it might reflect its high prevalence in this group of people. This makes the screening for irritable bowel syndrome

among medical students and the management of stress are necessary. [5, 6].

Aim of study:

To shed the light on prevalence of irritable bowel syndrome among medical students and to assess risk factors

Subjects and methods:

A cross section study is conducted that include a convenient sample of medical college students both males and females during a period starting from march 2017 till October 2018.

Data collection was done by using a preformed questionnaire that is composed of questions based on Rome's III criteria & other questions assessing the habits of students as practicing sports and cigarette smoking, sufficient sleeping hours.

Then data entry was done by Excel, percentages were calculated, tables and figures drawn and association using Chi square test was calculated.

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2 RESULTS & DISCUSSION:

The sample included 300 college students with age range 18-22 years old.

122 students were males, while females were 178, Figure 1.

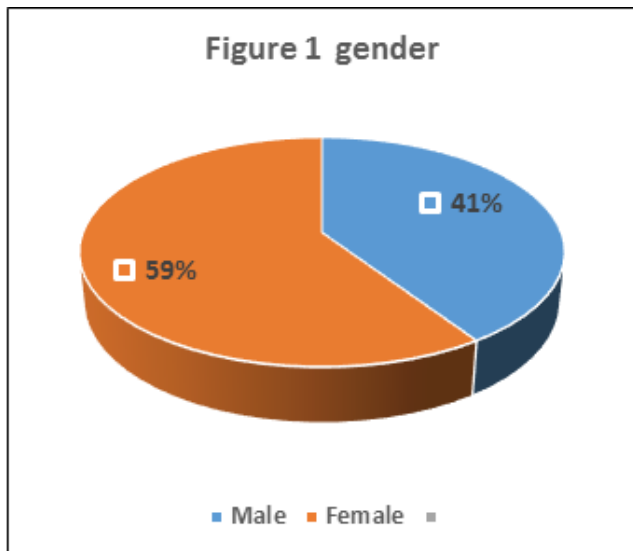


Figure 1. gender

The prevalence of irritable bowel syndrome in the total sample was 20% as shown in Figure 2 below.

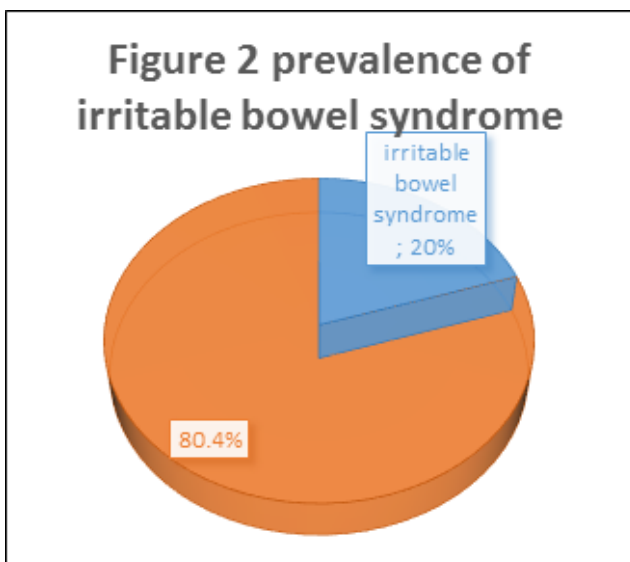


Figure 2. prevalence of irritable bowel syndrome

Several studies have been undertaken in the same era in our neighbouring country (Saudi Arabia) some using Rome III, & others using Rome IV.

The studies that depend upon Rome IV among Saudi medical students showed lower prevalence (15, 18%). [7, 8]

While it was almost similar to its prevalence when depending upon same criteria (Rome III) 21%&even it was doubled in another study using the same criteria (44.5). [9, 10] .

On the contrary in Almutairi study in which a sample size of 511 Saudi medical students showed a diluted IBS prevalence -per say- occurring as 13% although depending on Rome's III criteria . [11]

The association between irritable bowel syndrome and gender was assessed using Chi square test in Table 1 .

Table 1. Association between Irritable Bowel Syndrome (IBS) and gender.

Gender	IBS	No IBS	Total
Male	15	107	122
Female	45	133	178
Total	60	240	300

The chi square statistics is 7. 6292.
The p-value is 0.005743.the result is significant at $p < .05$.

Women show higher prevalence of irritable bowel syndrome than men, this had been documented by a meta-analysis of several studies showed comparable results. [12, 13] .

The association between smoking and Irritable Bowel Syndrome (IBS) was calculated using Chi square test in table 2.

Smoking occurred in 15 % in the total sample, in

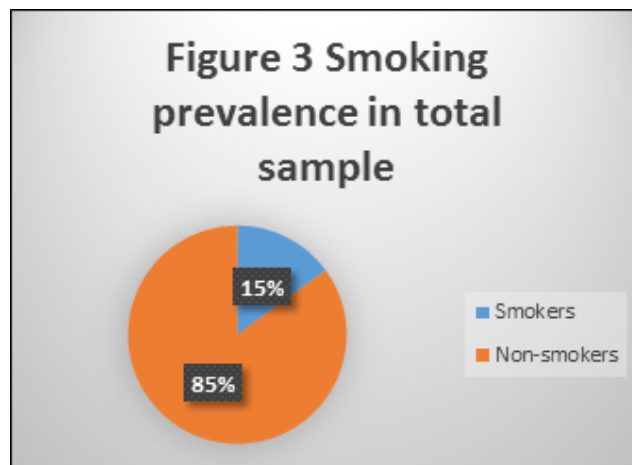


Figure 3. Smoking prevalence in total sample

which 10 of them were among irritable bowel syndrome sufferers, Figure 3 Figure 4 .

The association between IBS and smoking was calculated by Chi square test in Table 2 .

The association of irritable bowel syndrome with smoking is also not confirmed, supported by a meta-analysis results. [14, 15] .

While in Lebanese irritable bowel syndrome is associated with water pipe smoking. [16]

Sport practice among total sample is shown in Figure 5 .

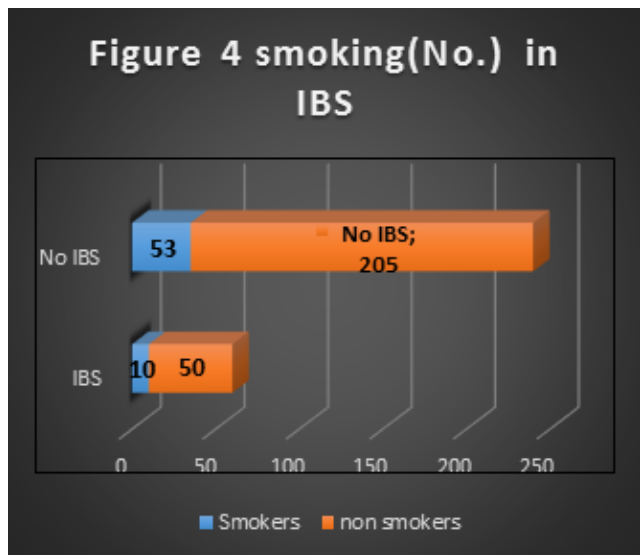


Figure 4. smoking (No.)in IBS

Table 2. the association between Irritable Bowel Syndrome (IBS) and smoking

Smoking	IBS	No IBS	Total
Smoker	10	35	45
Non -smoker	50	205	255
Total	60	240	300

The chi-square statistic is 0.1634. the p-value is 0.686047. the result is not significant at $p < .05$.

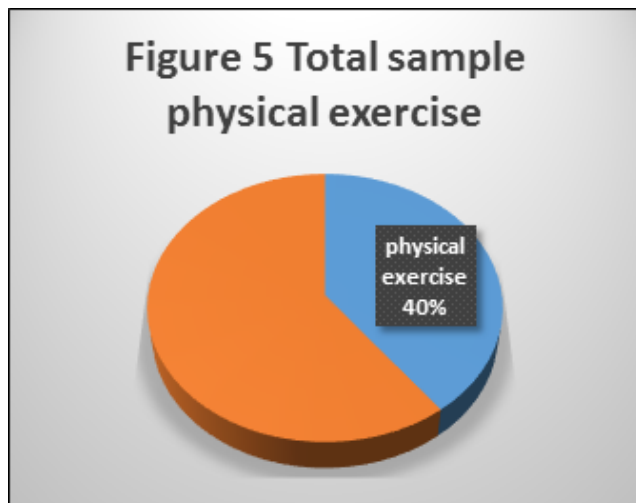


Figure 5. Total sample physical exercise

Only 18 reported physical exercise out of the total 6 IBS subjects, so to assess the association between them, Chi square test was calculated in Table 3 .

Table 3. the association between irritable bowel syndrome and physical exercise

Physical exercise	IBS	Non-IBS	Total
With	18	101	119
With out	42	139	181
Total	60	240	300

The chi square statistic is 2.9284. the p-value is 0.087033. the result is not significant at $p < .05$.

On the contrary of our results, several studies showed a significant association with OR: 1.27, 95% CI: 1.08–1.49, (OR, 6.297). [17, 18]

The recommended Sleeping hours/day is 8 hours/day, their percentage among the total sample was shown in Figure 6 .

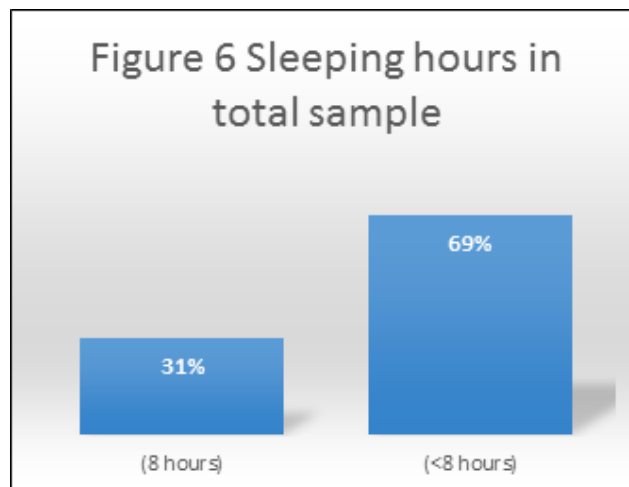


Figure 6. Sleeping hours in total sample

Only 19 out of the total 60 IBS sufferers sleep enough hours, to assess the association between having enough sleeping hours and IBS chi square was calculated ,Table 4 .

Table 4. sleeping hours and IBS association

Sleeping hours	IBS	Non-IBS	Total
8 hours	19	73	92
<8 hours	41	167	208
Total	60	240	300

The chi square statistics is 0.0353. the p-value is 0.851023. the result is not significant at $p < .05$.

A meta-analysis showed a high prevalence of sleeping disorders among those with IBS.. [19–21]

240 students expressed symptoms during stress of examination. Figure 7

Also supported by other studies showing similar results and showing benefits with Psychopharmacological agents. [22, 23].

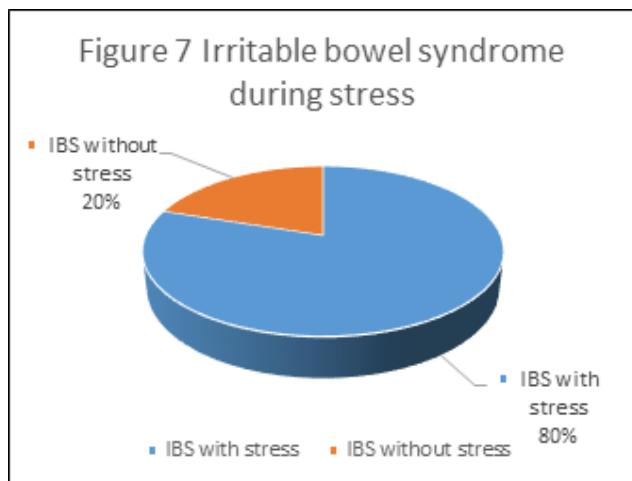


Figure 7. Irritable bowel syndrome during stress

3 CONCLUSION:

Prevalence of irritable bowel syndrome was 20% among medical students, which was significantly associated with female sex and stress during examinations while smoking, sport activity & enough sleeping hours showed no association.

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