

Knowledge on peptic ulcers among females aged 25-30 years in Mpumudde parish, Ndagwe sub-county, Lwengo district: A descriptive Cross-Sectional Study

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Abstract

Introduction: Globally, peptic ulcer disease (PUD) affects nearly 10% of the population at some point in their lives, with lifestyle factors and poor awareness contributing to its prevalence. So this study accessed the knowledge on peptic ulcers among females aged 25-30 years in Mpumudde parish, Ndagwe sub-county, Lwengo district

Methodology: The study employed a descriptive cross-sectional design, and simple random sampling was used to obtain a sample of 40 respondents. Data were collected using structured questionnaires, checked for completeness, coded, and analyzed using SPSS version 16.

Results: Findings revealed that the majority of respondents, 15 (38%), were aged 25–26 years, and most, 12 (30%), had only primary education. Concerning knowledge, 10 (25%) believed that not eating on time causes ulcers, while only 7 (18%) identified *Helicobacter pylori* as a cause. Majority, 26 (65%), did not know that using painkillers without prescription could lead to ulcers, and 12 (30%) never sought medical advice for stomach pain.

Conclusion: The study revealed gaps in knowledge, attitudes, and practices regarding peptic ulcer prevention and management among females aged 25–30 years

Recommendations: Enhanced health education through community outreach, health talks, and media campaigns is recommended to improve awareness and promote preventive and appropriate management practices for peptic ulcers.

Key words: Peptic ulcers, Awareness, Lwengo District

Background of the study

Peptic ulcer disease (PUD) refers to open sores that develop on the inner lining of the stomach (gastric ulcers), upper part of the small intestine (duodenal ulcers), or the esophagus. These ulcers result from the erosion of the mucosal lining, often caused by excessive gastric acid, *Helicobacter pylori* (*H. pylori*) infection, or prolonged use of non-steroidal anti-inflammatory drugs (NSAIDs) (Narayanan et al., 2018). According to the Mayo Clinic, common symptoms include burning stomach pain, bloating, nausea, and in severe cases, vomiting blood or weight loss. Awareness and knowledge of peptic ulcers are crucial for early detection, prevention, and effective treatment (Mayo clinic, 2024). Globally, peptic ulcer disease affects nearly 10% of the population at some point in their lives (Xie et al., 2022). In many developed countries, particularly in North America and Asia, increased public health awareness and

improved diagnostic tools have significantly reduced the prevalence. For example, in the United States, the prevalence declined from 12% in the 1980s to around 5% in 2020, largely due to reduced smoking rates, *H. pylori* eradication efforts, and public education. Similarly, in Japan, early screening and antibiotic therapies have significantly reduced PUD hospitalizations (Matsumoto et al., 2020).

In contrast, Africa continues to bear a high burden of peptic ulcer disease. A study by Jf et al., (2017) in Nigeria revealed that up to 35% of adult patients presenting with upper gastrointestinal symptoms had confirmed peptic ulcers, with low awareness about the causes and dangers. Poor sanitation, high prevalence of *H. pylori*, misuse of NSAIDs, and lack of health education contribute to the high rates. In Ghana, Tabiri et al., (2016) found that only 40% of surveyed adults could identify at least one risk factor for peptic ulcers.



In Sub-Saharan Africa, these challenges are compounded by poor access to diagnostic services and a high burden of untreated *H. pylori* infection. A regional study in Kenya, Uganda, and Tanzania showed that over 60% of symptomatic adults were unaware that their symptoms were related to ulcers, often attributing them to witchcraft or stress (Ackumey et al., 2022). In East Africa, particularly in Tanzania and Rwanda, similar trends are evident. A study in Mwanza, Tanzania by Jaka et al., (2016) found that only 32% of adults had heard about peptic ulcers, and fewer than 20% knew about prevention methods. In Rwanda, Nubahumpatse, (2022) reported that less than 25% of adults were aware of *H. pylori* as a major cause of ulcers. In Uganda, peptic ulcers remain a public health concern, especially in urban and peri-urban settings where the use of painkillers and stress-related disorders is common. According to the Ministry of

Health, ulcers rank among the top ten conditions treated in outpatient departments (Aitila et al., 2019). A study conducted in Wakiso District by Edyedu et al., (2024) found that only 36% of adults could correctly identify the symptoms of peptic ulcers, and less than 25% knew about *H. pylori* or the importance of medical treatment. In Mpumudde parish, located in Ndagwe division, the burden of gastrointestinal complaints is common among community adults. Health workers from nearby clinics and outpatient departments at Mulago National Referral Hospital (MNRH) have observed a consistent trend of patients presenting with advanced ulcer complications such as persistent epigastric pain, gastrointestinal bleeding, and recurrent indigestion (Kisuule et al., 2023). So this study accessed the knowledge on peptic ulcers among females aged 25-30 years in Mpumudde parish, Ndagwe sub-county, Lwengo district

Methodology

Study Design and Rationale

The study employed a cross-sectional descriptive study that involved quantitative data collection techniques. This design was chosen because it allowed for the collection of data at a single point in time, was cost-effective, and reduced bias due to its standardized approach. It was suitable given the nature of the study setting and the limited resources available.

Study Setting and Rationale

The study was conducted in Mpumudde Parish, situated in Ndagwe Sub-county, Lwengo District. This parish was predominantly rural and was home to a diverse population of adults from various socio-economic backgrounds. It was selected due to its high concentration of adults aged 25 to 30 years and above, which made it suitable for assessing awareness levels regarding peptic ulcer disease. Moreover, the area was accessible to the researcher and lay within their geographical area of operation.

Study Population

The target population consisted of females aged 25–30 years residing in Mpumudde parish who were available during the time of data collection.

Sample Size Determination

The sample size was calculated using the Kish and Leslie (1965) formula for cross-sectional studies:

$$n = \frac{z^2 pq}{d^2}$$

Where:

n = Desired sample size (if the target population was greater than 10,000)

Z = Standard normal deviation at 95% confidence interval (i.e. 1.96)

P = Proportion of the target (which was 50% or 0.5)

q = $1 - p$ ($1 - 0.5 = 0.5$)

d = acceptable degree of error (0.05)

$$\frac{96^2 \times 0.5 \times 0.5}{0.05 \times 0.05}$$

$n = 384$

Since the target population under study was less than 10,000, the required sample size was smaller and was estimated as follows:

$nf = n/1 + (n/N)$

Where:

N was the total population size, which was approximately 45

nf represented an adjusted or effective sample size after considering the population size.

$$= \frac{384}{1 + (384/45)} = 40.27 \approx 40$$

Therefore, the final sample size was forty (40) participants.

Sampling Procedure

The study employed simple random sampling. The researcher prepared folded pieces of paper marked “Yes” or “No.” Females present at a central location were asked to pick one. Those who selected “Yes” were enrolled in the study until the required sample size was achieved. Only participants who consented voluntarily were given the questionnaire to complete.

Inclusion Criteria

The study included all females aged 25–30 years who resided in Mpumudde parish and voluntarily consented to participate.

Exclusion Criteria

The study excluded individuals who were mentally or physically unable to respond to the questionnaire, outside the age bracket.

Dependent Variable: Awareness of peptic ulcer disease.

Independent Variables: Awareness of females aged 25–30 years on PUD.

Research Instruments

A semi-structured questionnaire containing mainly closed-ended questions was used. The questionnaire

was suitable because it enabled collection of standardized data while allowing participants to express their understanding in their own words.

Data Collection Procedure

Following approval from the supervisor, an introduction letter was obtained from the relevant training institution and presented to local authorities in Mpumudde parish to seek permission to carry out the study. The researcher then sampled around eight respondents per day and distributed questionnaires, continuing the process over five days until the required sample size of 40 was reached.

Data Management and Analysis

Completed questionnaires were checked, coded, and edited daily for completeness and accuracy. They were then stored securely in separate envelopes from unused ones to avoid mix-ups or data loss. Data was analyzed using Microsoft Excel. Descriptive statistics such as frequencies and percentages were used to summarize the findings. Results were presented in tables, figures, and narrative text.

Validity

The questionnaire was developed based on findings from relevant peer-reviewed literature to ensure

content validity. Subject matter experts reviewed the questionnaire to confirm it accurately reflected the study objectives. Questions were phrased clearly and aligned with the research objectives to ensure face validity.

Reliability

A pilot study involving 10% of the target population was conducted to test the reliability of the questionnaire.

Research assistants were trained uniformly to ensure standardized data collection procedures.

The principal investigator supervised the data collection process to maintain consistency and minimize interviewer bias.

Ethical Consideration

Ethical clearance was obtained through an introductory letter from the training institution.

Permission was sought from the local authorities and community leaders in Mpumudde parish. Respondents were fully informed about the study objectives and asked for voluntary consent. They were assured of confidentiality, anonymity, and the right to withdraw at any time. Questionnaires were kept securely to protect participant information.

Results

Socio-demographic Characteristics of Respondents

Table 1: Shows the socio-demographic information of respondents who participated in the study (n=40)

Variable	Category	Frequency	Percentage
Age group	25–26 years	15	38%
	27–28 years	14	35%
	29–30 years	11	27%
Highest education level	No formal education	10	25%
	Primary level	12	30%
	Secondary level	11	27%
	Tertiary/University level	7	18%
Marital status	Single	12	30%
	Married	16	40%
	Divorced/Separated	8	20%
	Widowed	4	10%
Main source of income	Formal employment	6	15%
	Informal business	12	30%
	Agriculture	14	35%
	Unemployed	6	15%
	Other (specify)	2	5%
Main source of health information	Friends/Family	14	35%
	Social media	9	23%
	Radio/TV	7	18%
	Health workers	6	15%
	Internet websites/blogs	4	9%

Total (n=40)		40	100%
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From the table above, the largest group of respondents 15 (38%) were aged 25–26 years, followed closely by 14 (35%) who were 27–28 years, while the smallest group, 11 (27%) were in the 29–30 years age group.

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Concerning education level, the majority had low education, with 12 (30%) reporting primary education and 10 (25%) having no formal education at all. Only 11 (27%) had secondary education, while the minority, 7 (18%) had attained tertiary/university level.

In terms of marital status, most, 16 (40%) were married, 12 (30%) were single, 8 (20%) were divorced/separated, while the least, 4 (10%) were widowed.

Regarding the main source of income, the majority 14 (35%) were engaged in agriculture, followed by 12 (30%) who ran informal businesses. A few 6 (15%) reported formal employment, another 6 (15%) were unemployed, while the minority, 2 (5%) indicated other sources of income.

When asked about their main source of health information, most 14 (35%) relied on friends and family, 9 (23%) mentioned social media, 7 (18%) used radio/TV, 6 (15%) got information from health workers, while the least 4 (9%) relied on internet websites/blogs. This shows a gap in access to professional health information sources, with many depending on informal channels.

Knowledge on Peptic Ulcers

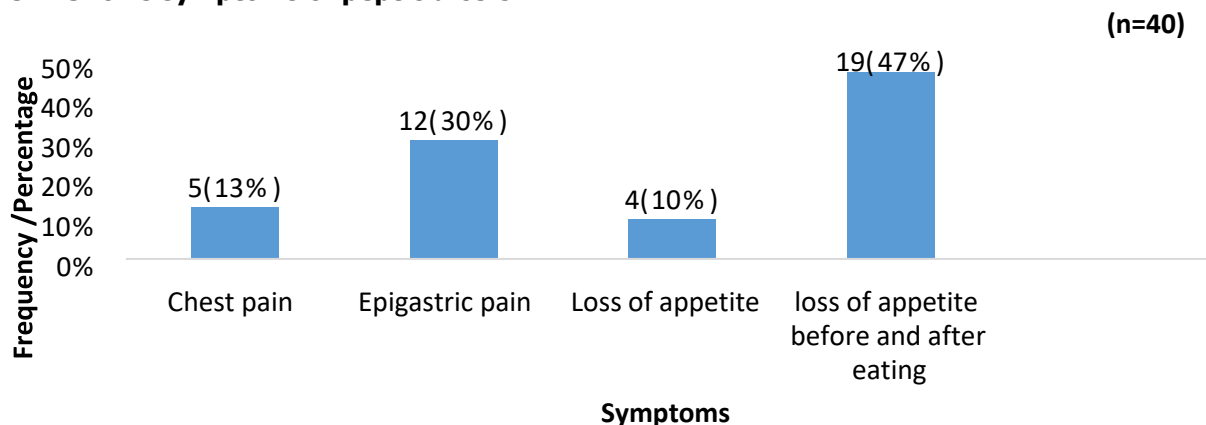
Table 2: Shows causes of peptic ulcers (n=40)

Variable	Category	Frequency	Percentage
Causes of peptic ulcers	Not eating on time	10	25%
	Eating spicy foods	6	15%
	Stress	5	13%
	Helicobacter pylori	7	18%
	Use of painkillers like ibuprofen	4	10%
	Witchcraft/spiritual causes	8	20%
Total		40	100%

From the table above, the majority 10 (25%) of respondents believed that not eating on time causes peptic ulcers, followed by 8 (20%) who attributed ulcers to witchcraft/spiritual causes. Only 7 (18%) mentioned *Helicobacter pylori*, while 6 (15%)

mentioned eating spicy foods and 5 (13%) reported stress. Minority, 4 (10%) pointed to painkillers like ibuprofen. This suggests that misconceptions remain common among respondents.

Figure 1: Shows symptoms of peptic ulcers



Regarding symptoms, majority 19(45%) experienced abdominal pain before and after eating food, followed by 12 (30%) who mentioned epigastric pain. Belching was noted by 5 (13%) and the least 4(10) loss of appetite.

Table 3: Shows how ulcers are diagnosed (n=40)

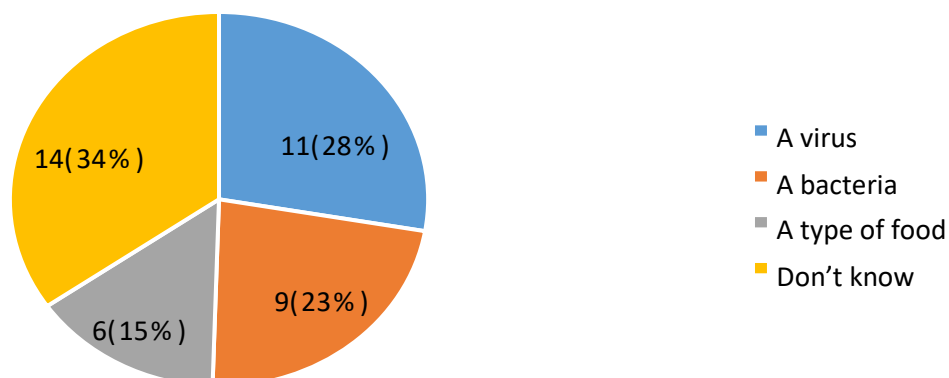
Variable	Category	Frequency	Percentage
How ulcers are diagnosed	By physical examination	8	20%
	Through lab tests/scans	10	25%
	Through signs and symptoms	11	28%

	Don't know	11	28%
Total		40	100%

On diagnosis, the largest group, 11 (28%) of respondents reported that ulcers were diagnosed by guessing symptoms, while the same proportion 11 (28%) admitted they did not know. Only 10 (25%) mentioned laboratory tests and scans, while the

smallest group, 8 (20%) said ulcers can be diagnosed by physical examination. This shows that most respondents had poor awareness of proper diagnosis methods.

Figure 2: Shows respondents' knowledge of H Pylori (n=40)



When asked about Helicobacter pylori, the majority 14 (35%) said they did not know, while 11 (28%) thought it is a virus. Only 9 (23%) identified it as a bacterium and the minority, 6 (15%) mentioned a type of food.

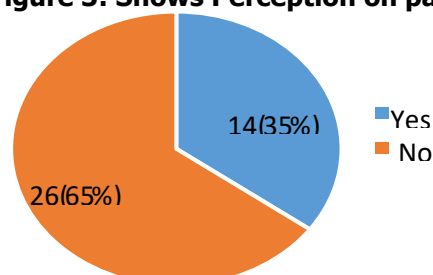
Awareness and Health-Seeking Practices

Table 4: Shows respondents' awareness sources regarding peptic ulcers (n=40)

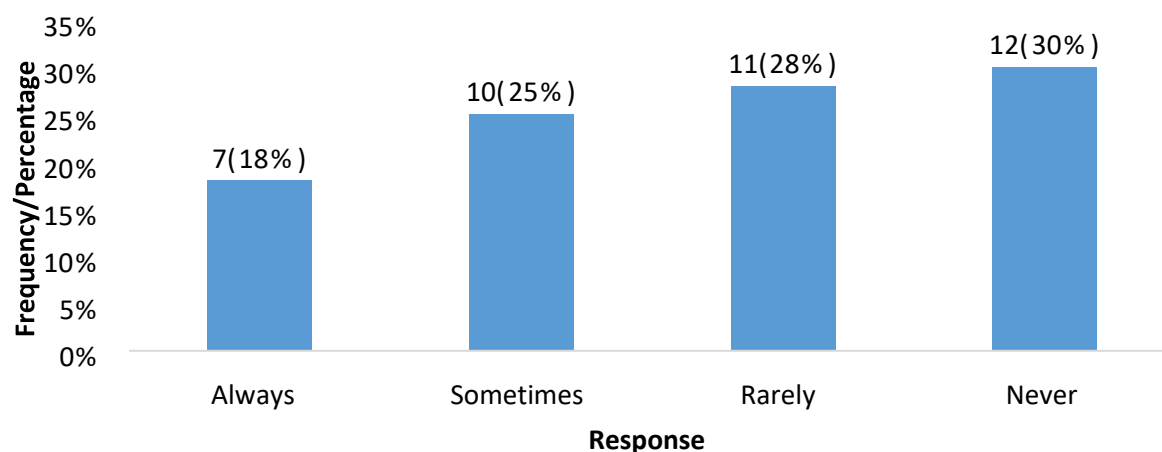
Variable	Category	Frequency	Percentage
Source of information about ulcers	School	5	13%
	Radio/TV	9	23%
	Social media	8	20%
	Health worker	12	30%
	Never heard of it	6	15%
Total		40	100%

From the table above, the majority 12 (30%) of respondents first heard about ulcers from health workers, followed by 9 (23%) from radio/TV and 8 (20%) from social media. 6 (15%) had never heard of ulcers and minority, 5 (13%) from school, indicating limited awareness.

Figure 3: Shows Perception on painkillers causing ulcers (n=40)



When asked whether using painkillers without prescription can lead to ulcers, the majority 26 (65%) said No, while minority, 14 (35%) answered Yes. This shows a significant gap in understanding risk factors.

Figure 4: Shows Frequency of seeking medical advice for stomach pain (n=40)

In terms of health-seeking behavior, most, 12 (30%) reported that they never sought medical advice when they had stomach pain, followed by 11 (28%) who rarely did. Only 10 (25%) sometimes sought advice, while the least, 7 (18%) said they always consulted medical professionals. This indicates poor health-seeking behavior among most respondents, which may delay proper diagnosis and management of ulcers.

Discussion

Socio-demographic Characteristics of Respondents

The majority of respondents, 15 (38%), were aged 25–26 years. This could be because younger women in this age bracket are more likely to participate actively in community surveys and health assessments. This finding is in agreement with a study by Swaminathan et al., (2024) conducted in Malaysia, which revealed that females aged 20–26 years were the most engaged in health awareness surveys. The similarity in the results could be due to comparable targeting of young adult women in both studies, reflecting active participation among younger age groups in health-related matters.

Concerning education level, the majority of respondents, 12 (30%), had primary education. This could be because access to higher education in Mpumudde Parish may be limited, leading to more females attaining only basic schooling. This finding is in agreement with Namugerwa (2017) in Uganda, which found that most women of reproductive age in rural communities had only primary education and consequently had lower awareness of health conditions such as peptic ulcers. The similarity is likely due to the rural context and limited educational infrastructure, which restricts formal learning opportunities.

In terms of marital status, most respondents, 16 (40%), were married. This could be because the age range of

25–30 years is a typical period for marriage among women in rural Uganda. This finding is in agreement with Abdu et al., (2025) in Kenya, which reported that a majority of women aged 25–30 years were married, reflecting socio-cultural norms regarding marriage timing. The similarity may be due to shared East African cultural practices regarding family formation. Regarding the main source of income, the majority, 14 (35%), were engaged in agriculture. This could be because agriculture is the predominant livelihood activity in rural areas like Mpumudde Parish, offering a readily accessible means of income for women. This finding agrees with Gobba et al., (2024) in Masaka District, Uganda, which showed that most women in rural communities relied on subsistence farming as their main source of income. The similarity is likely due to the rural setting, where economic opportunities are limited and agricultural work dominates.

When asked about their main source of health information, most respondents, 14 (35%), relied on friends and family. This could be because formal health education and access to professional health sources are limited, and informal networks serve as the primary channels for information. This finding is in agreement with Swaminathan et al., (2024) in Malaysia, which reported that the majority of young adult females acquired health information from friends and social media, often leading to misconceptions about peptic ulcer causes and prevention. The similarity arises from limited access to professional health education and dependence on informal communication networks.

Knowledge of Females Aged 25–30 Years about Peptic Ulcers

The majority of respondents, 10 (25%), believed that not eating on time causes peptic ulcers. This could be because irregular meal patterns are common in Mpumudde Parish due to busy schedules or limited food availability, which leads women to associate ulcers with skipping meals. This finding is in

agreement with a study by Abdu et al., (2025) done in Kisumu, Kenya, which revealed that most women commonly believed ulcers were caused by "not eating in time" or "eating spicy foods." The similarity in the studies is because both populations relied on traditional beliefs or personal experiences to explain ulcer causes, reflecting limited access to accurate biomedical information.

Regarding ulcer symptoms, the majority of respondents, 13 (33%), associated ulcers with frequent diarrhea. This could be because gastrointestinal disturbances are common and often linked with stomach problems in daily life, leading respondents to connect diarrhea with ulcers. This finding is in agreement with Namugerwa (2017) in Uganda, which reported that many women could not accurately describe ulcer symptoms, often confusing them with general digestive discomfort. The similarity is due to low exposure to formal health education on gastrointestinal conditions among young adult females in both settings.

On knowledge of *Helicobacter pylori*, the majority of respondents, 14 (35%), said they did not know what it is. This could be because health education programs on bacterial causes of ulcers are limited in rural communities, leaving women unaware of the biological etiology of the condition. This finding is in agreement with Jaka et al., (2016) in Tanzania, which revealed that only 31.5% of urban women aged 20–35 were aware of the bacterial origin of peptic ulcers. The similarity is due to general gaps in health literacy regarding *H. pylori* and other medically recognized causes of ulcers.

Regarding diagnosis methods, the majority of respondents, 11 (28%), reported that ulcers were diagnosed by guessing symptoms. This could be because formal diagnostic services, such as laboratory tests, are either inaccessible or unfamiliar to the community. This finding is in agreement with Abid et al., (2022) in India, which showed that many women relied on local remedies and symptom guessing rather than medical diagnosis, often delaying proper management. The similarity is due to low awareness of formal diagnostic procedures and reliance on personal or informal observations.

Concerning sources of information about ulcers, the majority, 12 (30%), first heard about ulcers from health workers. This could be because community health programs provide the primary structured exposure to ulcer information in rural areas, making health workers a key source of knowledge. This finding is in agreement with Doe et al., (2021) in Wakiso District, Uganda, which found that health worker interaction was a main source of information, although many women still had limited understanding. The similarity is due to the central role of community health providers in delivering health education in rural populations.

On understanding risk factors, the majority of respondents, 26 (65%), said that using painkillers without prescription does not lead to ulcers. This could be because misconceptions about medication safety are widespread, and women may not associate over-the-counter painkillers with gastrointestinal complications. This finding is in agreement with Chinecherem et al., (2024) in

Nigeria, which revealed that although self-medication with painkillers was common, only a small proportion of women recognized their Gastro-ulcerative potential. The similarity is due to limited awareness campaigns about NSAIDs and the risks of unsupervised medication use.

Regarding health-seeking behavior, the majority, 12 (30%), reported that they never sought medical advice when experiencing stomach pain. This could be because of fear of hospital expenses, cultural reliance on home remedies, or limited access to health facilities. This finding is in agreement with Abid et al., (2022) in Pakistan, which reported that many women skipped clinic visits and relied on pharmacies or traditional healers for symptom management. The similarity is due to socio-economic constraints and cultural practices influencing health-seeking behavior in both settings.

Study limitations

Financial constraints related to printing and transport occurred. This was mitigated through strict budgeting. Time constraints due to balancing research with academic schedules were addressed through a structured work plan.

Some participants were hesitant to respond truthfully due to sensitivity of the topic. They were reassured of confidentiality and anonymity to encourage openness.

Conclusion

Regarding socio-demographic characteristics of respondents, most respondents were aged 25–26 years (38%), married (40%), with primary education (30%), and mainly engaged in agriculture (35%). In addition, 35% relied on friends and family as their main source of health information, indicating limited access to professional health guidance. These characteristics may influence knowledge, attitudes, and practices regarding peptic ulcer prevention and management. Basing on the findings, regarding knowledge of respondents on peptic ulcers, the knowledge was generally low, as shown by the major findings such as 35% of respondents reporting that they did not know about *Helicobacter pylori*, 65% saying that using painkillers without prescription cannot lead to ulcers, and 28% indicating that ulcers are diagnosed by guessing symptoms.

Recommendations

To the Ministry of Health:

The Ministry of Health should strengthen public health campaigns, promote community health education, and integrate gastrointestinal health into

primary healthcare services to address knowledge gaps and misconceptions about peptic ulcers.

To the Health Workers:

Health workers should provide targeted education on ulcer causes, symptoms, prevention, and proper management, while emphasizing the risks of self-medication and the importance of completing prescribed treatments.

To Mpumude Parish Local Council leadership

They should promote community health education on peptic ulcer prevention, emphasizing the risks of self-medication, the importance of completing treatment, and maintaining regular meals. They should collaborate with local health workers and trusted community members to provide accessible guidance and encourage participation in health sessions.

Acknowledgement

I am deeply grateful to the Almighty God for granting me strength, wisdom, and good health throughout the course of this study. Special thanks to my supervisor for the invaluable advice and encouragement that shaped this work.

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List of Abbreviations

MNRH: Mulago National Referral Hospital

MOH: Ministry of Health

NSAIDS: Non-Steroidal Anti-Inflammatory Drugs

PUD: Peptic Ulcer Disease

SPSS: Statistical Package for Social Sciences

UHPAB: Uganda Health Professions Assessment Board

Source of funding: The study did not receive any funding or a grant.

Conflict of interest: The author declares no conflict of interest.

Author contributions

Nannyondo Angel Kaweesi was responsible for conceptualizing the study, designing the research framework, and collecting data from young women in Mpumude Parish, Lwengo District. She analyzed the findings, interpreted the results, and drafted the manuscript with guidance from her supervisor, Sr. Namukwaya Jane Frances. Angel also coordinated with community participants, ensuring ethical standards were upheld throughout the study. Her contributions reflect both academic rigor and a strong commitment to advancing health awareness in rural communities.

Data availability: Data is available upon request.

Informed consent: All the participants consented to this study.

Author Biography

Nannyondo Angel Kaweesi is a dedicated nursing professional who pursued her Diploma in Nursing at Lubaga Hospital Training School

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