

Evaluating the Disparities in Knowledge, Attitudes and Practices towards Haemorrhoids: Insights from Rural and Urban Populations of Kolhapur District

Abstract

Background:

Haemorrhoids (piles) are a common condition characterized by anal discomfort, bleeding, and swelling due to dilated veins in the anal canal. Studies show that despite a high prevalence, delayed diagnosis is common due to lack of awareness and psychosocial stigma. This study aimed to compare knowledge, attitudes, and practices (KAP) regarding haemorrhoids among rural and urban populations of Kolhapur.

Methods:

A cross-sectional comparative study was conducted with 262 participants from rural and urban areas of Kolhapur district, screened using a closed-ended, self-structured questionnaire. Out of which 56 participants (rural 30, urban 26) met inclusion criteria were considered for the study. Data was collected digitally through google forms and analysed using Microsoft excel and SPSS

Results: Independent t-tests showed no difference between KAP scores among rural and urban groups of Kolhapur district

Mean scores were low with overall knowledge 36% (rural 27%, urban 26%), attitude 21% (rural 29%, urban 27%) slightly higher in rural participants (29% vs 27%), and reported poor practices at 24% (rural 22%, urban 23%)

Conclusion:

This study concludes that there is no difference in the KAP among rural and urban groups. Most respondents had good awareness about symptoms of haemorrhoid but overall knowledge was poor. Many participants held misconceptions and showed negative attitudes toward hygiene, care, and were hesitant to seek help.

Practices were suboptimal in both groups, like taking high-fibre diet was in higher percentages in urban respondents, adequate hydration were reported at low levels in both groups.

Key words – Haemorrhoids, piles, knowledge, attitude, practices, KAP, causes, risk factors

1. Introduction

Haemorrhoids, commonly known as piles, are a prevalent condition affecting a significant portion of the population. They are defined as swollen and dilated veins in the anal canal⁽¹⁾ which can cause discomfort, itching, and prolapse, significantly impacting the quality of life.⁽¹⁰⁾ The condition can be managed through various treatment modalities, including modern medicine, Ayurveda, and Homeopathy. Majority of patients careful clinical examination will be diagnostic those complaining of anal symptoms but it requires a relaxed patient who is informed what is examination and its importance in diagnosis.⁽²⁾ Despite the availability of these treatments, there is a lack of comprehensive data on public awareness, attitudes, and practices related to haemorrhoids, especially in different demographic settings. This study aims to bridge this gap by evaluating the knowledge, attitude, and practices about haemorrhoids among adults in rural and urban areas of Kolhapur.

2. Hypotheses:

Null Hypothesis H₀: There is no significant difference between Knowledge, Attitude, and Practice scores among rural and urban groups.

3. Objectives

1. To evaluate and compare Knowledge, Attitude, and Practice scores among Rural and urban populations.
2. To evaluate the gap between knowledge, attitude and practice within each group.

4. Material and Methods

This comparative cross-sectional study was conducted between June 2025 and January 2026, involving 262 participants from rural and urban areas of Kolhapur district. The study included both male and female participants aged between 20 and 60 years. Data was collected digitally using a Google Form available in both Marathi (the local language) and English. A

close-ended, self-structured questionnaire was used to gather information on demographics, knowledge, attitudes, and practice with coping techniques for haemorrhoids.

4.1 Inclusion: Pre-diagnosed cases of piles of both gender and age group between 20 to 60 years from different rural and urban places of Kolhapur district willing to participate were included in the study.

4.2 Screening:

Of the **262** people screened in both rural and urban areas—**150 participants were (57%)** from rural areas and **112 (43%)** from urban areas, out of which **56** met the study's inclusion criteria and were shortlisted, including **30 (57%)** from rural and **26 (46%)** from urban areas. Consent was taken from all participants before collection of data and were informed about the purpose of the study. Confidentiality was maintained regarding the identity of the participants. Ethical approval was obtained before the study's commencement.

4.3 Questionnaire:

A pilot study was conducted to improve the quality of questionnaire. The questionnaire consisted of sixteen questions, organized into four sections to facilitate the smooth conduct of the study. The first part of the questionnaire focused on demographic details such as gender, marital status, age and place of residence (urban or rural).

The second, third and fourth part of the questionnaire included four questions each, assessing knowledge, attitude and practices related to piles, respectively

Also, two multiple choice questions, one of knowledge and last related to coping practices were included.

4.4 Statistical Analysis

Statistical analysis was done using Microsoft excel and SPSS software.

Independent Samples t-test (parametric) for each domain (knowledge, attitude and practice) were applied separately to test the hypothesis (Ho) that there is no significant difference between Rural and Urban groups

Descriptive statistics, such as mean values and percentages, were applied to present demographic information and responses related to knowledge, attitudes, and practices within the group

All the decimals of percentages were converted to whole numbers and overall percentages above 50% were considered positive for assessing knowledge, attitude and practices.

Answer 'yes' to the options in questionnaire were considered as positive responses.

Hypothesis Testing:

H₀ - There is no significant difference between Knowledge, Attitude, and Practice scores among rural and urban groups.

The comparison between rural and urban group was done by applying Independent Samples t-test (parametric) for each domain:

- Knowledge: 27.3 vs. 26.3 → difference = 1.0%
- Attitude: 29.4 vs. 27.4 → difference = 2.0%
- Practice: 22.2 vs. 23.4 → difference = 1.2%

t-tests results yielded p-value > 0.05

There is no statistically significant difference between Knowledge, Attitude, and Practice scores among Rural and Urban groups, accepting the null hypotheses

5. Results

5.1 Demographic Data

Number of male participants was higher compared to females in both the groups and most of the participants were between age group of 20 to 40 years and married. Overall, **37 (66%)** participants, suffering with piles had sedentary occupation (sitting for 6 hours or more) observed commonly among urban participants **20 (77%)** than rural.

Table No.1: Demographic Data

S. No.	Preliminary Data	Rural	Urban	Total
1	Gender - Male	26	21	47
	Female	04	05	09
2	Marital status - Married	28	22	50

	Unmarried	02	04	06
	Occupation – Sedentary	17	20	37
	Non- Sedentary	13	06	19
3	Age - 20-30	08	12	20
	30-40	09	09	18
	40-50	06	04	10
	50-60	01	01	02
	Above	01	00	01

5.2 Knowledge:

Questionnaire included four questions related to Knowledge and Awareness; however, fourth question was a multiple-choice question

Both the rural **90%** and urban **73%** participants had good knowledge about ‘**what is piles**’ with overall awareness of 86%. Similarly, **70%** rural and **73%** urban respondents knew ‘anal itching/pain’ as the symptom of piles for an overall rate of **71%**.

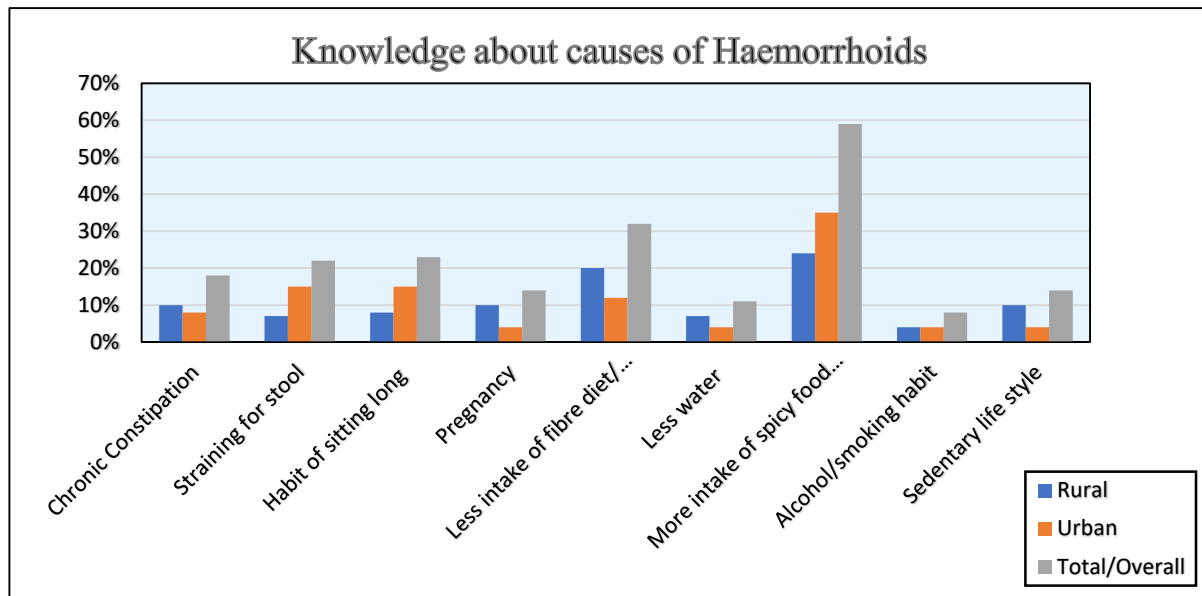
Knowledge of traditional treatments (Homoeopathy, Ayurveda, Unani, Siddha) was reported by **38 of 56 (68%)** participants—**20/30 (67%)** in rural areas and **18/26 (69%)** in urban areas, suggestive of good knowledge about the other systems offering treatment for piles among both groups

Table No. 2: Knowledge And Awareness

No	Questions	Response as YES		
		Rural (N=30)	Urban (N=26)	Total (N=56)
1	Do you know what is piles?	90% N=27	73% N=19	86% N=48
2	Do you know anal itching/pain is a symptom of piles?	70% N=21	73% N=19	71% N=40

3	Do you know about Homoeopathy, Ayurveda, Unani, Siddha, etc offer treatments for piles?	67% N= 20	69% N= 18	68% N=38
4	Do you know which among the following causes/risk factors for piles are?	Rural 11%	Urban 11%	Total = 22%
a	Chronic Constipation	10%	8%	18%
b	Straining for stool	7%	15%	22%
c	Habit of sitting long	8%	15%	23%
d	Pregnancy	10%	4%	14%
e	Less intake of fibre diet/ Vegetable /fruits	20%	12%	32%
f	Less water	7%	4%	11%
g	More intake of spicy food /fast food	24%	35%	59%
h	Alcohol/smoking habit	4%	4%	8%
i	Sedentary life style	10%	4%	14%
	Average Knowledge %	27%	26%	36%

Figure No 1: Knowledge about causes of Haemorrhoids



Mixed understanding about causes was observed, as both rural (24%) and urban participants (35%) thought spicy/fast food (59%) was the main cause whereas only few recognized constipation (10% vs 8%), low water intake (20%vs12%), and sedentary lifestyle (10% vs 4%) among rural and urban groups as the causes for haemorrhoids

Urban participants more often identified sitting long (15%), and straining as causes (15%), compared to rural participants who identified low-fiber diet (20%) and pregnancy (10%) as related causes.

Both groups had good knowledge about good haemorrhoids and its symptoms but low awareness about the causes of haemorrhoids (22%)

5.3 Attitude:

Four questions to evaluate the attitude among rural and urban respondents were considered

Over half the participants (54%) believed poor personal hygiene causes piles, with slightly higher percent in rural participants (57%) than urban (50%). A large majority (64%) felt hesitant to see a doctor with, 67% from rural and 62% from urban group.

Table No. 3: Attitude Table

No	Question	Response as YES
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		Rural (N=30)	Urban (N=26)	Total (56)
1	Do you feel piles is caused due to poor personal hygiene	(N= 17) 56.66%	(N=13) 50%	(N=30) 53.57%
2	Do feel hesitated to consult the doctor	(N=20) 67%	(N=16) (62%)	(N=36) 64.28%
3	Surgery as first choice of treatment	(N=02) 6.66%	(N=03) (11.53%)	(N=5) (3%)
4	Do you seek medical help immediately if there is bleeding from anus	(N=08) 27%,	(N=06) 23%	(N=14) 25%
	Average %	29%	27%	21%

Urban participants were a bit more likely to choose surgery as first option compared to rural (12% vs 6.8%), but overall (3%) inclination towards surgery was low.

Only about one-quarter in both groups would seek immediate care for bleeding (rural 27%, urban 23%, overall, 25%) which is quite concerning.

Attitude of both the groups was leaning more towards negative as the mean attitude of rural (29%) was very close to mean attitude of urban group (27%)

5.4 Practices:

Home remedies were used by a small number of overall participants (about 11%), slightly more in rural areas (13%) while urban only 8% was observed.

Use of medicines to ease stool was higher in urban (61.5%) than rural (50%). History of surgery was reported higher in urban (46%) than rural (33%)

Table No 4: Practice Table

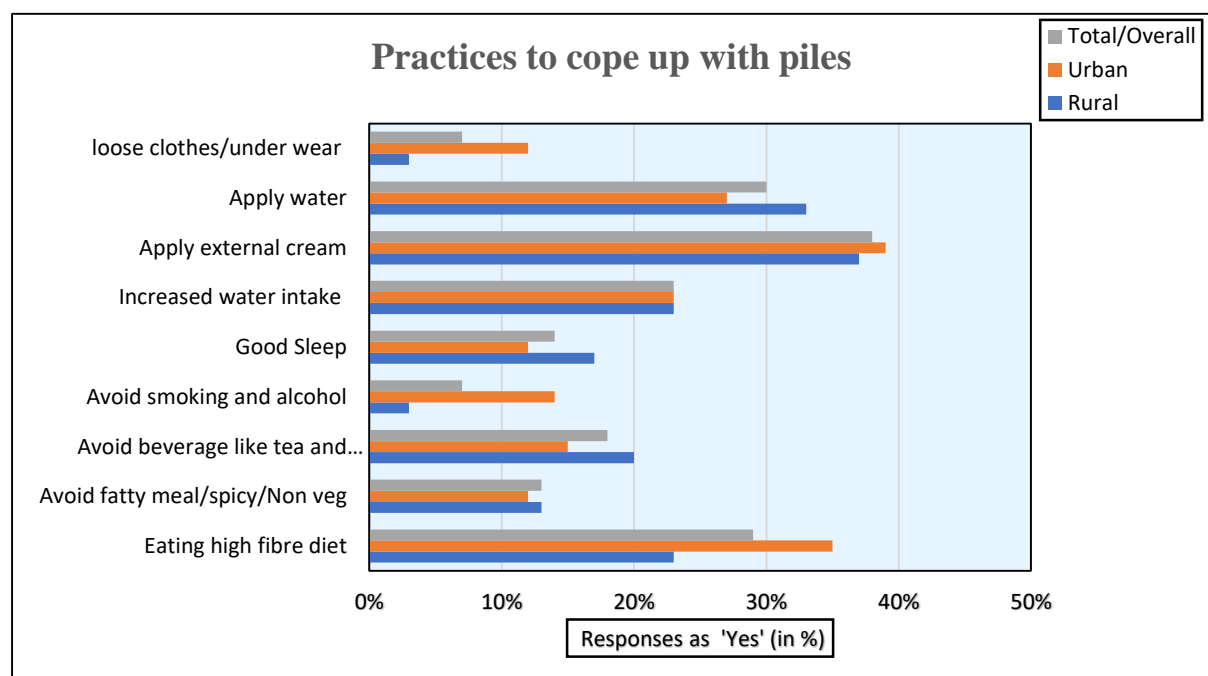
No.	Questions	Response as YES		
		Rural	Urban	Total
1	Have you tried any home remedies for getting relief from piles	13% N=4	8% N=2	11% (6)
2	Do you take any medicine for the easy passage of stool?	50% N=15	38%N=16	55% (31)
3	Have you undergone any surgery for piles	33% N=10	46% N=12	39% (22)
4.	What Practices do you follow to cope up with piles			
a	Eating high fibre diet	23%	35%	29% (16)
b	Avoid fatty meal/spicy/Non veg	13%	12%	13% (7)
c	Avoid beverage like tea and coffee	20%	15%	18% (10)
d	Avoid smoking and alcohol	3%	14%	7% (4)
e	Good Sleep	17%	12%	14% (8)
f	Increased water intake	23%	23%	23% (13)
g	Apply external cream	37%	39%	38% (21)
h	Apply water	33%	27%	30% (17)
j	loose clothes/under wear	3%	12%	7% (4)
	Average %	22%	23%	24%

Preventive practices like eating high-fibre food were observed with slightly higher percentages in urban (**35%**) whereas increasing water intake were reported by one-third 23% of participants overall with almost equal percentages in both groups

Self-care actions of applying external creams (**37% vs 39%**) and using lukewarm water (**33% vs 27%**) were practiced with similar rates in both groups

Lifestyle changes like avoiding smoking/alcohol (3% vs 14%) or wearing loose clothes (3% vs 12%) were uncommon among both rural and urban respondents, with slight higher percentages in urban

Figure 2: Practices to Cope Up With Piles



Good sleep (17% vs. 12%), use of simple home/self-care measures (13% vs. 8%) and consuming medicines for easy passage of stools (50% vs. 38%) were practised by rural respondents more often compared to urban

Both rural and urban groups though practised different techniques to cope with the piles, but the mean percentages of both the groups were similar.

Practices toward piles were suboptimal among both the groups, where urban participants relied more on medical treatments (medicines and surgery) rural participants tend to use slightly more home/self-care, but both groups showed lower percentages of practices related to preventive measures like high-fiber diet, hydration, and lifestyle changes.

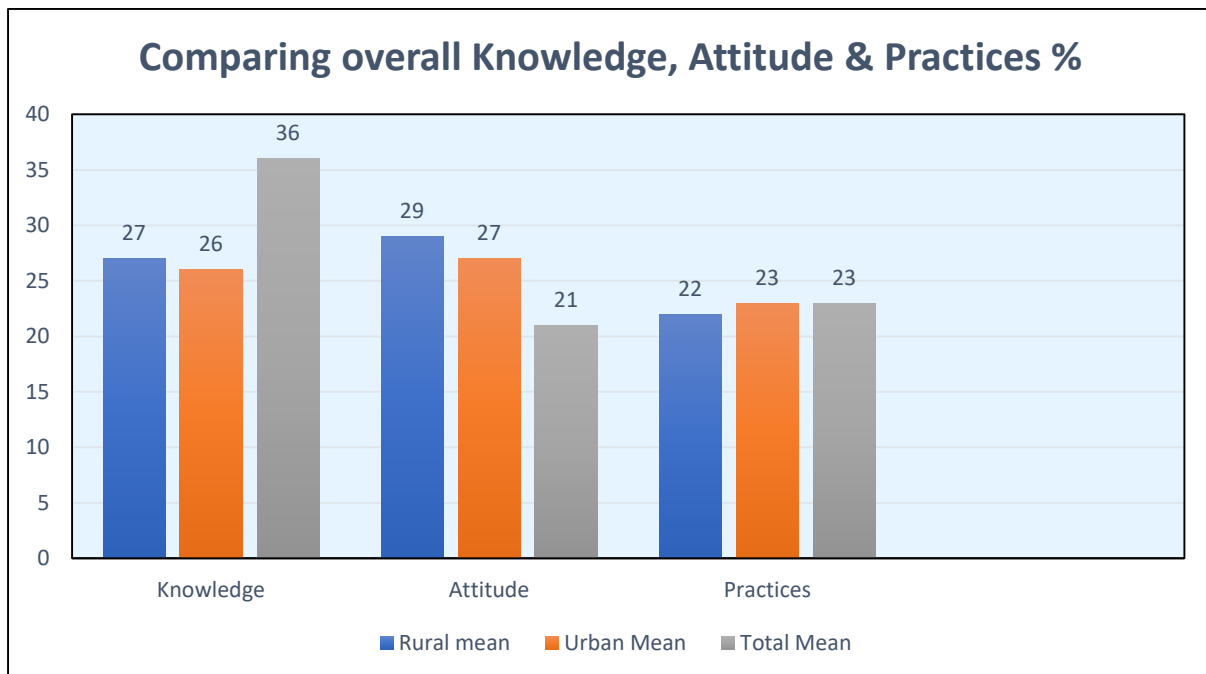
Comparative evaluation of knowledge, attitude and practices related to haemorrhoids in rural and urban areas

Table No. 5: Consolidated Mean% of Knowledge, attitude and practices

Category	Rural mean %	Urban Mean %	Total Mean %
Knowledge	27	26	36
Attitude	29	27	21
Practices	22	23	23

The mean percentages knowledge (**36%**), attitude (**21%**) and practice (**24%**) among rural and urban participants were evaluated with knowledge levels relatively low in both groups (**Rural 27%, Urban 26%**) followed by attitudes, slightly higher in rural participants (**29% vs. 27%**) and, practices were suboptimal in both groups (**Rural 22%, Urban 23%**).

To compare the Knowledge, attitude and practices among rural and urban groups mean for each group was calculated for all three domains and statistical tool Independent sample t test was used to test the hypothesis



The comparison between rural and urban group was done by applying Independent Samples t-test (parametric) for each domain, t-tests results yielded p-value > 0.05, resulting in no significant difference between Knowledge, Attitude, and Practice scores among Rural and Urban groups

6. Discussion

This study was planned to compare the Knowledge, attitude and practices related to haemorrhoids in rural and urban areas of Kolhapur district where 262 participants were screened from different places and 56 respondents who fulfilled inclusion criteria were considered for further study, out of which 30 were rural and 26 were urban

In the present study there was no difference in the knowledge, attitude and practices related to hemorrhoids among rural and urban population of Kolhapur district.

When within the group comparison was done urban and rural both had good knowledge about piles and its symptoms but lacked awareness about the causes for piles, suggesting that there is need to educate both the groups about the causes. The overall attitude was mixed but leaning towards negative, as many participants had misconceptions about hygiene (**54%**), majority were hesitant to seek care (**64%**), and only about **25%** would seek immediate help for bleeding, suggesting widespread misconceptions and reluctance to seek medical care, hence educating for timely care-seeking is important. Practices toward piles were suboptimal among both the groups. where urban participants relied more on medical treatments (medicines and surgery) rural participants tend to use slightly more home/self-care, but both groups showed lower percentages of practices related to preventive measures like high-fiber diet, hydration, and lifestyle changes.

Similar other studies were done in different parts of India and Saudi Arabia. Comparing the results of different studies conducted in India, namely P.K. Sutariya et al⁽³⁾ (Ahmedabad, 2015), Malviya V.K. et al⁽⁴⁾ (Bhopal, 2019), Dr. Chetan Sakore et al⁽⁵⁾(Amravati, 2023) and the present Kolhapur district study it was observed that, Ahmedabad reported **67%** male patients while Kolhapur reported **84%** males, and Bhopal showed a similar pattern with a predominance of younger patients (20–40 years), matching the Kolhapur findings. These findings were contrary to the results in Amravati study where females reported in higher numbers with age more than 40 years. People following the sedentary life style or low physical activity was much higher in Amaravati (**82.86%**), followed by Kolhapur (**67%**) compared with Ahmedabad (**22%**) and Bhopal (**34.9%**), suggesting greater lifestyle risk in the Amravati and Kolhapur studies.

Regarding awareness of the causes related to piles, like constipation **18%** vs **78%** vs **46.67%**, and Alcohol consumption **8%** vs **15 %** vs **50%** were reported with mixed responses

(Kolhapur vs Ahmedabad vs Amravati) while straining for stools, low fibre diet, less water intake, spicy food, chronic constipation or diarrhoea, straining during the defecation, low physical activity, obesity, smoking were also reported in all the studies with mixed responses suggestive of need for educating them about the causes and risk factors of haemorrhoids.

Bhopal (2019) and Kolhapur identified risk factors which aligned, though Kolhapur and **Ahmedabad (59% & 54%)** participants thought spicy/fast food to be one of the major causes for piles.

Amravati reported moderate constipation prevalence (**46.67%**), but high alcohol use (**50%**), substantial smoking (**36.37%**), and listed obesity, hypertension, and fatty meals as important risk factors.

Mixed response was reported indicating of different awareness level in various studies across India, suggestive of need for educating them about the causes and risk factors of haemorrhoids, especially in Kolhapur to address misconceptions such as overemphasis on spicy food.

A study conducted in 2022, in Saudi Arabia by Sultan Aiman Neazy et al ⁽⁶⁾ concluded that about **2.5%** participants had never heard about haemorrhoids whereas this percentage in the present study is 14. Participants who could identify the symptoms of haemorrhoids was 64.4% against 71% in current study. **66%** people were hesitant to consult doctor due to embarrassment which is very similar to the studies conducted in Saudi Arabia by Sultan Aiman Neazy et al, at **66.5%**, and **67.7%** (Makkah region of Saudi Arabia,2024) respectively

Similar findings were observed like participation of male patients in current study Vs Makkah region of Saudi Arabia ⁽⁷⁾ (**2024**) (**84% Vs 83.6%**), with overall poor knowledge about haemorrhoids at **35% Vs 21.4%**, respectively among both population

A hospital-based cross-sectional study done in Odisha, India (**2025**) by Rakesh Ranjan Swain et. al. ⁽⁸⁾ in, concluded that participants had good awareness (**94.2%**) based on the questions related to symptoms like pain and itching in anal region compared with **71%** in the present study suggestive of good awareness about the symptoms of piles.

These results are consistent with finding of the study done in Saudi Arabia by Abdullah Al Sawat et. al ⁽⁹⁾ (2024) indicating notable awareness at **97.7%**. However, preference to surgery as first choice of treatment differed with 25% in Odisha and 30% in Saudi Arabia study

which suggests low awareness about other systems of medicines whereas in the current study it was reported as **3%** suggestive of preference to non-invasive treatment.

Our study faced few limitations. Due to time constraint sample size available for the study was considerably small which may lead to reduced statistical power and making results less generalized. Also, unequal sample size, rural 30 and urban 26 may introduce selection bias

7. Conclusion:

This study concludes that there is no difference in the knowledge, attitude and practices scores related to haemorrhoids among rural and urban population of Kolhapur district.

It was found that there is good awareness about symptoms of haemorrhoid but poor overall knowledge about causes and prevention. Many participants held misconceptions and showed negative attitudes toward hygiene and care, with a large proportion hesitant to seek help. Practices were suboptimal in both groups, eating high-fibre food was observed with slightly higher percentages in urban while rural participants used slightly more home or self-care, yet both groups showed low uptake of preventive measures such as adequate hydration, lifestyle changes, etc. Hence, there is need for health education to correct misconceptions, promote preventive practices and encourage timely care-seeking

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