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Research Article

**PREVALENCE OF CONSTIPATION AMONG WESTERN
REGION POPULATION IN SAUDI ARABIA, IN JEDDAH AND
AL-TAIF.****Hussain S. Althumali¹, Ahmed M. Alserihi¹, Mohammed A. Al-Ghamdi¹, Rawan E. bin Ali gaber¹, Malath A. Bukhari¹, Hossam E. Kordi¹, Abdulaziz A. Kurdi¹, Abdulrahman S. Alshamrani¹.**¹Ibn Sina National College**Article Received:** June 2020**Accepted:** July 2020**Published:** August 2020**Abstract:**

Background: Because very little research done for the prevalence of constipation in Saudi Arabia, this study aimed to determine the prevalence of constipation among western region population in Saudi Arabia, in Jeddah and Al-Taif.

Aims: To determine the prevalence of constipation, to estimate the overall prevalence of constipation among the society, and to identify risk factors of constipation. Materials and Methods: In this cross-sectional study, 1,086 individuals were selected, for males and females in Jeddah and Al-Taif. A standardized questionnaire was used to cover the different aspects that can increase the constipation. In this study, we use SPSS to analyze the data that has been collected from the sample. Results: The prevalence of constipation among the sampled individuals is only 4.4%, whereas those whose result indicates no suffering from constipation represented 95.6%. Constipation prevalent among females is (64.35%) and among males is (35.65%). Constipation is more severe among those who are between 20- and 35-year old, while it reaches 0% among old people (over 51 years). Jeddah population are more likely to suffering from constipation than population in Al-Taif. In Jeddah 83.3%, whereas in Al-Taif was 16.7%. Result show that constipation is more prevalent among population who are on stress all the time, and who get dehydrated and do not carry a bottle of water, who eat fiber-rich food once in a week, and less in smoker. There is a significant relationship between suffering from constipation and only two variables, which are regularity of being stressed and regularity of getting dehydrated. The test value for these two variables were (0.0) in the two cases. Conclusion: The prevalence of constipation is relatively very low among population of Western region in Saudi Arabia.

Keyword: Jeddah, al-Taif, constipation, cross-sectional, Saudi Arabia.

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INTRODUCTION:

There is no consensus definition for Constipation, or ideal disease markers.

Therefore, the major determinant of the diagnosis become the history and physical examination. Although patients and physicians may interpret it differently, medical personnel define constipation as less than three bowel movement per week or according to Rome III criteria.

While patients often feels of incomplete emptying, straining, and urge for defecation And equate stool consistency with constipation. [1,2]

According to BMJ, normal range between one bowel action every few weeks or months to 24 bowel actions a day.[3]and the healthy person suggestions that a daily habit is not only natural but also necessary, is often assumed to have one bowel action each day.

Constipation presents as a problem in healthcare system with debilitating and painful consequences. Although constipation is usually preventable, constipation can be prevented by assessing the risk factors and individualized intervention for those risk factors. [4]

The direct impact of constipation has been highlighted in several studies on health-related quality of life (HRQOL).[5,6] A lot of prevalence was reported.[7] when we compared the Results with the general population the patients with constipation have lower HRQOL.[5] a lot of Various validated instruments shows that.

In the other hand, 2,870 participants were reporting that constipation resulted in impaired HRQOL scores similar to each country surveyed.[6] the survey conducted in seven countries that enrolled (England, Brazil, and the United States France, South Korea, Germany, Italy,)

The prevalence of constipation In the United States is around 15%. Canada reported that chronic constipation affects nearly 2%–27% of the Canadian population, on the other hand prevalence of constipation reached to 8%, 17%, and 28%, in China, India, and Japan respectively. [8-10]

Studies in Saudi Arabia about the prevalence of constipation are less than expected. To determine the irregularities of bowel function among Saudi adults a Study was done in Saudi Arabia that showed 18% of the respondents experienced abnormal bowel habits. there is a discrepancy in the reported rates Due to the absence of uniform diagnostic criteria..[7] While comparing between three types of questionnaires like Wexner and KESS and Mansoura Numerolphabetic Constipation Score (MNCS), suggest the most accurate between the three way is MNCS. Also, it can be used as an indicator to determine surgical interventions (stages C and D indicating surgical intervention).[11]

However, one of the most commonly used subjective scores is Wexner,[12] so we will use it as well to compare between those two scores.

to define the level of prevalence among population in Jeddah we need to standardized the questionnaire, at first you well find in our report, the methodology we used in analyzing the collected data, and then you well find the results. Finally, it compares between the results based on the questionnaire with other similar studies.

MATERIALS AND METHODS:

The study is a cross-sectional study using an online questionnaire to gather information from Participants, which include 768 subjects.

But we managed to get 1086 samples. Targeted area was West region of Saudi Arabia as the questionnaire covered two areas, to be specific, Jeddah and Al-Taif and covered both males and females.

The survey included eight viewpoints concerning constipation, Including, how many bowel movements, pain during evacuation feeling imperfect evacuation, minutes in toilet per attempt, type of assistance, ineffective attempts for emptying per 24 h, and duration of constipation (year).

Statistical Package for Social Sciences (SPSS) software was used to analyse the data collected form the questionnaire.

RESULTS:**Table 1: Relation between suffering from constipation and other variables**

Variables		Does not suffer from constipation (%)	Suffering from constipation (%)	Total
Gender	Male	46.80	35.65	388
	Female	53.20	64.35	698
Age	<20	22.25	10.10	202
	20-35	55.30	73.30	694
	36-50	19.35	13.60	168
	≥51	3.10	3.00	22
Residence place	Jeddah	72.30	83.30	892
	Al-Taif	27.70	16.70	194
Regularity of eating fiber-rich food	Daily	27.30	10.70	288
	Twice a week	35.40	25.80	318
	Once a week	23.70	27.20	272
	One a month	11.50	25.00	172
	Rarely/never	2.10	11.30	36
Regularity of being stressed*	Yes, all the time	23.50	59.50	248
	Sometimes	48.90	28.20	574
	Rarely	18.90	8.20	164
	Never	8.70	4.10	100
Regularity of smoking	Yes, heavy smoker	10.50	1.50	80
	Yes, occasionally	12.20	3.30	108
	No	77.30	95.20	898
Regularity of getting dehydrated*	Yes, I always carry a water bottle	28.60	17.80	348
	Yes, but I do not carry a water bottle	52.10	35.50	548
	Sometimes I feel thirsty and do not drink	17.30	28.20	160
	I am always dehydrated	2	18.50	30

In total, 1086 people the questionnaire, of which 698 of females and 388 were males. (20–35 years) was the common age who responded, they were 694 of the sample, followed by 202 of the sample are less than 20 years. 168 between 36 and 50 years and only 22 over 50. The paramount sample was taking from Jeddah they represented 72.30% of the sample, and only 27.70% were in Al-Taif.

Cantered on statistical analysis, eight variables were choose for the scoring system. The items ware includes, painful evacuation, incomplete evacuation, frequency of bowel movements, abdominal pain, assistance for defecation, unsuccessful attempts for evacuation per 24 h, and duration of constipation [table 1] the scoring range of 0-4 (with the exception of “assistance for defecation,” which is 0-2) was derived. The universal score was calculated by adding each individual score. A score of more than 20 was the definition of the symptom “constipation” in this study.

The results [table 1] show that constipation is more among females 64.35% instead of males 35.65%. The rate of constipation was 73.30% between 20-

and 35-year old, and it was 3% in old individuals over 51.

Individuals in Jeddah residents are much more likely to experience constipation rather than Taif residents. The percentage in Jeddah was 83.30%, whereas the percentage in Taif city was 16.70%.

The displayed results show that constipation is more common in those who eat fibers wealthy nourishment one time per week, non-smokers, stressed individuals, and those who get dehydrated and don't carry a bottle of water. The rates of those who suffers from constipation among the above categories were 27.20%, 95.20%, 59.50% 18.50%, separately.

We utilized Chi-square test to settle the relationship between enduring from constipation and the factors in [table 1]. The outcome of the test show that there is a significant relationship between having constipation and two factors, which are consistency of being stressed and consistency of drinking fluids. The test value for these two variables were (0.0) within the two cases.

On the other hand, none of the remaining factors had critical relationship with having constipation.

DISCUSSION:

There are number of studies examined the predominance of constipation among distinctive sorts of population. In this study, having constipation was not severe as it was 7.2% of the test suffer from constipation. In a study in a city in Brazil, the predominance of constipation come to 25.2% the severity of constipation was higher among females 37.2% rather than males 10.2% which is close with the results of our study. [13]

Similarly, different studies show that females are more likely to suffer from constipation rather than males. As the results of the studies of Jun *et al.* (2006) in South Korea,[14] Mendoza-Sassi *et al.* (2006) in Brazil,[15] and Adibi *et al.* (2007) in Iran [16] have proven this conclusion. In these three studies, the prevalence of constipation among targeted population ranged from 7.3% to 23.7%.

In women, constipation is more common because of hormones changes pregnancy childbirth and abuse physically and emotionally.

In Saudi Arabia there must be a campaign to raise awareness of constipation and the treatment of the issue like increase fiber intake or proper hydration and to avoid risk factors of constipation.

CONCLUSION:

This study was aimed to know the prevalence of constipation among western region population. The results show that the prevalence is low, stress and dehydration are big factors in causing constipation.

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