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ORIGINAL ARTICLE

Knowledge, the extent of awareness, and attitudes toward hemorrhoids in Makkah population, Saudi Arabia

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ABSTRACT

Background: Hemorrhoids are disorders characterized by symptomatic enlargement and distal displacement of the anal canal. It is a worldwide common anorectal disorder that increases with age. The present study aims to determine the knowledge, the extent of awareness, and attitudes toward hemorrhoids in the Makkah population, Saudi Arabia.

Methods: A descriptive, cross-sectional study was conducted among the general population who resides in Makkah region, aged 18 years or older. The data were collected using an online questionnaire designed by Google forms distributed electronically via Social media. The questionnaire covered demographical data and history of having hemorrhoid disease, general information about the knowledge, awareness, and attitude toward hemorrhoids.

Results: Among 417 of the participants surveyed, (64%) had a poor level of awareness regarding hemorrhoids. More than 60% of the participants were considered to have a good level of awareness. A significant relationship was found between income and history of hemorrhoids when linked with the level of awareness. Fifty percent of the participants considered tradition a barrier when they have hemorrhoids and want to see a doctor.

Conclusion: The present study found a lack of knowledge and awareness among the general population of Makkah city about hemorrhoid causes, preventive measures, and complications of hemorrhoids. This warrants the need for raising the level of awareness of Makkah residents through awareness programs and campaigns.

Keywords: Knowledge, awareness, attitude, hemorrhoids, Makkah.

Introduction

Hemorrhoids are "vascular submucosal cushions located along the anal canal" [1]. It is a common anorectal disorder characterized by symptomatic enlargement and distal displacement of the normal anal canal [2]. Hemorrhoids are one of the most common reasons for consultation in colorectal departments [1]. It can affect people of any age and both genders equally. The prevalence of hemorrhoids globally is around (50%-85%) [3]. Hemorrhoids are categorized into two types of internal hemorrhoid and external hemorrhoid. It is characterized by painless rectal bleeding during defecation with or without prolapsing anal tissue [4]. Hemorrhoid symptoms of hemorrhoids include mucous discharge, bright red bleeding from the rectum, pruritus or perianal irritation, perianal pain, protruding mass, prolapse of the hemorrhoidal cushions, soiling, and difficulties with hygiene [5]. One of the main risk factors of hemorrhoids is age. People between 45 and 65 years have a higher Incidence of hemorrhoids and declines after age 65 [6]. The factors that elevate the intra-abdominal pressure are found to be contributing to increased symptomatic hemorrhoids such as straining due to constipation, pregnancy state, and those who have a weakness in supporting tissue [7].

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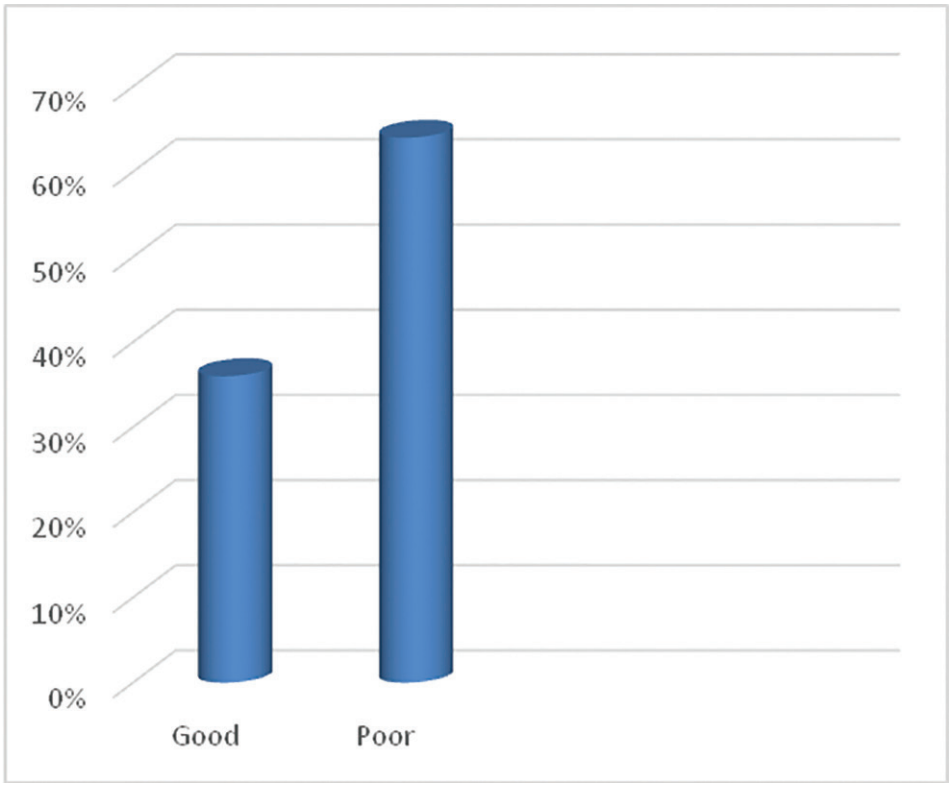

Figure 1. *Level of awareness.*

Accurate diagnosis requires a detailed history, thorough examination, and proctoscopy inspection of the anal canal and distal rectum [8]. Perianal thrombosis and incarcerated prolapsed internal hemorrhoids with subsequent thrombosis are the most common and severe complications of hemorrhoids [9]. A recent study showed that 42.1% of participants agreed that there is an embarrassment in visiting a doctor for hemorrhoids. Also, it showed the participant's awareness regarding hemorrhoids complications and preventive measures were moderately good [10]. The participants in the previous study were reluctant to seek medical consultation, which seems to be one of the foremost problems (10). Accordingly, we aim to conduct a cross-sectional study to determine the knowledge, the extent of awareness, and attitudes toward hemorrhoids in the Makkah population, Saudi Arabia.

Subjects and Methods

A cross-sectional study was conducted among the general population of the Makkah Region to assess the level of knowledge regarding hemorrhoids. Google forms designed an online questionnaire, then distributed electronically via social media apps (WhatsApp and Twitter) among the participants. They were informed about the study, and consent was obtained from all participants. The questionnaire was inspired and developed based on a review of the literature, and a study done by Alamri et al. [10] contained 16 questions divided into 3 sections: the first section consisted of 6 questions about sociodemographic characteristics (age, gender, area of residence, education, income, and work field). The second section included six questions about the previous history of hemorrhoids, the remaining questions about awareness regarding hemorrhoids. The third section contained four questions about an attitude toward hemorrhoids answered by no/maybe/yes. The questionnaire contained demographic data and general information about the knowledge, awareness, and attitude toward hemorrhoids. Validity assessment a panel of three experts reviewed the questionnaire items in context to study objectives to assess their content validity. The assessment was first done independently, and then items with debates were discussed in detail until consensus was reached. All suggested modifications were applied to improve the questionnaire validity until the current study's final format was obtained. The questionnaire showed an acceptable level of reliability. Removing any of the questionnaire items will not improve the questionnaire reliability so, all items were kept. Sample size was calculated by OpenEpi software and the minimum sample needed to accomplish a confidence interval of 95% was 385 participants. The language of the questionnaire was translated to Arabic and then translated back to English for publication. The survey was done based on previous articles; it contained demographic data, questions related to level of knowledge of hemorrhoids, and questions regarding the attitude of participants. The

Table 1. *Demographic data.*

Variable	Category	Frequency (%)
Age	18-30	305 (73.1%)
	31-50	96 (23.0%)
	More than 50	16 (3.8%)
Gender	Male	79 (18.9%)
	Female	338 (81.1%)
Education	No education	1 (0.2%)
	Secondary	6 (1.4%)
	High	59 (14.1%)
	University	351 (84.2%)
Income	Less than 5K	307 (73.6%)
	5-10K	44 (10.6%)
	10-15K	35 (8.4%)
	More than 15k	31 (7.4%)
Work field	Health care	213 (51.1%)
	Non health care	204 (48.9%)
History of hominoids	Yes, me	85 (20.4%)
	Yes, relative	201 (48.2%)
	No	131 (31.4%)

survey consists of either multiple-choice questions, with single or multiple answers that apply. All questions were mandatory. A common scoring method was used to assess the knowledge of participants, 2 points were given for correct answers, 1 point for "I do not know" answer and 0 for the incorrect. After data collection, a participant who correctly answered 60% or more of the questions (11 points out of 19) were considered to have good knowledge about hemorrhoids. We entered the data on Microsoft Excel spreadsheets. It was transferred into spreadsheets of Statistical Package for the Social Sciences. (SPSS, IBM, NY). Frequency was calculated for categorical variables and mean ± standard deviation for continuous variables. For comparing categorical variables Chi-square test was used. Univariate analysis was done to find out the association of hemorrhoids with age, gender, education, income, work field and history of hemorrhoids and a p-value of <0.05 was considered to be significant.

Results

Four hundred and seventeen individuals completed the questionnaire. There were 338 (81.1%) females and 79 (18.9%) males; the age of 305 participants ranged between 18 and 30 years old. Considering the education 14.1% with high school degree, while 84.2% with a baccalaureate degree. Exactly 48.9% were non-healthcare workers. Noticing the participant income, 73.6% of them had an income of less than 5,000 Saudi riyals. Regarding previous hemorrhoid's history, 20.4% were positive and 48.2% with positive relatives (Table 1). Table 2 represents the awareness of the adults regarding hemorrhoids, about the definition of hemorrhoids was 79.9% of the participants knew the enlarged rectal veins. The knowledge about the symptoms of hemorrhoids (itching or irritation of perianal skin, pain, swelling, and bleeding) was in the following percentages (10.1%, 21.7%, 16.4%, 19.2%). The knowledge of the participants about causes of hemorrhoids was very low, prolonged sitting (16.6%), straining (18.4%), chronic constipation (17.8%), and pregnancy (6.7%). Regarding complications, 33.1% of the participants knew that the anemia can be caused by hemorrhoids, also 59.7% did not know. Furthermore, about prevention, 46.5% knew it can be prevented by eating a fiber diet, 11.3% of the participants chose that the defecation when needed may prevent hemorrhoids, and 17.8% knew that to prevent hemorrhoids is to increase fluid intake. The level of awareness of the participants was calculated, 64% had a poor level of awareness regarding hemorrhoids (Figure 1). The relationship between the level of awareness and demographic factors was also analyzed, no significant value was found between the level of awareness and age, gender, education, and work field. Nevertheless, a significant value was found between income and history of hemorrhoids when linked with the level of awareness (Table 3).

The attitude of adults toward hemorrhoids were assessed in Table 4, and it showed that a 202 (48.4%) of the participants did not feel embarrassed while visiting the doctor, also a 290 (69.5%) of them agreed on seeing a doctor if they or one of their family have hemorrhoids. 210 (50.4%) of the participants think

Table 2. *The awareness of adults regarding hemorrhoids in Makkah region, Saudi Arabia.*

Awareness regarding hemorrhoids	Choices	Frequency (%)
Definition of hemorrhoid	Hemorrhoid is enlarged rectal veins	333 (79.9%)
	Hemorrhoid is injury of anal mucosa	28 (6.7%)
	Hemorrhoid is enlarged veins of the intestines	3 (0.7%)
	I don't know	53 (12.2%)
Symptoms of hemorrhoids	Fecal incontinence	25 (1.8%)
	Itching	142 (10.1%)
	Sweating	16 (1.1%)
	Abdominal pain	53 (21.7%)
	Anal pain	305 (21.7%)
	Diarrhea	25 (1.8%)
	Urine incontinence	9 (0.6%)
	Perineal ulcers	163 (11.6%)
	Swelling	230 (16.4%)
	Bleeding with defecation	270 (19.2%)
	Dysuria	43 (3.1%)
	I don't know	53 (3.8%)
Causes of hemorrhoids	Long-standing in the bathroom	163 (12.4%)
	Eating too many vegetables	1 (0.1%)
	Long duration of setting	218 (16.6%)
	Hot bathing	12 (0.9%)
	Straining	242 (18.4%)
	The Frankish chair	53 (4.0%)
	Tight underwear	53 (4.0%)
	Chronic constipation	234 (17.8%)
	Oral contraceptive pills	3 (0.2%)
	Pregnancy	88 (6.7%)
	Labor	122 (9.3%)
	No exercise	57 (4.3%)
	I don't know	70 (5.3%)
Complications	Hypertension	27 (6.5%)
	Anemia	138 (33.1%)
	Diabetes millets	3 (0.7%)
	I don't know	249 (59.7%)
Prevention	Good sleep	2 (0.5%)
	Stop smoking	3 (0.7%)
	Eating fiber diet	193 (46.5%)
	Avoid fatty meals	5 (1.2%)
	Hot drinks	1 (0.2%)
	Defecation when needed	47 (11.3%)
	Fasting	1 (0.2%)
	Clean tissue	6 (1.4%)
	Excessive fluid intake	74 (17.8%)
	I don't know	83 (20.0%)

the tradition is a barrier when they have hemorrhoids and want to see a doctor. Finally, there were only 46 (11.0%) who will use the herbal medication if they have hemorrhoids (Table 4).

Table 3. *The association between level of awareness and demographic factors awareness toward hemorrhoids.*

Variable	Good 80 (23.5%)	Poor 290 (76.5%)	*p*-value
Age			
18-30	108 (35.4%)	197 (64.6%)	0.695
31-50	38 (39.6%)	58 (60.4%)	
More than 50	5 (31.3%)	11 (68.8%)	
Gender			
Male	33 (41.8%)	46 (58.2%)	0.298
Female	118 (34.9%)	220 (65.1%)	
Education			
No education	0 (0.0%)	1 (100.0%)	0.278
Secondary	4 (66.7%)	2 (33.3%)	
High school	18 (30.5%)	41 (69.5%)	
University	129 (36.8%)	222 (63.2%)	
Income			
Less than 5K	114 (37.1%)	193 (62.9%)	0.044
5-10K	9 (20.5%)	35 (79.5%)	
10-15K	12 (34.3%)	23 (65.7%)	
More than 15K	16 (51.6%)	15 (48.4%)	
Work field			
Health care	82 (38.5%)	131 (61.5%)	0.359
Non health care	69 (33.8%)	135 (66.2%)	
History of hemorrhoids			
Yes, me	42 (49.4%)	43 (50.6%)	0.000
Yes, relative	78 (38.8%)	123 (61.2%)	
No	31 (23.7%)	100 (76.3%)	

Table 4. *Attitude of adults toward hemorrhoids in Makkah region, Saudi Arabia.*

Attitude toward hemorrhoids	Yes	Not sure	No
Visiting the doctor is embarrassing	95 (22.8%)	120 (28.8%)	202 (48.4%)
If you or one of your family members have hemorrhoids, will you see a doctor?	290 (69.5%)	90 (21.6%)	37 (8.9%)
Do you think tradition is a barrier to visit the doctor when they have heemraads?	210 (50.4%)	115 (27.6%)	92 (22.1%)
Will you use herbal medication if you have hemorrhoids?	46 (11.0%)	118 (28.3%)	253 (60.7%)

Discussion

Hemorrhoids are frequently occurring anorectal conditions widely related to many unhealthy habits and may be perceived differently by different social or ethnic groups as something requiring medical care [11,12]. Because hemorrhoids are not considered life-threatening conditions, socioeconomic circumstances, as well as the availability of self-treatment, may influence healthcare-seeking behavior [12]. In our study, 417 individuals completed the questionnaire. Females made up 81.1% of the participants, while males comprised 18.9%. This was found to be discordant with a study done in southwestern Saudi Arabia in the Aseer region where the male responders (61.6%) and (56.3%) females [10]. The study revealed that about 36% of the respondents have good awareness regarding hemorrhoid. While 63% of them have low awareness. This finding is in line with a Chitwan College study that indicated that moreover half of respondents (57.5%) had inadequate awareness and less than half (42.5%) had adequate awareness of hemorrhoids [13]. Unfortunately found to be discordant with the Asser study done in 2020 that revealed about 60% were aware of hemorrhoids [10]. Noticing the awareness was better among high income participants and those with a positive history of the disease. This was consistent with a study

where the awareness was better among young-aged, high-level education, and positive history [10].

Regarding medical consultation for hemorrhoids, about half of the participants did not feel embarrassed while visiting the doctor, the rest of them think tradition is the main barrier when seeing a doctor. Our results were the opposite to Aseer's study, they revealed that nearly half of the individuals felt embarrassed to see a doctor if they had hemorrhoids [10]. In conclusion, the preponderance of the participants from the Makkah region had lack of knowledge regarding the causes, preventive measures, and complications of hemorrhoids. Although participants' attitude toward hemorrhoids were justifiable, participants will not feel shamed for seeking medical consultation, and most of them will not go for herbal medication. Undoubtedly the need for more effort toward raising the awareness of hemorrhoids should be applied. Majority of our recruited subjects were females. We encourage that related surveys should be carried out across all Saudi Arabia regions with more concentration on barriers for seeking medical care and good knowledge and attitudes toward hemorrhoids.

Conclusion

The present study found a lack of knowledge and awareness among the general population of Makkah city about hemorrhoid causes, preventive measures, and complications of hemorrhoids. However, participants attitudes toward hemorrhoids were justifiable as many of the participants did not feel ashamed for seeking medical consultation. On the other hand, these findings of the survey support the necessity for awareness programs and campaigns.

Conflict of interests
The authors declare that there is no conflict of interest regarding the publication of this article.

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Consent to participate
Informed consent was obtained from all the participants.

Ethical approval
The study was approved by the Ethics and Research Review Committee of Umm Al- Qura University, Faculty of Medicine (Approval number: HAPO-02-K-012-2021-06- 686), date of approval was 17/6/2021.

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