

Knowledge, Attitudes and practices of patients towards peptic ulcer disease at Namatala Health Centre IV, Mbale City. A cross-sectional study.

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ABSTRACT

Background:

PUD is a frequent gastrointestinal disease affecting the stomach and duodenum and is characterised by deep lesions in the mucosa. The purpose of this study was to identify and analyse the level of knowledge, attitude, and practices of patients towards peptic ulcer disease.

Methodology:

A descriptive cross-sectional study design was employed. Data was collected using structured questionnaires administered to 66 respondents who were selected through convenience sampling. The collected data were analysed and presented using tables, figures, and percentages to summarise the findings.

Results:

The majority of the respondents, 23(35%), were aged above 50 years, and 10 (15%) ranged between 18 and 30 years. Most of the respondents, 25 (38%), stopped in secondary, 20(30%) stopped in primary, 15 (28%) never studied, and 6(9%) stopped at Tertiary /University. The majority of respondents (77%) had heard about peptic ulcer disease, while 23% had not. Regarding causes, 39% associated PUD with *H. pylori* infections, 38% attributed it to the use of NSAIDS. In terms of management practices, 50% reported drinking milk to relieve symptoms, 31% drank coffee beverages, 15 % consumed spicy and fatty foods, and only 3% smoked. Additionally, 50% of respondents had never discussed *H. pylori* infections with their family members, indicating a gap in awareness and communication.

Conclusion:

The study concluded that although most respondents had some awareness of peptic ulcer disease, significant gaps remain in their understanding of its causes and management. Misconceptions about dietary practices and limited knowledge of *H. pylori* infection contribute to poor self –care and delayed medical attention.

Recommendation:

The study recommends strengthening community health education on prevention and management of PUD, promoting routine *H. pylori* screening, providing counselling at health facilities on proper dietary habits, and conducting further research to address knowledge gaps and improve public awareness.

Keywords: Level of knowledge, Attitude and practices, Patients, Peptic ulcer disease.

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Background

PUD is a frequent gastrointestinal disease affecting the stomach and duodenum and is characterised by deep lesions in the mucosa. Several dietary and behavioural factors may increase epigastric pain related to PUD and delay the healing process (Abumunaser et al,2021). *Helicobacter pylori* infection and prolonged use of NSAIDS are the primary causes, while other factors include extreme stress, comorbid

chronic conditions, old age, African American race, smoking, and alcohol consumption. Globally, about four million people are diagnosed with PUD each year, with an incidence of complications in approximately 10-20% (Abbasi-Kangevari et al, 2022). Prevalence varies by region, with higher rates observed among East Asians, for example, gastric ulcers are more common than duodenal ulcers in Japan (Yunye He et al,2023). *H pylori* infection accounts for 90% of duodenal ulcers and 70%-90% of gastric ulcers

(Malik, 2023). In the US, peptic ulcer disease affects 1% of the population, and approximately 54,000 patients are admitted to the hospital annually for bleeding peptic ulcers (Nimish Vakil et al,2024).

A comprehensive analysis of 58 studies revealed a pooled prevalence of PUD in Africa at 15.2% (Abdu et al, 2025). The most common ulcer pattern was DU at 10.2%, followed by GU at 5.8%, while 0.6% of cases had both types (Abdu et al, 2025). Gastric ulcer in Africa, occurring 6 -30 times less commonly than duodenal ulcer, the highest prevalence was reported to be in the Great Lakes region, the area includes Rwanda and Burundi, eastern DRC around Lake Kivu, extreme western Tanzania adjacent to Burundi, and south –western Uganda. (Namugerwa Juliana, 2023). The study aims to assess the knowledge, attitude, and practices of patients towards Peptic Ulcer Disease at Namatala Health Centre IV

METHODOLOGY

Study Design

The study used a descriptive cross-sectional study to collect quantitative data from the respondents; this study design will be used because it will enable me to obtain data within the shortest time possible.

Study Area

The study was conducted at Namatala Health Centre IV. The area is located in the industrial division, Namatala ward, Mbale city. It is a health centre IV offering both inpatient and outpatient services.

Study Population

The study population included patients of different ages attending Namatala Health Centre IV.

Sample Size Determination

The sample size will be determined using Silven's formula, which will be used as

$$n = \frac{N}{1+Ne^2}$$

Where n = sample size of the study

N = estimated study population (80)

e = sampling error (0.05)

I = constant

$$n = \frac{80}{1+80(0.05 \times 0.05)}$$

Therefore, a sample of 66 participants was considered for the study.

Sampling Technique

A researcher used a simple random sampling technique to select or obtain the respondents to participate in the study. This technique is chosen because it is time-saving, each respondent had an equal chance to be selected to participate in the study, and it prevents bias.

Sampling Procedure

A random sampling method was used to obtain 66 respondents at Namatala Health centre IV OPD in Mbale city, whereby the study used papers of similar characteristics, including size, shape, texture, weight, and folding style. The folded papers will be put in six boxes; each box will be labelled with a particular letter. Altogether, those who picked papers with numbers 1-10 were selected for an interview, and those who picked papers with letters beyond 10 were eliminated from the study. This method helped to avoid biases in choosing principal respondents.

Data collection method.

The study used a questionnaire guide with closed-ended questions, which helped the study to get quantitative data from respondents; this helped to collect data in the shortest time possible.

Data collection tool(s).

This study employed the use of a self-administered structured questionnaire to gather relevant data among patients; this is because a questionnaire is easy to collect data from a wide population within a short period. For those who were illiterate, structured interviews were used where they were asked questions to answer while the researcher filled in the responses.

Data Collection Procedure.

A letter of introduction was obtained from the Research Committee Kampala Institute of Health Professionals, then taken to the Facility in charge, and a research assistant was trained, and consent was obtained from study participants who reached the inclusion criteria. Then, questionnaires were given out, and an explanation on how to fill them out was provided.

Study variables.

Dependent variables.

Peptic ulcer disease in patients.

Independent variable

Knowledge, attitude, and practices of patients towards peptic ulcer disease.

Quality Control.

Piloting the study.

A study was first pretested at the study area to test the reliability and suitability of the study, which involved developing questionnaires with both open and closed-ended questions.

Pretesting of the research tools.

The questionnaire was pretested at Nakaloke HC IV, Mbale City, at the OPD to check whether the questions are specific to the study, measurable, accurate, and relevant, and time-bound.

Inclusion criteria

The study involved peptic ulcer disease patients at Namatala Health Centre IV.

Exclusion criteria

All peptic ulcer disease patients who were not willing to be part of the study, and those who were asking for money to be part of the study.

Data analysis and presentation.

The data obtained was tallied manually using pens, paper, and tally sheets, and the information obtained after tallying was presented in the form of tables, bar graphs, and pie charts. The narrative follows.

Ethical consideration.

Permission was sought from the research ethics committee through a letter, which will then be presented to the Namatala Health Centre administration. The study sought consent from the correspondents and requested them to participate in the interview in order to collect data from them at the same time and ensure the confidentiality of the information provided by the respondents, which will portray a good image.

RESULTS

Demographic data.

Table 1: Showing the demographic data of respondents. (n=66)

| Item | variant | Frequency | Percentage (%) |
|-------------------------------------|----------------------|-----------|----------------|
| Location/address of the respondents | Namatata | 34 | 51 |
| | Dokho | 16 | 24 |
| | Namabasa | 10 | 15 |
| | Nkoma | 6 | 9 |
| | Total | 66 | 100 |
| Age(years) | 18-30 | 10 | 15 |
| | 31-40 | 15 | 23 |
| | 41-50 | 18 | 27 |
| | 51 –above | 23 | 35 |
| | Total | 66 | 100 |
| Religion | Anglican | 8 | 12 |
| | Catholic | 31 | 47 |
| | Muslim | 24 | 36 |
| | Others | 3 | 5 |
| | Total | 66 | 100 |
| Education level | Never studied | 15 | 28 |
| | Primary | 20 | 30 |
| | Secondary | 25 | 38 |
| | Tertiary/ University | 6 | 9 |
| | Total | 66 | 100 |

Table 1 shows that the majority of the respondents, 34(51%), came from Namatala, followed by 16 (24%) from Dokho, 10 (15%) from Namabasa, and 6 (9%) from Nkoma. Regarding age, the majority of the respondents, 23(35%), were aged above 50 years, while the least respondents, 10 (15%), ranged between 18 and 30 years.

Regarding their religions, most of the respondents, 31 (47%), were Catholics, followed by 24 (36%) who were Muslims, followed by 8(12%) who were Anglicans, and lastly 3 (5%) who belonged to others.

Regarding their education level, most of the respondents, 25 (38%), stopped in secondary, followed by 20(30%) who

stopped in primary, followed by 15 (28%) who never studied, and lastly 6(9%) who stopped at Tertiary /University.

Knowledge of patients towards peptic ulcer disease

Table 2: showing the respondents' response on whether they have ever heard about peptic ulcer disease (n=66)

| Response | Frequency(f) | Percentage (%) |
|--------------|--------------|----------------|
| Yes | 51 | 77 |
| No | 15 | 23 |
| Total | 66 | 100 |

Table 2: The majority of the respondents, 51(77%), had heard about peptic ulcer disease, while 15(23%) did not know about peptic ulcer disease.

Figure 1: showing the respondents' responses on the risk factors of peptic ulcer disease (n=66)

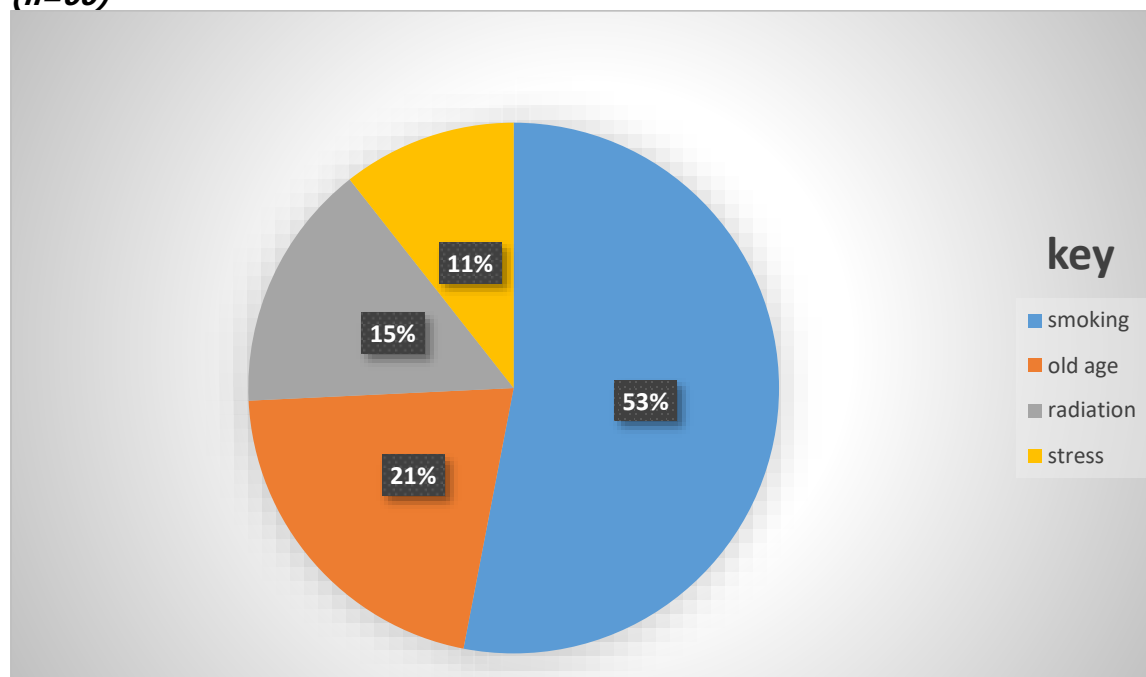


Figure 1 shows that the majority of the respondents, 35 (53%), replied that smoking is a risk factor of peptic ulcer disease, and the minority, 7(11 %), answered stress.

Table 3: showing respondents' responses on the major cause of peptic ulcer disease (n=66)

| Response | Frequency (f) | Percentage (%) |
|----------------------|---------------|----------------|
| H. pylori infections | 26 | 39 |
| NSAIDS | 25 | 38 |

| | | |
|--------------|-----------|------------|
| Cancers | 5 | 8 |
| stress | 10 | 15 |
| Total | 66 | 100 |

Page | 5 Table 3 shows that the majority of respondents, 26(39%), answered H. pylori infections as the major cause of peptic ulcer disease, and the least, 5(8%), answered cancers.

Figure 2: showing the respondents' response to the initial symptom of PUD (n=66)

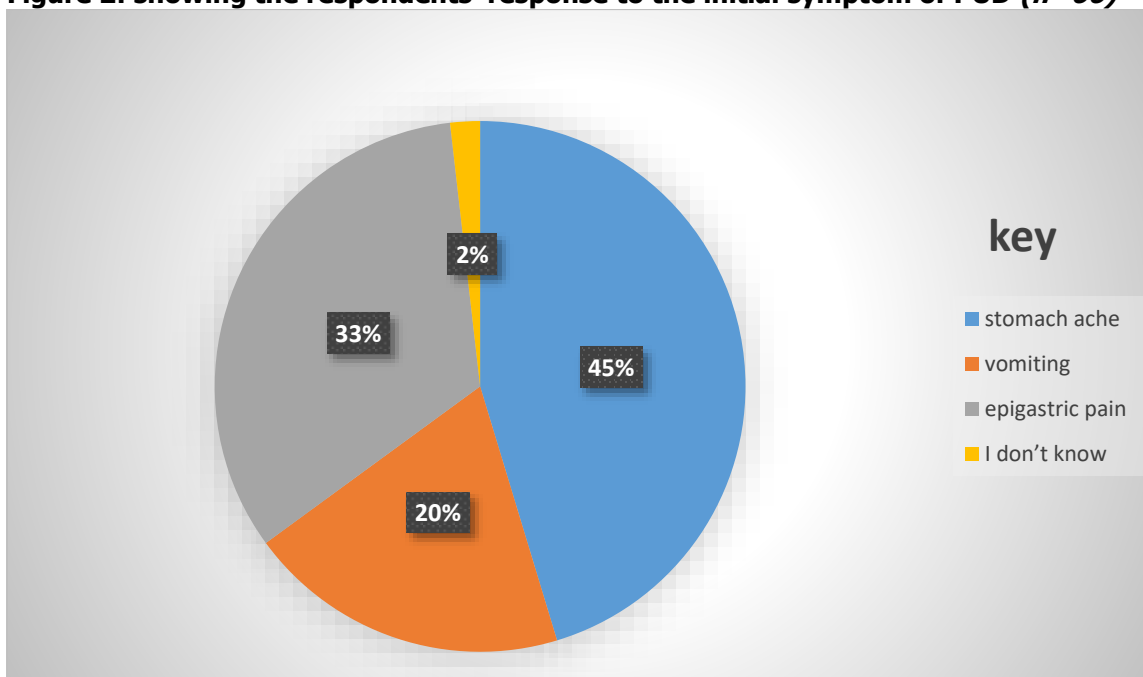


Figure 2 shows that the majority of the respondents, 30(45%), answered stomach ache as the initial symptom of peptic ulcer disease; the least 1 (2%) didn't know.

Attitude of patients towards peptic ulcer disease

Figure 3: Showing respondents' beliefs on whether poor diet and lifestyle can cause peptic ulcer disease ($n=66$)

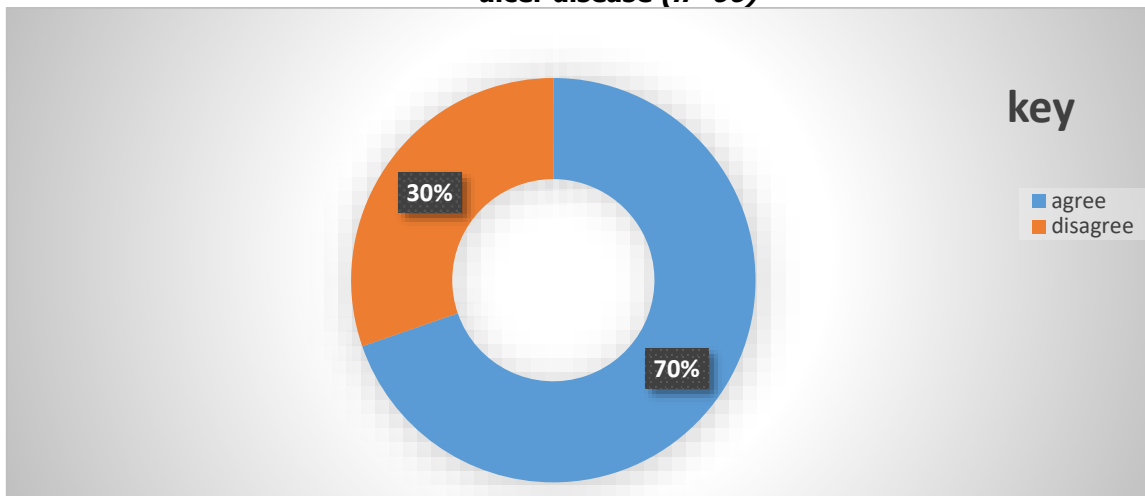


Figure 3 shows that more than half of the respondents, 46(70%), agreed that poor diet and lifestyle can cause peptic ulcer disease, whereas less than half, 20(30%), did not agree.

Table 4: showing whether respondents believe that eating on time can treat peptic ulcer disease ($n=66$)

| response | Frequency (f) | Percentage (%) |
|--------------|---------------|----------------|
| Yes | 58 | 88 |
| No | 8 | 12 |
| Total | 66 | 100 |

Table 4: More than half of the respondents, 58(88%), believed that eating on time can treat peptic ulcer disease, while 8 (12%) didn't believe that.

Practices of patients towards peptic ulcer disease

Figure 4: Respondents' medications they take to treat PUD (n=66)

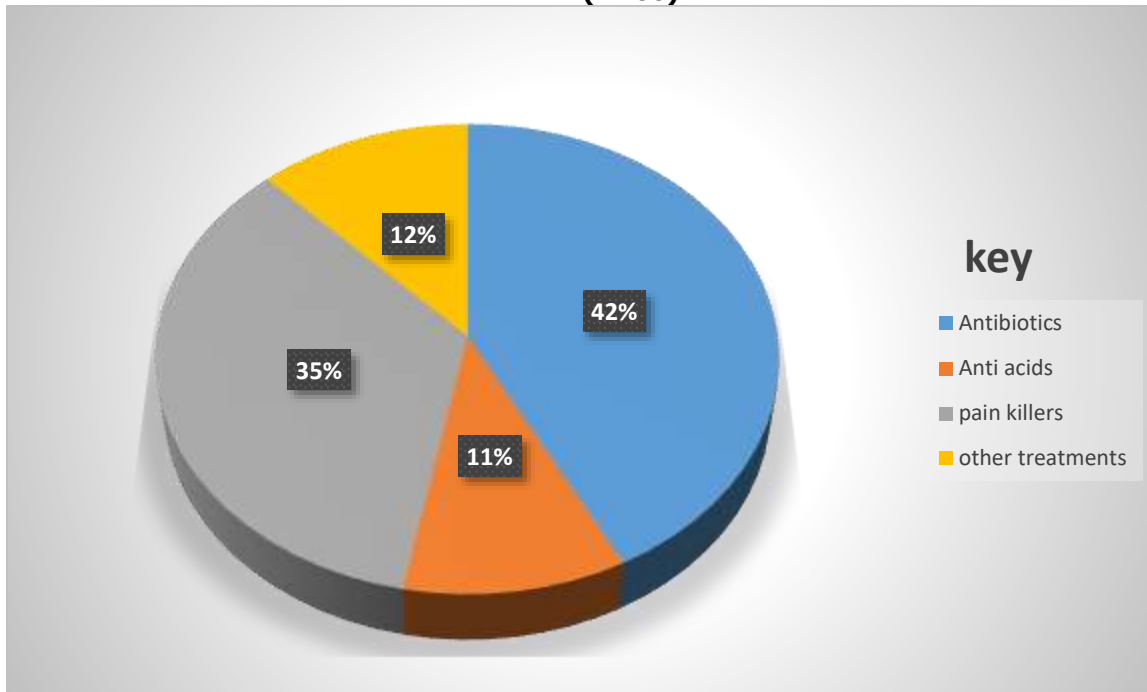


Figure 4 shows that most of the respondents, 28 (42%), answered taking antibiotics, and the minority, 8 (12%), answered other treatment.

Figure 5: showing what respondents regularly practice to manage peptic ulcer disease (n=66)

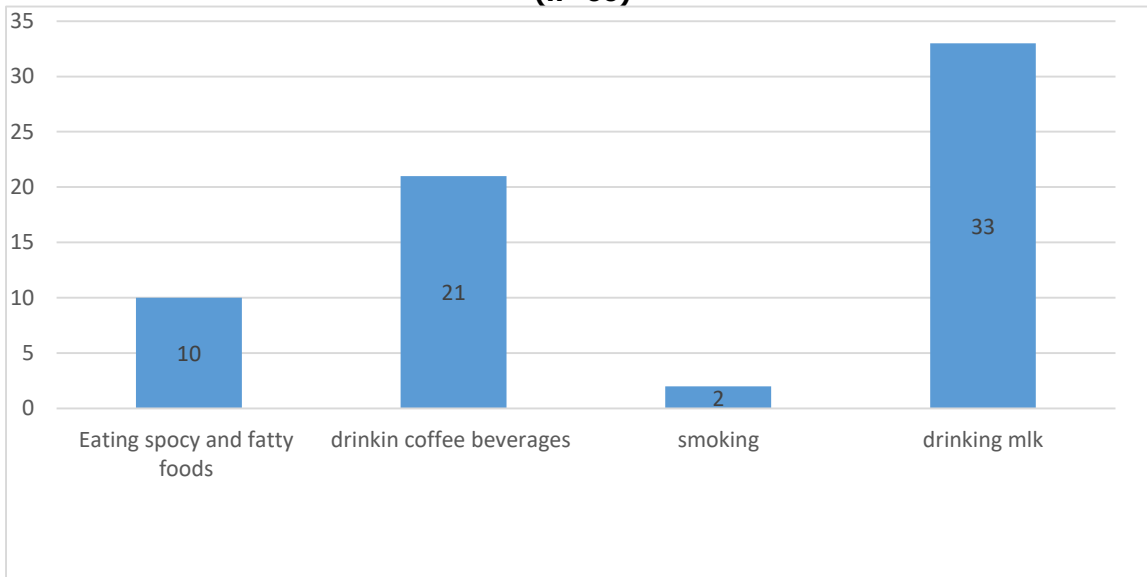


Figure 5: The majority of the respondents, 33(50%), regularly drank milk to manage PUD, and the least 2(3%) answered smoking.

Table 5: showing whether respondents discuss with their family members and others about H pylori infection as the commonest cause of PUD (n=66)

| Response | Frequency(f) | Percentage (%) |
|--------------|--------------|----------------|
| Frequent | 14 | 21 |
| Sometimes | 19 | 29 |
| Never | 33 | 50 |
| Total | 66 | 100 |

Table 5: The majority of the respondents, 33(50%), have never discussed with their family members and others about H pylori infection as the commonest cause of PUD, and the minority, 14 (21%), answered frequently.

Discussion

Knowledge of patients towards peptic ulcer disease

Findings from the study indicated that the majority of the respondents, 51(77%), had heard about peptic ulcer disease, while 15(23%) had not. This implies that most patients have general awareness of the condition. This is in line with a study aimed at assessing the knowledge of students of a tertiary institution in Northern central Nigeria about peptic ulcer disease, which indicated that 78% of the respondents knew about PUD before. (Matthew Olumuyiwa Bojuwoye et al,2021).

Regarding the risk factors of peptic ulcer disease, findings revealed that the majority of respondents, 35(53%), identified smoking as a major risk factor for PUD, and the minority, 7(11%), associated it with stress. This shows that while many participants are aware of lifestyle –related risk factors, misconceptions still exist regarding non-established causes like radiation. Health education emphasising the major causes, such as Helicobacter pylori infection and NSAIDs, is therefore essential. Concerning the major cause of PUD, the majority of respondents (39%) perceived H. pylori infection as the leading cause of PUD, and the least (8%). This suggests that respondents have a relatively good understanding of biological and lifestyle factors that cause ulcer formation. This does not agree with findings aimed at assessing the knowledge of students of a tertiary institution in North Central Nigeria about PUD that revealed majority of the respondents 81% considered prolonged fasting to be the cause of PUD (Matthew Olumuyiwa Bojuwoye et al,2021).

Regarding the initial symptoms of peptic ulcer disease, the majority of respondents, 30(45%), identified stomach ache as the initial symptom of PUD, and the least 1 (2%) was uncertain. These findings show that most respondents were aware that abdominal discomfort is a key early indicator of peptic ulcer disease.

Attitude of patients towards peptic ulcer disease

Results indicated that the majority of respondents, 46 (70%), agreed that poor diet and lifestyle can cause peptic ulcer disease, while 20 (30%) disagreed. This demonstrates that most of the respondents recognise unhealthy eating habits and poor lifestyle choices. This agrees with the findings in a study on the attitudes towards H.pylori and gastric disease that revealed that 50% of the respondents believed that poor diet and lifestyle led to the illness (Shatha M AL Omari et al,2021).

Concerning beliefs on eating habits, 58(88%) of the respondents believed that eating on time can treat or manage peptic ulcer disease, while 8(12%) did not agree. These findings reflect a positive awareness among respondents regarding the importance of proper meal timing in controlling acid secretion and reducing the recurrence of ulcer symptoms. This is in line with the findings in a study to assess the knowledge and attitude of students in Nigerian tertiary institutions about PUD.

Practices of patients towards peptic ulcer disease

Regarding treatment practices, findings indicated that the majority, 28(42%) of the respondents reported taking antibiotics, and the least, 7 (11%) used antacids. The high use of antibiotics is appropriate since H. Pylori infection, which is bacterial in origin, remains a main cause of PUD. This agrees with the findings in a study about the knowledge, attitudes, and practices of adults in the Kingdom of Saudi Arabia regarding H. pylori-induced gastric ulcer, cancer, and treatment that revealed that 79.0% received antibiotic treatment (Mohammed Attieh Alzahrani et al,2023).

Findings revealed that the majority of respondents, 33(50%), regularly drank milk to manage peptic ulcer disease, and the least, 2 (3%), engaged in smoking. These results show that while many respondents adopt some dietary practices believed to relieve PUD symptoms, a significant number still engage in behaviours that increase the condition. This does not agree with a cross-sectional

study in the UAE to assess the current knowledge level, attitude, and practices of the adult population with regard to H. pylori-induced gastric ulcer and cancers, which revealed that the majority of the respondents 48.4% regularly engaged in drinking coffee (Abdullah Imadeddin Malek et al,2021).

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Concerning communication about Helicobacter infection, the majority of the respondents, 33(50%), reported that they never discussed H. pylori infection, the most common cause of PUD, with their family members, and the least 14 (21%) reported frequent discussions. This indicates a low level of interpersonal communication about the bacterial cause of peptic ulcer disease. This is not in line with a study about the knowledge, attitudes, and practices of adults in the Kingdom of Saudi Arabia regarding H. pylori-induced gastric ulcers, cancers, and treatment, in which 14.8% frequently discussed the issue of H.pylori infection, 35 .6% discussed it sometimes, and 18 .7 % never discussed (Mohammed Attieh Alzahrani et Al,2023).

Conclusion

Concerning patients' knowledge of PUD, the study revealed that the majority of respondents (77%) had heard about PUD, showing a generally good level of awareness among participants. Most respondents correctly identified stomach ache and epigastric pain as the main symptoms, while a few associated vomiting or were uncertain. The findings also showed that Helicobacter pylori infection, stress, and the use of NSAIDs were reorganized as the major causes of peptic ulcer disease. However, some respondents still held misconceptions regarding other causes, such as viral infection and radiation, indicating the need for further education.

Furthermore, about patients' attitudes on PUD, the study revealed that while most respondents demonstrated a fair understanding of peptic ulcer disease, misconceptions and poor health practices still persist. A majority of the respondents (50%) reported drinking milk to relieve ulcer symptoms, indicating a common but misleading belief that milk permanently neutralizes stomach acid.

In regards to patient's practices towards PUD, half of the respondents (50%) had never discussed Helicobacter pylori infection, the most common cause of PUD, with their family members or others, showing a gap in public communication and awareness about the bacterial origin of ulcer.

Recommendations

The Ministry of Health and healthcare providers should strengthen the public health education programs to increase community awareness about the causes and treatment of peptic ulcer disease, particularly focusing on the role of Helicobacter pylori infection.

Furthermore, health workers should provide regular counselling to patients during clinic visits on proper dietary habits, avoidance of irritants such as spicy foods, coffee, and alcohol, and the importance of completing prescribed ulcer medication.

Community health workers should conduct outreach sessions to dispel myths and misconceptions, such as the belief that milk permanently cures ulcers. Hospitals and health centres should establish routine screening for H. pylori infection among patients presenting with PUD symptoms to ensure early diagnosis and proper management.

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List of abbreviations and acronyms

| | | |
|------------------|---|--|
| DU | : | Duodenal ulcer. |
| GU | : | Gastric ulcer. |
| H. PYLORI | : | Helicobacter pylori. |
| NSAIDs | : | Non-steroidal anti-inflammatory drugs. |
| PUD | : | Peptic ulcer disease. |

Source of funding

The study was not funded.

Conflict of interest

The author did not declare any conflict of interest.

Data availability

Data is available upon request.

Author contribution

Sharif Wasega collected data and drafted the manuscript of the study

Olga Nakagiri supervised the study

Author biography

Sharif Wasega is a student at Kampala Institute of Health Professionals.

Olga Nakagiri is a research supervisor at Kampala Institute of Health Professionals.

George Masete is a research supervisor at Kampala Institute of Health Professionals.

Informed consent

Written informed consent was obtained from all participants before their inclusion in the study. Participants were informed about the purpose of the study, procedures involved, potential risks and benefits, and their right to withdraw at any time without penalty.

References

1. Abbasi-Kangevari, M., Ahmadi, N., Fattahi, N., Rezaei, N., Malekpour, M. R., Ghamari, S. H., Moghaddam, S. S., Azadnajafabad, S., Esfahani, Z., Kolahi, A. A., Roshani, S., Rezaezadeh-Khadem, S., Gorgani, F., Naleini, S. N., Naderimaghani, S., Larijani, B., & Farzadfar, F. (2022). Quality of care of peptic ulcer disease worldwide: A systematic analysis for the global burden of disease study 1990-2019. *PLoS one*, 17(8), e0271284. <https://doi.org/10.1371/journal.pone.0271284>
2. Abdu, S. M., Assefa, E. M., & Abdu, H. (2025). Prevalence and patterns of peptic ulcer disease in Africa: a systematic review and meta-analysis. *BMC gastroenterology*, 25(1), 298. <https://doi.org/10.1186/s12876-025-03906-y>
3. Abdullah Imadaddin Malek, Muzan Abdelbagi, Lian Odeh, Atheer Tariq Alotaibi, Mohamed Husain Alfardan, Hiba Jawdat Barqai (2021)(Knowledge, Attitudes and Practices of Adults in the United Arab Emirates Regarding Helicobacter pylori induced Gastric Ulcers and Cancer.
4. Albatool Abumunaser (King Abdulaziz University, Saudi Arabia) (2021). Cases on Medical Nutrition Therapy for Gastrointestinal Disorders.
5. Malik TF, Gnanapandithan K, Singh K. Peptic Ulcer Disease. [Updated 2023 Jun 5]. In:

StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK534792/>

6. Matthew J Doe, Emmanuel Bua John So Obbo, Fred Bisso, Peter Olupot-Olupot(2021). Upper gastrointestinal endoscopy findings in Mbale Regional Referral Hospital, Eastern Uganda: a 10-year retrospective analysis. <https://doi.org/10.4314/ahs.v21i2.54>
7. Namugerwa Juliana (2023).Prevalence of Peptic Ulcer in Patients Attending Kampala International University Teaching Hospital in Ishaka Bushenyi Municipality, Uganda. *INOSR APPLIED SCIENCES* 10(1):45-54.
8. Nimish Vakil ¹PMID: 3946626 DOI: 10.1001/jama.2024.19094 Peptic Ulcer Disease: A Review
9. Seid Mohammed Abdu, Ebrahim Msaye Assefa & Hussen Abdu *BMC Gastroenterology* volume 25, Article number: 298 (2025) Prevalence and patterns of peptic ulcer disease in Africa: a systematic review and meta-analysis <https://doi.org/10.1001/jama.2024.19094>
10. Shatha M Al Omari, Anas H Khalifeh, Raja Moman &Hana M Sawan(2021).Knowledge, Attitudes, and Practices Related to Helicobacter pylori and Gastric Disease in Jordan: Implications for Early Detection and Eradication.
11. Yunye He, Masaru Koido, Yoichi Sutoh, Mingyang Shi, Yayoi Otsuka-Yamasaki, Hans Markus Munter, BioBank Japan, Takayuki Morisaki, Akiko Nagai, Yoshinori Murakami, Chizu Tanikawa, Tsuyoshi Hachiya, Koichi Matsuda, Atsushi Shimizu, & Yoichiro Kamatani. *Nature Genetics* volume 55, pages 2129–2138 (2023) East Asian-specific and cross-ancestry genome-wide meta-analyses provide mechanistic insights into peptic ulcer disease. <https://doi.org/10.1038/s41588-023-01569-7>