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Knowledge, attitude, and practices towards prevention of peptic ulcer disease among adults aged 18 -45 years attending kayunga regional referral hospital, A cross-sectional study.

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ABSTRACT

Background:

Peptic ulcer disease presents a significant global health concern, affecting millions of individuals and imposing substantial burdens on healthcare systems. This study, therefore, aimed at assessing the knowledge, attitude, and practices towards the prevention of peptic ulcer disease among adults between 18 and 45 years attending Kayunga Regional Referral Hospital in Kayunga District.

Methodology:

A cross-sectional descriptive study design was used involving a sample size of 100 participants, who were selected using a convenience sampling technique. Data was collected and analyzed using Microsoft Excel and presented in the form of tables and figures.

Results:

Findings showed that 32% of the adults were aged 25-31 years, while 17% were between 18- 24 years. The majority, 64% were females, 40% were single, 33% were Baganda, 39% had attained secondary level of education, 56% were employed, and 69% resided in an urban setting. Considering knowledge, 35% were aware that eating on time regularly and controlled use of painkillers (28%) safeguarded against PUD. There was a good attitude towards health-seeking behavior, as 56% thought of seeking medical checkups as important, 60% thought that preventive treatment was crucial. Practically, there was poor control, as 51% did not always take regular meals, 38% used painkillers, which are a risk factor.

Conclusion:

There was generally good knowledge about the prevention of peptic ulcer disease with practices like having regular meals and quitting smoking. Having irregular meals was a major risk factor. Most of the participants were ready to go for medical checkups at the hospital.

Recommendation:

The adults should be educated about the common symptoms and risk factors of peptic ulcer disease, like helicobacter pylori, chronic use of NSAIDs, and safe use of NSAIDs, advocating for access to safe water and food to reduce the H. Pylori transmission.

Keywords: Knowledge, Attitude, Practices, Peptic Ulcer Disease, Kayunga Regional Referral Hospital.
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BACKGROUND

Peptic ulcer disease represents a significant global health concern, affecting millions of individuals worldwide and imposing substantial burdens on healthcare systems (Maqbul et al 2020). Globally, H. pylori was believed to infect more than half of the world's population with high geographical variability (Hooi et al, 2017).

A study carried out in sub-Saharan Africa showed that there was a high prevalence of gastro-duodenal disease. According to the WHO in 2020, peptic ulcer disease deaths in Tanzania reached 462, or 0.16% of the total deaths.

A study carried out in Ghana showed that the prevalence of H. pylori in the sampled patients by histopathology in Accra was 54.4% with 74 out of 136 patients infected, whereas 93.3% had molecular evidence of H. pylori by PCR (Acheampong et al 2019). A study carried out in Nigeria showed that 8.7% patients were diagnosed with peptic ulcer disease, 68.4% were male, and 59.6% had gastric ulcers, 31.6% duodenal ulcers, and 8.8% had both. The mean age of patients with gastric ulcers was higher than those with duodenal ulcers (49.9 years vs. 46.6 years); patients aged less than 40 years were significantly more likely to be diagnosed with duodenal ulcers than gastric ulcers (54.7% vs. 33.9%) while those above 40 years significantly had more gastric ulcers than duodenal ulcers (74.6% vs. 54.7%) (Yahya, et al 2023). A study carried out in the University of Gondar Hospital, Northwest Ethiopia,

showed that peptic ulcer disease occurs in 5-15% of patients with dyspepsia. Imbalances in defensive and aggressive factors play a role in gastro-duodenal mucosal injuries. Helicobacter pylori infection and nonsteroidal anti-inflammatory drugs /aspirin use were the major components of aggressive factors (Belete et al 2021).

In Kenya, a study carried out in Mbagathi Level V Hospital, Nairobi, revealed that the prevalence of Peptic ulcer disease was found to be 46.2%. The H. pylori infection among various age groups was found to be high at 32.4% for those aged 31-40 years, and found to be low at 3.4% in the age group between 81 and 90 years. Among the risk factors, female gender and water for drinking and other domestic usage were found to be statistically significant (Khamisi et al 2020)

In Uganda, a study in Kampala showed that 17 (30%) of the respondents had ever been diagnosed with PUD, of which 80% were females, while 20% were males. 20% took alcohol, 14% took NSAIDs. Additionally, 71% smoked, 68% of the respondents fed on spiced food, and 82% had psychological issues (Chekwemoi et al 2024).

Peptic ulcer disease is a complex disorder, for which Helicobacter pylori infection and the use of non-steroidal anti-inflammatory drugs are the main risk factors. Eradicating H. pylori is effective for infection-relevant PUD treatment (Lanas et al 2017). However, understanding the host factors influencing H. pylori infection and subsequent response could contribute to early risk identification and/or prevention, given the increasing antimicrobial resistance in Uganda. Thus, the aim of the study is to examine the knowledge, attitude, and practices towards prevention of PUD among adults between 18 and 45 years attending Kayunga Regional Referral Hospital in Kayunga District.

METHODOLOGY

Study Design

A cross-sectional descriptive study design involving quantitative methods of data collection was employed since it involved numerical representation of observations for the purpose of describing and explaining the events.

Study Area

The study was conducted at Kayunga Regional Referral Hospital, which is located in the town of Kayunga in Kayunga District in the Buganda Region of Uganda, approximately 51 kilometers north-east of Mukono District. This was about 67.5 kilometers north-east of Mulago National Referral Hospital, the nation's largest referral hospital in Kampala.

Study Population

The study population was adults aged 18- 45 years who attended the outpatient department at Kayunga Regional Referral Hospital during the time of the study.

Sample Size Determination

For this study, the sample size was determined using the Kish-Leslie (1965) formula.

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

Description:
N=desired sample size
Z= the standard normal distribution at 95% confidence level (standard value of 1.96)
P= estimated proportion of adults = 7% (0.07)
d= margin of error 5% (0.05)
q=1-p, therefore; q= (1-0.07) =0.93

$$N = \frac{1.962X\ 0.07\ X\ 0.93}{0.052}$$

N=100 adults.
Therefore, the sample size of 100 adults was used for the study.

Sampling Technique

A convenient sampling method was used for the study. This method is cheap, easy to use, and time-saving.

Sampling Procedure.

A convenient sampling method was used, which is a non-probability sampling method. It involved drawing samples that were easily accessible; adults seeking health care at Kayunga Regional Referral Hospital at the outpatient department.

Data Collection Method

The questionnaire method was used for data collection.

Data Collection Tool

A composite of semi-structured and structured questionnaires written in English was the main instrument used for data collection in this study; translations in the local language were done for those who didn't know English.

Data Collection Procedure

After approval of the study by Kampala School of Health Sciences' research review committee, an introductory letter was issued that was presented to the management of Kayunga Regional Referral Hospital, seeking to carry out research at the health facility. With permission, the target population at the outpatient department was approached, and the purpose of the study and other details were explained. After obtaining individual consent, participants were interviewed based on their accessibility until the full sample size was reached.

Study Variables

Dependent Variable

The dependent variable was Peptic Ulcer Disease among Adults Aged 18- 45 Years Seeking Health Care at Kayunga Regional Referral Hospital.

Independent Variables
The independent variables were knowledge, attitude, and practices towards the prevention of peptic ulcer disease among adults between 18 and 45 years attending Kayunga Regional Referral Hospital in Kayunga District.

Quality control
Quality issues were addressed through the following measures to ensure that the data generated was complete, reliable, and accurate.

Pre-testing Research Tool
Pretesting was done in Kayunga Regional Referral Hospital through questionnaires.

Training of Research Assistants
This focused on participant handling skills such as interviewing skills, content and meaning of questions, correct recording of responses, and orientation to study objectives and procedures.
They were briefed on ethical issues such as the need to observe confidentiality and obtain informed consent from participants prior to administering study tools.

Data management
Each questionnaire was checked soon after the interview for completeness and accuracy. Missing gaps were corrected immediately. At the end of data collection, a database was created. The data was then entered into the computer for analysis. After data entry, questionnaires were kept in a cupboard under a key and lock, only accessible to the researcher. The entered data was password-protected to avoid breach of confidentiality.

Eligibility criteria.
Inclusion criteria
All adult patients aged 18-45 years who attended the outpatient department during the time of study, and consented to participating in this study.

Exclusion criteria
The study excluded all patients below 18 years, above 45 years, incapacitated, critically ill, and mentally ill patients.

Data Analysis and Presentation
Data collected was processed manually by hand tallying and entered into the computer system using the Microsoft Excel 2021 program, analyzed, and presented in the form of tables and figures.

Ethical Consideration
Approval was sought from the Research Committee of Kampala School of Health Sciences, the supervisor, and the Hospital Director. Potential participants were given an explanation about the study, and only those who consented and agreed were included in the study. Confidentiality was ensured, and cultural beliefs and customs were respected.

Study Limitations
Since the study was done at Kayunga Regional Referral Hospital, the study findings may not be generalized easily to other health facilities within the district.

RESULTS
Socio-demographics of the respondents

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Table 1: Showing the socio-demographics of the respondents, N=100.

Variables	Frequency (n)	Percentage (%)	
Age	18-24 years	17	17
	25-31 years	32	32
	32-38 years	29	29
	39-45 years	22	22
Gender	Male	36	36
	Female	64	64
Marital Status	Single	40	40
	Married	35	35
	Divorced	25	25
Tribe	Muganda	33	33
	Musoga	31	31
	Mulyala	21	21
	Others	15	15
Education level	None	10	10
	Primary	14	14
	Secondary	39	39
	Tertiary	37	37
Occupation	Self employed	44	44
	Employed	56	56
Residence	Rural	31	31
	Urban	69	69

Source: Field data

Table 1 shows that the majority, 32 (32%) of the adults were between the ages of 25-31 years, 17 (17%) were between 18- 24 years, while 64 (64%) were females. Considering the marital status, 40 (40%) were single. 33 (33%) were Baganda by tribe, 39 (39%) had attained their level of education as secondary level, 56 (56%) of them were employed, and 69 (69 %) were residing in an urban setting.

Knowledge about the prevention of peptic ulcer disease

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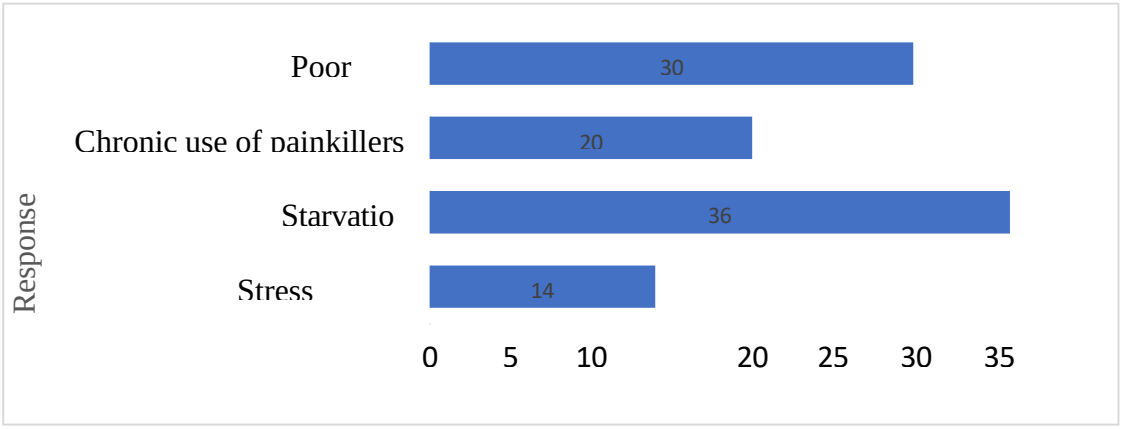
Table 2: Showing Knowledge about prevention of peptic ulcer disease, N= 100.

Variable		Frequency(n)	Percentage (%)
Ever heard about peptic ulcer disease	Yes	64	64
	No	36	36
If yes Source of information about peptic ulcer disease	Relative	10	10
	Media	12	12
	Health workers	40	40
	Other sources	2	2
Preventive measures, you know	Eating in time regularly	35	35
	Control of painkiller use	28	28
	Avoid stress	17	17
	I don't know	20	20

Source: Field data

Table 2 shows that the majority, 40 (40%), got information from health workers,12 (12 %) got the information from the media, while 35 (35%) of the adults knew that eating on time regularly was one way of preventing peptic ulcer disease. Additionally, 28 (28%) of them knew controlled use of painkillers could prevent an adult from peptic ulcer disease, while 20 (20%) of them did not know about the preventative methods of peptic ulcer disease.

Figure 1: Shows some of the causes of peptic ulcer diseases known by the adults during the study.



Source: Primary data (2024)

Findings from Figure 1 show that 36% of the respondents were aware that starvation was the cause of PUD, while 14% of the respondents knew that stress factors were the cause of PUD.

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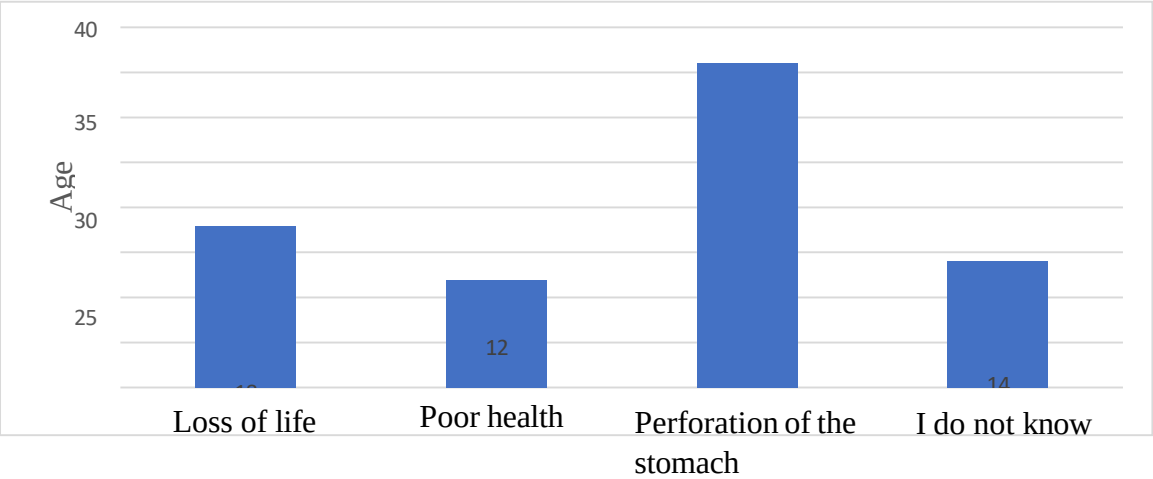
Figure 2: shows the knowledge about the different complications of peptic ulcer disease



Source: Primary data (2024)

From figure 2, most, 36% of the respondents reported perforation of the stomach was the complication of PUD, while the least 12% of the respondents reported poor health was the complication of PUD.

Attitude towards the prevention of peptic ulcer disease.

Table 3: Showing Attitudes towards prevention of peptic ulcer disease, N=100.

Variable	Category	Frequency(n)	Percentage (%)
You think PUD among adults can be a great public concern.	Yes	53	53
	No	7	47
You think of going to the Hospital, check for PUD visits is important.	Yes	56	56
	No	44	44
Do you think a PUD patient can benefit from taking preventive treatment	Yes	60	60
	No	40	40
You always prefer observing or practicing Preventive Measures for PUD.	Yes	58	58
	No	42	42
You think PUD is a chronic illness or it can be treated	It is a chronic illness	41	41
	Can be treated and heals completely	59	59

Source: Field data

Table 3 shows that 56(56%) thought that seeking medical checkups in hospitals is important, 60(60%) thought that a PUD patient could benefit from taking preventive treatment, while 58(58%) always preferred observing or practicing Preventive Measures for peptic ulcer disease.

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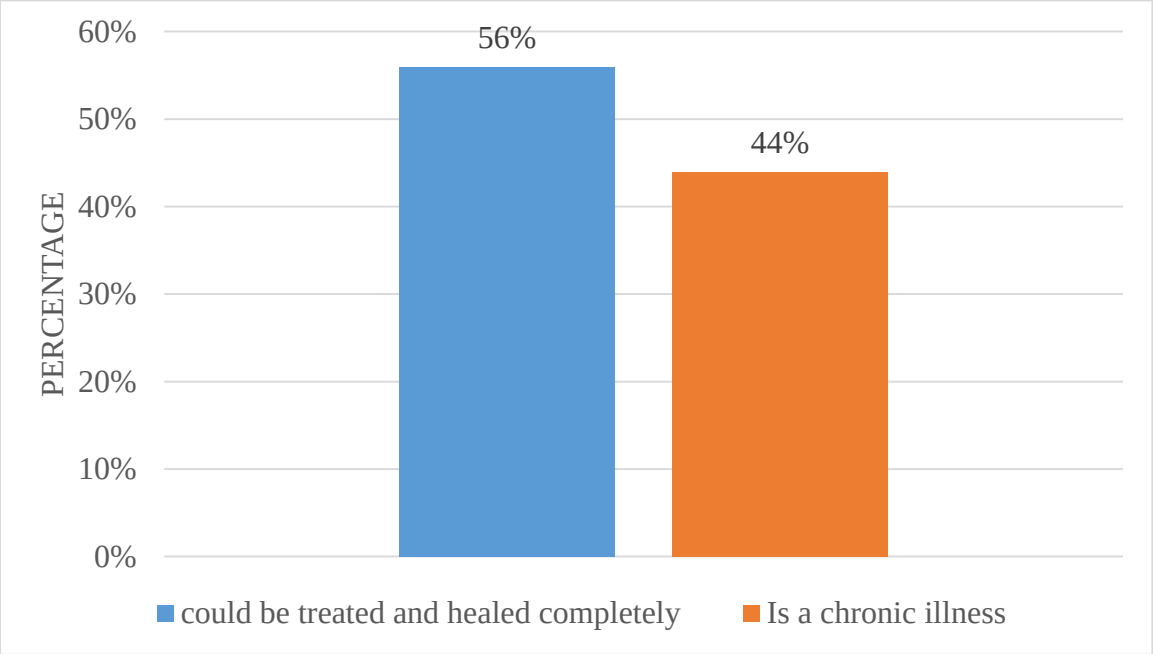
Figure 3: Showing the attitude of adults towards peptic ulcer disease



Source: Primary data (2024)

From figure 3, results show that the majority, 56% of the respondents, reported that PUD could be treated and healed completely, while the minority, 41% reported that it is a chronic illness.

Practices towards the prevention of peptic ulcer disease.

Table 4: Showing practices towards prevention of peptic ulcer disease, N =100.

Variable		Frequency(n)	Percentage (%)
How frequently do you take painkillers	Always	38	38
	Sometimes	40	40
	Never	22	22
How do you prevent yourself from getting PUD	Having regular meals	35	35
	Avoiding painkillers	28	28
	Avoid alcohol taking	12	12
	Stopping smoking	25	25
Do you always take your meals on time	Yes	49	49
	No	51	51

Source: Filed data

Table 4 shows that the most, 38 (38%), could always use painkillers, and 22 (22%) never used painkillers frequently. 35 (35%) reported that they used to have regular meals to prevent themselves from developing peptic ulcer disease, whereas 28 (28%) could avoid overuse of painkillers as a measure against Peptic ulcer disease. Additionally, 25 (25%) had to stop smoking as a way of preventing peptic ulcer disease. 51 (51%) always could not take regular meals, with 28 (28%) who would not maintain their meal regularly.

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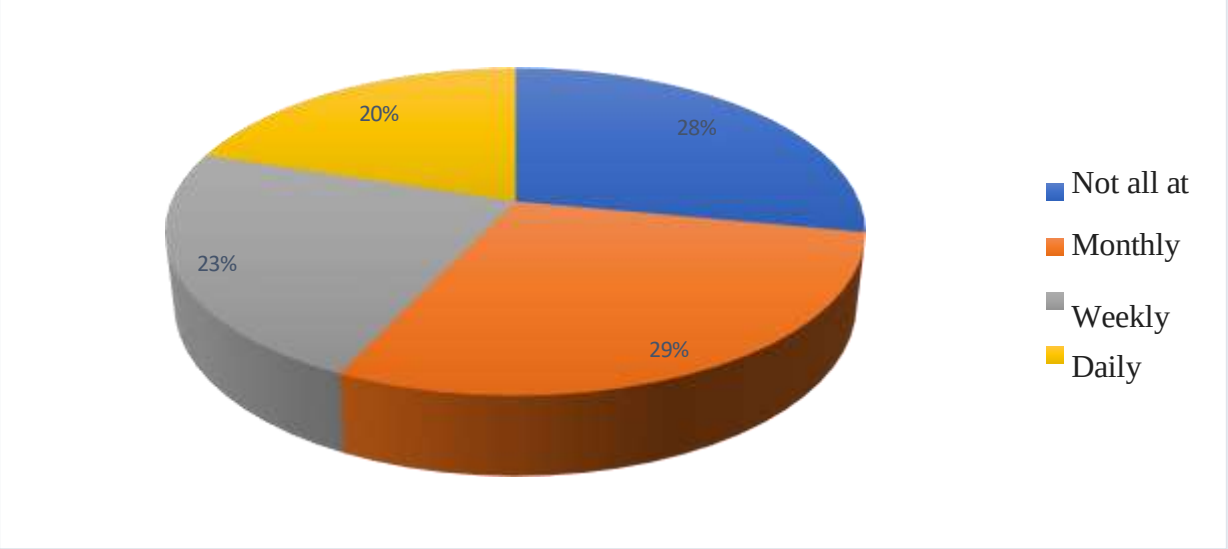
Figure 4: showing how often adults would maintain their diet on a regular basis.



Source: Filed data

From Figure 4, 28% of the respondents reported that they did not maintain their diet, while at least 20% of the respondents reported that they maintained their diet daily.

DISCUSSION

Knowledge about prevention of peptic ulcer disease among adults aged 18 – 45 years attending Kayunga Regional Referral Hospital in Kayunga District.

Findings showed that 64(64%) of the adults had ever heard of peptic ulcer disease; the majority of them, 40(40%), had gotten information from health workers, and 12(12 %) had gotten the information from the media. Most, 36(36%) of participants were aware that starvation results in peptic ulcer disease, while 30(30%) suggested that a poor diet would cause PUD. In addition, 36(36%) of the adults knew complications of peptic ulcer disease, which include perforation of the stomach and loss of life (18%). Considering preventive measures, 35% of the adults knew that eating on time regularly was one way of preventing peptic ulcer disease, 28 (28%) of them knew controlled use of pain killers could prevent peptic ulcer disease, while 20 (20%) of them didn't know about the preventative methods of peptic ulcer disease.

This indicated that the majority of the adults between the ages of 18 and 45 years at Kayunga Regional Referral Hospital had known about peptic ulcer disease, with good knowledge about the causes, complications, and prevention measures of the disease. The study carried out in India showed that 47.5% of the students had a moderate level of knowledge regarding the prevention of peptic ulcer, 18.5% of adolescents had good knowledge, 0.5% had excellent knowledge, and 33.5% had poor knowledge regarding peptic ulcer (Jinu et al 2019).

Attitude about prevention of peptic ulcer disease among adults aged 18 – 45 years attending Kayunga Regional Referral Hospital in Kayunga District.

Findings showed that 53 % of respondents thought PUD could be a great public concern among adults. Whereas 56% thought that seeking medical checkups in hospitals is important, 60% thought that a patient with peptic ulcer disease could benefit from taking preventive treatment. 58% always preferred observing or practicing preventive measures for peptic ulcer disease, with 59% thinking that peptic ulcer disease could be treated with complete healing. This indicated that adults attending the hospital had a positive attitude towards the prevention of peptic ulcer diseases with the eradication of the causes of the condition. This agreed with the study carried out in Bugiri Main Hospital in Uganda, which showed that 62.1% of the interviewed respondents thought they could have ulcers and 79.3% thought ulcers could be cured using proper medicine, while 17.9% thought otherwise (Mariam Nambi et al., 2021).

Practices about prevention of peptic ulcer disease among adults aged 18 – 45 years attending Kayunga Regional Referral Hospital in Kayunga District.

Findings showed that the most, 40(40%) of the adults could sometimes frequently use painkillers. This indicated that most of the adults, despite the fact that they knew about the peptic ulcer disease prevention measures to reduce the prevalence of the disease, there are many more efforts to be implemented effectively. This agrees with the

study carried out in Kampala, Uganda, which showed that peptic ulcer disease can be prevented, and one can live without this dangerous condition (Ngobi, 2022).

CONCLUSION

The study showed that peptic ulcer was prevalent among adults between the ages of 25 and 38 years who had good knowledge about the causes, complications, and preventive measures of the disease. The adults attending the hospital had a positive attitude towards the prevention of peptic ulcer diseases with the eradication of the causes of the condition. The adults despite the fact that they knew about the peptic ulcer disease, prevention measures to reduce the prevalence of the diseases need much more efforts to be implemented effectively.

RECOMMENDATION

Health education of adults about common symptoms and risk factors of peptic ulcer diseases, like helicobacter pylori, that can be passed from person to person through direct contact with saliva, stool, and contaminated food, in addition to the already known causes. Adults should be encouraged by the health workers through the media and leaders to embrace the habit of carrying out medical checkups for early diagnosis and treatment, and adhering to treatment if diagnosed with peptic ulcer disease.
Adults should be educated on the safe use of NSAIDs and advocate for access to safe water and food to reduce the transmission.

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LIST OF ABBREVIATIONS

H. Pylori	**:** Helicobacter pylori
NHS	**:** National Health Service
NSAIDs	**:** Non-Steroidal Anti-Inflammatory Drugs
PCR	**:** Polymerase Chain Reaction
PUD	**:** Peptic Ulcer Disease
WHO	**:** World Health Organization

SOURCE OF FUNDING

The study was not funded.

CONFLICT OF INTEREST

The author declares no conflict of interest.

AUTHOR CONTRIBUTIONS

WK- Study developer, pretested research tools, Data collector, Data entry, and analysis.
CA- Supervised the Study

DATA AVAILABILITY

Data is available upon request.

INFORMED CONSENT

There was full disclosure; full comprehension, and respondents voluntarily consented to participate in the study.

AUTHOR BIOGRAPHY

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Cliffe Atukuuma is a tutor at Soroti School of Comprehensive Nursing and a research supervisor.

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