

RESEARCH ARTICLE

Knowledge and Attitude of Patients Toward Hemorrhoids in Yogyakarta, Indonesia

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ABSTRACT

Introduction: Hemorrhoids are enlarged and displaced vascular structures located in the anal canal that may cause symptoms such as bleeding, pain, discomfort, and itching, thereby affecting patients' quality of life. Although hemorrhoidal disease is common, evidence regarding knowledge and attitudes toward hemorrhoids in Indonesia remains limited. This study aimed to assess knowledge and attitudes regarding hemorrhoids among adults diagnosed with hemorrhoids in Yogyakarta, Indonesia.

Methods: A cross-sectional study was conducted among adults aged ≥ 18 years diagnosed with hemorrhoids in Yogyakarta, Indonesia. Data were collected over six months using an online questionnaire adapted from previous studies. The questionnaire included knowledge-related items addressing hemorrhoid definition, causes, complications, and preventive measures, as well as four questions assessing attitudes toward medical consultation and traditional medicine. SPSS version 24 was used to conduct descriptive statistics and chi-square analysis.

Results: The study included 70 participants with 52.9% being male. Majority of the participants had awareness of common hemorrhoid symptoms particularly bleeding during defecation (98.6%) and dilated anal or rectal veins (88.6%). However, misconceptions were still observed with regard to complications and preventive measures including fiber-rich diet and adequate fluid intake. Overall, 65.7% of the participants were categorized as having good knowledge. In terms of attitudes, most of the participants reported willingness to seek medical consultation if hemorrhoidal symptoms occurred (94.3%) while 30% indicated preference toward traditional medicine. Cultural perceptions were also considered a potential barrier to medical consultation by 61.4% of the participants.

Conclusion: Patients with hemorrhoids in Yogyakarta generally had good awareness of hemorrhoidal symptoms and positive attitudes towards seeking medical care. However, important misconceptions about prevention and complications were still found. These findings highlight the need for culturally sensitive educational interventions to improve public understanding of hemorrhoidal disease and to encourage timely medical consultation.

Keywords: Knowledge; Attitude; Hemorrhoids; Yogyakarta

INTRODUCTION

Hemorrhoids are a common anorectal disorder characterized by dilation and displacement of vascular structures in the anal canal and may present with bleeding, pain, pruritus, and prolapse (1). Severe manifestations include perianal thrombosis and thrombosed prolapsed internal hemorrhoids (2). Hemorrhoids can affect individuals of different ages and sexes and are associated with multiple risk factors, including chronic constipation, straining during defecation, obesity, a sedentary lifestyle, and low fiber intake (3). Severe hemorrhoidal disease may lead to thrombosis, ulceration, strangulation, anemia, and a substantial reduction in quality of life (4,5).

The global burden of hemorrhoid disease is still quite high. The prevalence of hemorrhoids varies in different populations and the most recent international guidelines still consider hemorrhoidal disease to be one of the most common anorectal disorders encountered in clinical practice (1,6). Australia has the highest prevalence of hemorrhoids at 38.93%, followed by Israel at 16% and Korea at 14.4% (7). Studies to evaluate the frequency of hemorrhoids in Africa are still limited. Among those living in Egypt who underwent colonoscopy, the prevalence of hemorrhoids was 18% (2,8). In 2009, the Ministry of Health in Indonesia documented 355 cases of hemorrhoids. It is estimated that by 2030, the number of people affected by hemorrhoids in Indonesia will increase to around 21.3 million (8). In addition to the physical symptoms, hemorrhoids can also negatively affect the psychological well-being, daily activities, social interaction and work productivity, contributing to the social and economic burden on society (4).

Despite the wide availability of conservative and surgical therapy options (9,10) many persons with hemorrhoid symptoms tend to wait before seeking medical help (2). Shame associated with anorectal symptoms, social stigma, fear of invasive examinations, incorrect perceptions about the severity of the disease, and reliance on self-medication or traditional medicine can influence health-seeking behavior (11). This phenomenon has important social consequences as it relates to various aspects of people's lives such as their interpersonal relationships, eating habits, hygiene practices and sexual behavior (12). Anorectal diseases remain a sensitive issue in many socio-cultural settings, making it difficult to discuss openly which may lead to delayed diagnosis, underreporting and inappropriate self-management (13).

Studies have examined knowledge and awareness of hemorrhoidal disease in Saudi Arabia (14), Chinese (15), India and Peru (16). Their findings indicate gaps in knowledge and misconceptions regarding causes and treatment. Barriers such as embarrassment and stigma may also delay medical consultation (13). However, scientific evidence on knowledge of and attitudes toward hemorrhoids in Indonesia remains limited. In particular, the influence of sociocultural perceptions, misconceptions, and health-seeking behavior on Indonesians' understanding and management of hemorrhoidal disease remains unclear. Barriers to discussing anorectal symptoms may differ across populations; therefore, these factors should be examined within the specific cultural context of Yogyakarta, Indonesia.

This study therefore aimed to evaluate knowledge of and attitudes toward hemorrhoids among adults with a doctor-confirmed diagnosis of hemorrhoids in Yogyakarta, Indonesia. The findings are expected to inform effective education, promote earlier use of healthcare services, and improve public awareness of hemorrhoidal disease.

METHODS

Research Design

This descriptive cross-sectional study was conducted among patients diagnosed with hemorrhoids in the Special Region of Yogyakarta, Indonesia. Participants were aged 18 years or older, and data collection took place over six months.

Population and Sampling

Participants were recruited from patients diagnosed with hemorrhoids at AMC Hospital, Yogyakarta, using a random sampling method. Data were collected through an online questionnaire administered via Google Forms. Patients aged 18-80 years with a doctor-confirmed diagnosis of hemorrhoids were eligible to participate. Incomplete responses were excluded from the final analysis.

Research Instrument

The questionnaire was adapted from a previous study by Alamri (14) and collected demographic characteristics, including age, sex, education level, occupation, and place of residence. Knowledge of hemorrhoids was assessed using items addressing the definition, symptoms, causes, complications, and preventive measures. Attitudes toward medical consultation for hemorrhoids were assessed using four structured questions. Before distribution, the questionnaire was reviewed and modified to improve linguistic clarity and contextual appropriateness.

Data Collection Procedure

Data were collected using an online questionnaire distributed through Google Forms. Responses were exported to Microsoft Excel for data cleaning and error checking before statistical analysis.

Data Analysis

Data analysis was done using Statistical Package for the Social Sciences (SPSS) version 24. Descriptive statistics were expressed in terms of frequencies and percentages. Each correct knowledge response was given a score of 1 point while incorrect responses were given a score of 0. The total knowledge score was categorized into poor knowledge (<50% of the

total score) and good knowledge ($\geq 50\%$ of the total score). The association between participants' demographic characteristics and knowledge level was analyzed using the chi-square test. A p-value of less than 0.05 was considered statistically significant.

Ethical Consideration

This study received ethical approval from the Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta, with ethical clearance number 027/EC-KEPK FKIK UMY/II/2024. Informed consent was obtained from all participants before participation in the study. The participants were told that their participation was voluntary and they could withdraw from the study at any time without penalty. All the information of the participants was kept confidential and anonymous throughout the study.

RESULTS

Participant Characteristics

A total of 70 participants diagnosed with hemorrhoids were included in this study. Most participants were aged 36-45 years (60%), while only 8.6% were aged 46 years or older. Male participants accounted for 52.9% of the sample. Regarding educational level, half of the participants (50%) had completed a bachelor's degree, whereas only 1.4% had completed junior high school education. In terms of occupation, 34.2% of respondents were employees, followed by civil servants (31.4%), students (27.2%), and housewives (7.2%). Most participants resided in urban areas (74.3%) (Table 1).

Table 1. Characteristics of Participants

Variables		Frequency	%
Age	< 25 years old	12	17.1 %
	26-35 years old	10	14.3 %
	36-45 years old	42	60 %
	≥ 46 years old	6	8.6 %
Gender	Male	37	52.9 %
	Female	33	47.1 %
Education	Junior high school	1	1.4 %
	High school	12	17.1 %
	Diploma	4	5.7 %
	Bachelor's degree	35	50 %
	Master degree	15	21.4 %
	Doctoral degree	3	4.3 %
Occupation	Student	19	27.2%
	Employee	24	34.2 %
	Civil servant	22	31.4 %
	House wife	5	7.2 %
Living	Urban area	52	74.3 %
	Rural area	18	25.7 %

Knowledge of Patients Regarding Hemorrhoids

Participants demonstrated variable levels of knowledge across different domains of hemorrhoidal disease (Table 2). Most respondents correctly recognized bleeding during defecation as a symptom of hemorrhoids (98.6%) and identified dilated anal and rectal veins as part of the disease process (88.6%). In addition, prolonged sitting was commonly recognized as a contributing factor (91.4%).

However, several clinically important misconceptions were identified. Only 15.7% of participants recognized fiber-rich food intake as a preventive measure, while 42.9% identified adequate fluid intake as beneficial for prevention. Similarly, only 42.9% recognized adequate sleeping habits as part of preventive measures. Misconceptions were also observed regarding complications of hemorrhoids. Although 72.9% identified anemia as a possible complication, awareness regarding other associated conditions varied substantially.

Furthermore, certain questionnaire items showed inconsistency in responses between the domains of symptoms and causative factors, reflecting heterogeneity in participants' understanding of hemorrhoidal disease. These results imply that while general awareness of hemorrhoids was relatively high, significant gaps existed in understanding preventive behaviors and clinically relevant disease management.

Table 2. Knowledge of Patients Regarding Hemorrhoids

Knowledge regarding hemorrhoids		Yes (n)	Yes (%)	No (n)	No (%)
Definition of hemorrhoids	Hemorrhoids are anal injuries	62	88.6%	8	11.4%
	Definition of hemorrhoids	31	44.3%	39	55.7%
	Dilated anal and rectal veins	62	88.6%	8	11.4%
	Fecal incontinence	54	77.1%	16	22.9%
	Itching	40	57.1%	30	42.9%
	Sweating	39	55.7%	31	44.3%
	Abdominal pain	18	25.7%	52	74.3%
	Diarrhea	23	32.9%	47	67.1%
	Perianal pain	23	32.9%	47	67.1%
	Urine incontinence	58	82.9%	12	17.1%
	Perianal erosions	39	55.7%	31	44.3%
	Bleeding with defecation	69	98.6%	1	1.4%
	Painful urination	10	14.3%	60	85.7%
	Anal pus discharge	44	62.9 %	26	37.1 %
	Perianal edema	51	72.9 %	19	27.1 %
Causes of hemorrhoids	Long standing in bathroom	5	7.1 %	65	92.9 %
	Eating too much vegetables	2	2.9 %	68	97.1 %
	Long duration of setting	52	74.3 %	18	25.7 %
	Hot bathing	43	61.4 %	27	38.6 %
	Defecation stretching	4	5.7 %	66	94.3 %
	Prolonged sitting	64	91.4 %	6	8.6 %
	Tight pants	45	64.3 %	25	35.7 %
	No sports	21	30 %	49	70 %
	Chronic constipation or diarrhea	40	57.1 %	30	42.9 %
	Oral contraceptive pill	53	75.7 %	17	24.3 %
	Pregnancy	14	20 %	56	80 %
	Labor	39	55.7 %	31	44.3 %
Complication of hemorrhoids	Obesity	30	42.9 %	40	57.1 %
	Hypertension	40	57.1 %	30	42.9 %
	Diabetes mellitus	11	15.7 %	59	84.3 %
	Anemia	51	72.9 %	19	27.1 %
Preventive measures	Sufficient sleeping hours	30	42.9 %	40	57.1 %
	Stop smoking	40	57.1 %	30	42.9 %
	Eating fiber-rich food	11	15.7 %	59	84.3 %
	Avoid fatty food	51	72.9 %	19	27.1 %
	Hot drinks	30	42.9 %	40	57.1 %
	Defecation on need	40	57.1 %	30	42.9 %
	Fasting	11	15.7 %	59	84.3 %
	Use tissue for cleaning	51	72.9 %	19	27.1 %
	Excessive fluid intake	30	42.9 %	40	57.1 %

Overall Knowledge Level Regarding Hemorrhoids

According to the prespecified scoring system, 46 participants (65.7%) were classified as having good knowledge of hemorrhoids, whereas 24 participants (34.3%) were classified as having poor knowledge (Figure 1).

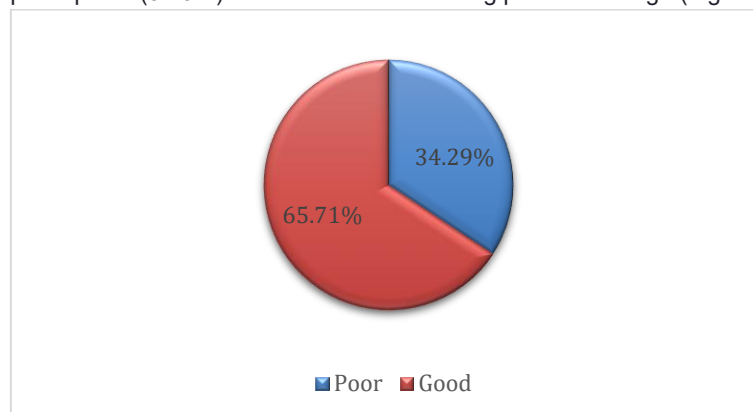
**Figure 1.** Overall Knowledge Level Regarding Hemorrhoids**Association Between Participant Characteristics and Knowledge Level**

Table 3 presents the distribution of knowledge level according to participant characteristics. Educational level and knowledge level were statistically significantly associated ($p < 0.001$). The proportion of participants with bachelor's and postgraduate degrees classified as having good knowledge was higher.

No statistically significant associations were found between knowledge level and age ($p = 0.068$), gender ($p = 0.113$), occupation ($p = 0.052$) or residential area ($p = 0.336$). Therefore, although some demographic groups seemed to have descriptively higher proportion of good knowledge these differences were not statistically significant.

Table 3. Distribution of Knowledge Level by Participant Characteristics

Variable		Knowledge level				P Value
		Poor		Good		
		Frequency	(%)	Frequency	(%)	
Age	≤ 25 years old	1	1.4 %	11	15.71 %	0.068
	26-35 years old	1	1.4 %	9	12.85 %	
	36-45 years old	2	2.85 %	40	57.14 %	
	≥ 46 years old	1	1.4 %	5	7.14 %	
Gender	Male	2	2.85 %	35	50 %	0.113
	Female	3	4.28 %	30	42.85 %	
Education	Junior high school	1	1.4 %	0	0 %	0.000
	High school	2	2.85 %	10	14.28 %	
	Diploma	1	1.4 %	3	4.28 %	
	Bachelor's degree	1	1.4 %	34	48.57 %	
	Master degree	0	0 %	15	21.42 %	
	Doctoral Degree	0	0 %	3	4.28 %	
Occupation	Student	1	1.4	18	25.72 %	0.052
	Employee	3	4.29 %	21	30 %	
	Civil servant	1	1.4 %	11	15.71 %	
	Housewife	1	1.4 %	9	12.85 %	
Living	Urban area	2	2.85 %	40	57.14 %	0.068
	Rural area	1	1.4 %	5	7.14 %	

Attitudes of Patients Toward Hemorrhoids

In general, participants had a positive attitude towards seeking medical help for hemorrhoids (Table 4). The percentage of respondents who feel embarrassed to come to a doctor for hemorrhoids is low (2.9%). In addition, 94.3% of them stated that they would immediately consult a doctor if they or family members experienced symptoms that indicate hemorrhoids.

Nevertheless, sociocultural barriers were still evident. More than half of the participants (61.4%) believed that customs and traditions could have a role in the delay in seeking medical consultation and 30% of respondents said that they would be willing to use traditional or folk medicine to treat hemorrhoids.

These findings indicate that the healthcare seeking behavior of patients with hemorrhoids may be influenced by positive general attitude to seek professional medical care, cultural perceptions, and preference for alternative treatments.

Table 4. Attitudes Toward Hemorrhoids

Attitude toward hemorrhoids	Yes (n)	No (%)	No (n)	No (%)
Visiting the doctor is embarrassing	2	68	2.9 %	97.1 %
If you or someone in your family is diseased, will you see a doctor immediately?	66	4	94.3%	5.7 %
Do you think customs and traditions constitute a barrier for society in delaying or not going to the doctor?	43	27	61.4 %	38.6%
If you or one of your family members were injured, would you resort to folk medicine?	21	49	30 %	70%

DISCUSSION

The respondents in the present study showed an average level of basic knowledge related to common symptoms of hemorrhoids especially rectal bleeding and identified prolonged sitting as a potential risk factor, but some misconceptions were present related to preventive measures and long-term disease management. This is consistent with previous studies that found a greater awareness of hemorrhoid symptoms than knowledge of lifestyle-based prevention and conservative management strategies (16,18).

One of the most prominent findings of this study was the low proportion of respondents who identified high-fiber food intake and adequate fluid intake as preventive measures for hemorrhoids. Dietary modification and regulation of bowel habits are generally accepted components of conservative hemorrhoid management (19,20). Limited knowledge of preventive measures may contribute to recurrent symptoms, delayed improvement, and inappropriate self-management (21). Previous studies have likewise shown that the public more readily recognizes symptoms than preventive behaviors and lifestyle-based management approaches (22).

This study also identified variations in respondents' understanding of hemorrhoid complications and causes. Most of the respondents knew that rectal bleeding is one of the common symptoms; however, their knowledge of complications such as anemia and risk factors such as chronic constipation are inconsistent (1). These results suggest that some respondents may have a superficial knowledge of hemorrhoids with limited knowledge of disease progression or long-term consequences (12). Consequently, the overall knowledge score reported in this study may overestimate respondents' actual depth of understanding.

Interpretation of the findings should also consider the educational profile of the respondents. More than half of the participants had bachelor or master's degrees, which may partly explain the relatively high proportion of respondents classified as having

“adequate knowledge”. Therefore, the results may not fully represent the whole population of Indonesia, especially the lower education level and limited access to health information. In addition, the online questionnaire may have biased recruitment towards those with higher digital literacy and access to the internet. Previous studies have shown that higher educational levels are associated with better health-related knowledge including knowledge of hemorrhoids and chronic disease (14,18). Although most respondents were not embarrassed to consult a doctor about hemorrhoids, sociocultural barriers to health-seeking behavior were identified. More than half agreed that customs and traditions could delay or discourage medical treatment. This finding is important because anorectal complaints may be difficult to discuss openly (23,24).

Previous research has identified barriers to seeking medical care for hemorrhoidal symptoms, including embarrassment and related concerns (10,19). In this study, 30.0% of respondents reported that they would use traditional or folk medicine for hemorrhoids (25). This finding indicates that preferences for alternative treatment may coexist with generally positive attitudes toward professional medical care. Therefore, health education programs should address not only symptom recognition but also appropriate prevention, indications for medical consultation, and evidence-based management.

In the present study, educational level was the only variable significantly associated with respondents' knowledge level. Although younger respondents descriptively appeared to demonstrate higher knowledge scores, the association did not reach statistical significance. Therefore, the influence of age and occupation on knowledge should be interpreted cautiously and should not be considered definitive predictors based on the current findings.

This study demonstrates a relatively similar pattern in comparison with previous studies conducted in other countries, i.e., high recognition of hemorrhoid's symptoms, but lower understanding in regard to prevention and long-term management (26). Nevertheless, sociocultural factors identified in this study, particularly cultural perceptions toward anorectal diseases and the use of traditional medicine, may be important contextual features within the Indonesian setting. These findings suggest that public health education of hemorrhoids should include culturally sensitive approaches to promote healthy bowel habits, increased fiber intake, lifestyle modification, and timely medical consultation.

Several limitations of this study need to be considered. Firstly, the cross-sectional design of this study limits the ability to determine causal relationships between the respondents' characteristics and the levels of knowledge. Secondly, the study used self-administered questionnaires, which can lead to response bias and socially desirable responses, although the respondents were recruited from patients with a previous history of hemorrhoid diagnosis at a healthcare facility. Thirdly, the relatively small sample size, and the predominance of highly educated respondents may limit the generalizability of the findings to the broader Indonesian population. Also, the online recruitment method may have selected respondents with higher digital literacy and internet access. Future research with larger and more diverse populations is needed to improve assessment of treatment-seeking behavior, self-management practices and sociocultural influences associated with hemorrhoid disease, as well as self-management and the impact of sociocultural factors on hemorrhoid disease.

CONCLUSION

This study indicates that hemorrhoid patients in Yogyakarta have a fairly good knowledge of common symptoms of hemorrhoids and a positive attitude towards seeking medical help. However, several misconceptions related to risk factors, complications, and preventive measures were still found, especially on diet, fluid intake and lifestyle-based management. Moreover, socio-cultural factors and preferences for traditional medicine still have a potential to influence the health-seeking behavior.

The results of this study emphasize the importance of more specific and culturally appropriate health education to improve the knowledge of the general population about the etiology, complications, prevention, and importance of early medical assessment of hemorrhoids. This study has some limitations such as the cross-sectional study design, a relatively small sample size, and the use of an online questionnaire that may be subjected to selection bias; further studies with a larger population are needed.

DECLARATIONS

Author contributions: Fadli Robby Amsriza contributed to the study conception, research design, data collection, data analysis, and drafting of the manuscript. Rizka Fakhriani contributed to data interpretation, critical manuscript revision, and final approval of the version to be published. Both authors reviewed and approved the final manuscript.

Conflicts of interest: We declare that we do not have any conflict of interest.

Declaration of Generative AI And AI-Assisted Technologies in the Writing Process: The authors state that no generative artificial intelligence tools were used to generate, analyze, or interpret data in this study. AI-assisted technologies were used only to support language refinement and grammar checking during manuscript preparation. All content, findings, and conclusions are the result of the authors' own work.

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