Journal of World Health Research
Vol. 2 No. 6 (2025): June 2025
https://doi.org/10.71020/jwhr.v2i6.54
Original Article

HEALTH-RELATED FACTORS CONTRIBUTING TO INCREASING CASES OF PEPTIC ULCER DISEASE AMONG PATIENTS AGED 18-70 YEARS ATTENDING KAYUNGA REGIONAL REFERRAL HOSPITAL, KAYUNGA DISTRICT. A CROSS-SECTIONAL STUDY.

Bruno Walubata, Mulodokayi Niwagiira
Kampala School of Health Sciences

Abstract

Background

A gradual increase has been observed in recent years, as indicated by hospital records and the increasing number of cases attended to daily at KRRH. This study assessed the health-related factors contributing to the increasing cases of peptic ulcer disease among patients aged 18-70 years attending Kayunga Regional Referral Hospital, Kayunga District.

Methodology

A descriptive cross-sectional study design was used in this study of 72 respondents. A simple random sampling technique was used to select samples. A semi-structured questionnaire with both open and closed-ended questions was designed to collect data. The data collected was analyzed manually using tally sheets and data systematically computed into frequency and percentage and presented in tables, bar graphs, and pie-charts.

Results

Most (55.6%) of the participants were in the age range of 50-70years, (55.6%) of the respondents were females, and (51.4%) of the respondents were civil servants. (69.4%) of the respondents reported that they eat spicy or fatty foods on daily basis, (90%) of the respondents had ever used NSAIDs, (83.3%) of the respondents have been diagnosed with H. pylori before and (86%) of the respondents had ever been diagnosed of dyspepsia, (72.2%) of the respondents had depression.

Conclusion

The study established that the health-related factors contributing to PUD were NSAIDs use, history of being diagnosed with H. pylori, depression, and dyspepsia.

Recommendation

There is a need for designing and implementing an education program targeting to educate men on good lifestyle practices to prevent peptic ulcers**.**

Keywords: *Prevention of peptic ulcer disease, Health related factors, Kayunga regional Referral hospital.*
Submitted: *2024-11-20* ***Accepted:*** *2025-04-17* ***Published:*** *2025-06-15*

Corresponding Author: *Bruno Walubata*
Email: *walubatabruno@gmail.*
Kampala School of Health Sciences

Background

In 2019, the global prevalence of PUD was approximately 8.09 million, representing a 25.82% increase from 1990. In both sexes, the numbers of the prevalence, incidence, and deaths were higher in males than in females over 29 years (Renet *al.*, 2022). Non-significant differences in mortality rates of PUD existed between sub-Saharan Africa and North Africa (Peiffer *et al.*, 2020). In the pooled prevalence of H. pylori in East Africa, the rate was 50.98%. The prevalence of H. pylori infection ranged from 7.7% to 94.5% in East African countries (Mnichil*et al.*, 2024). According to the latest WHO data published in 2020, PUD deaths in Uganda reached 0.33% of total deaths. The age-adjusted death rate is 4.66 per 100000 of population, which ranks Uganda 63rd in the world (WHO, 2020). However, the morbidity and mortality of PUD decreased significantly from 1990-2019 (MOH, 2022), A gradual increase has been observed in recent years as per the hospital records and increasing numbers of cases attended to in a day at KRRH, hence I picked interest to research factors contributing to increasing cases of PUD among patients aged 18-70 years attending at KRRH Kayunga district.

Furthermore, according to the research by reviewing the most important recent publications concerning the relation of Helicobacter pylori and nonmalignant upper gastrointestinal diseases, results show that *H. pylori* remains the main etiopathogenetic factor in complicated and uncomplicated PUD. Nevertheless, the role of NSAIDs and aspirin is increasing. The novel data did not confirm that PUD caused by NSAIDs and aspirin is less symptomatic (Jonaitis*et al.*,2018). According to Kaplan–

Meier method used to investigate how the incidence of PUD varied with depression and social engagement status among 850 older people living alone recruited from eight Grade-A hospitals in the People's Republic of China, results shown that the cumulative incidence of PUD was higher in depressed 10.1% than non-depressed participants 5.3%. However, among the depressed participants, increased or continued social engagement reduced the incidence to 6.2% and 7.9%, respectively. The incidence of PUD was similar in non- depressed and depressed participants who reported increased or continued social engagement during the follow-up period. However, depressed participants who reported decreased or no social engagement were more likely to develop PUD than those without depression (Yang *et al.*, 2019). This study assessed health-related factors contributing to the increasing cases of peptic ulcer disease among patients aged 18-70 years attending Kayunga Regional Referral Hospital, Kayunga District.

Methodology

Study Design

A cross-sectional descriptive study design with an exploratory aspect, employing both qualitative and quantitative approaches, was used due to the specific period of time allocated for my research.

Study Area

The study was carried out at Kayunga Regional Referral Hospital situated in Kayunga town, Kayunga district central Uganda.

Study Population

The study populations were patients aged 18-70 years with PUD attending KRRH.

Sample Size Determination

The sample size was determined using Keish and Lesile (1965) formula as shown below. $N=z^2p\ (1-p)/d^2$

Where:

N is the sample size required

Z is standard normal deviation (1.96 for 95% confidence interval)

P is proportional characteristics where no reasonable estimate is given therefore 95% or 0.95 is used.

D is the level of precision desired 5% (0.05) $N= (1.96)^2x0.95x0.049/ (0.05)^2$

N=72 respondents.

Sampling Technique

Purposive sampling was done to obtain the sample. It involved choosing respondents based on the purpose of the study. It entailed recruiting adult patients for the study as they were diagnosed with PUD in the hospital. This method was used because it was quick and saved time.

Sampling procedure

Small pieces of paper were written on by any member present, and only the member with a history of PUD was picked randomly to avoid bias among the members. Those with the first numbers were selected first until the required sample size was obtained.

Data collection method

The study focused on primary data because primary information from the respondents was needed. Data was collected using a semi-structured questionnaire since not all patients were able to interpret questions. The questionnaire was divided into two sections that is, the patient's demographic data and questions that gather information about the health-related, socio-demographic, and economic status of the patient. The questionnaires were administered to patients upon being informed about the study. The reason for using questionnaires is that they are easy to use and save time during data collection.

Data collection tool

A self-administered, semi-structured questionnaire with both open and closed-ended questions was designed to collect data from respondents. It consisted of English questions on socio-demographic, health-related, and economic factors to answer. The questionnaire consisted of four sections, which included socio-demographic and economic factors on increasing cases of PUD. This data collection tool was preferred because it is easier to collect data from a large population in the shortest period.

Data Collection Procedure

An introductory letter to the research ethics committee of the school was obtained from Kampala School of Health Sciences upon clearance. The researcher introduced himself to the ward in charge, who later identified patients with PUD and was involved in the study. The researchers converted the patients to participate in the study.

Study Variable

Independent Variables

Independent variables were social-demographic and economic factors.

Dependent Variables

Dependent variables were increased cases of peptic ulcer disease.

Quality Control

Training of research assistants

Two research assistants were trained who were fluent in speaking Luganda and English prior to the study, and how to use structured questionnaires.

Pretesting of the research tool
The filled questionnaires were checked for completeness at the interview site before leaving the place, and then submitted to the supervisor. Ample time was given to the research participants. Pretesting of the questionnaires to find out any contradictory problems was done. Therefore, quality control was done to ensure the accuracy and validity of the data collected.

Data Management
The data obtained was stored in notebooks, computers, compact discs, and a flash disk as a backup copy. All completed questionnaires will be kept in a cupboard waiting for data analysis.

Selection criteria
This included the inclusion and exclusion criteria.

Inclusion criteria
Current patients aged 18-70 years and patients with PUD attending KRRH were the target for this study

Data analysis and presentation
Information was obtained from the questionnaires checked and verified manually, and data was analyzed using simple calculators, Windows Excel-2010, and presented in the form of tables, graphs, and charts

Results
Demographic data
Table 1: Shows distribution of respondents according to demographic data (N=72)

Response	Frequency (f)	Percentage (%)
Age		
18- 30,	4	5.6
30-39	7	9.7
40-49	20	27.8
50-70	40	55.6
Total	**72**	**100**
Sex		
Female	40	55.6
Male	32	44.4
Total	**72**	**100**
Marital status		
Married	37	53.6
Single	16	23.2
Widow	11	15.9
Divorced	5	7.2
Total	**72**	**100**
Occupation of respondent		

Civil servant	37	51.4
Not employed	12	16.7
Self employed	13	18
Peasant	10	13.9
Total	**72**	**100**
Education level		
Illiterates	8	11.1
Primary	15	20.8
High school	20	27.8
Tertiary	29	40.3
Total	**72**	**100**

Table 1 shows that most (55.6%) of the participants were in the age range of 50-70years, while the least (5.6%) were in the age range of 18- 30 years. About the above, most (55.6%) of the respondents were females, and the least (44.4%) of the respondents were males; however, the most (53.2%) of the respondents were married, and the least (7.2%) of the respondents were divorced. The results further showed that more than half (51.4%) of the respondents were civil servants, while the least (13.9%) of the respondents were peasants. In addition to the above, most (40.3%) of the respondents had finished tertiary education, while the least (11.1%) of the respondents were illiterates

.

Health related factors contributing to increasing cases of PUD among patients aged 18-70years attending at Kayunga regional referral hospital, Kayunga district.

Table 2: Shows the distribution of respondents according to whether they were obese (N=72)

Response	**frequency (f)**	**percentage (%)**
Yes	50	69.4
No	22	30.6
Total	**72**	**100**

Table 2 showed that most (69.4%) of the respondents were obese, while the least (30.6%) of the respondents were not.

Journal of World Health Research
Vol. 2 No. 6 (2025): June 2025
https://doi.org/10.71020/jwhr.v2i6.54
Original Article

Figure 1: Shows the distribution of patients according to consumption of spicy or fatty foods.

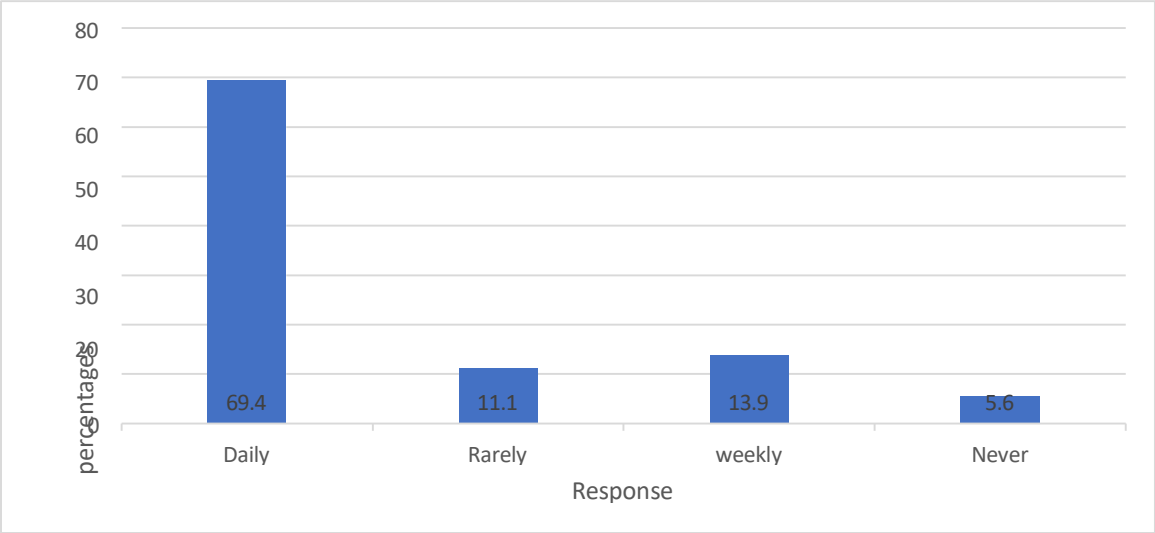

Figure 1 shows that more than half (69.4%) of the respondents reported that they eat spicy or fatty foods daily, while the least (5.6%) of the respondents reported that they do not eat spicy or fatty foods.

Figure 2: showing the distribution of respondents according to whether they used NSAIDs

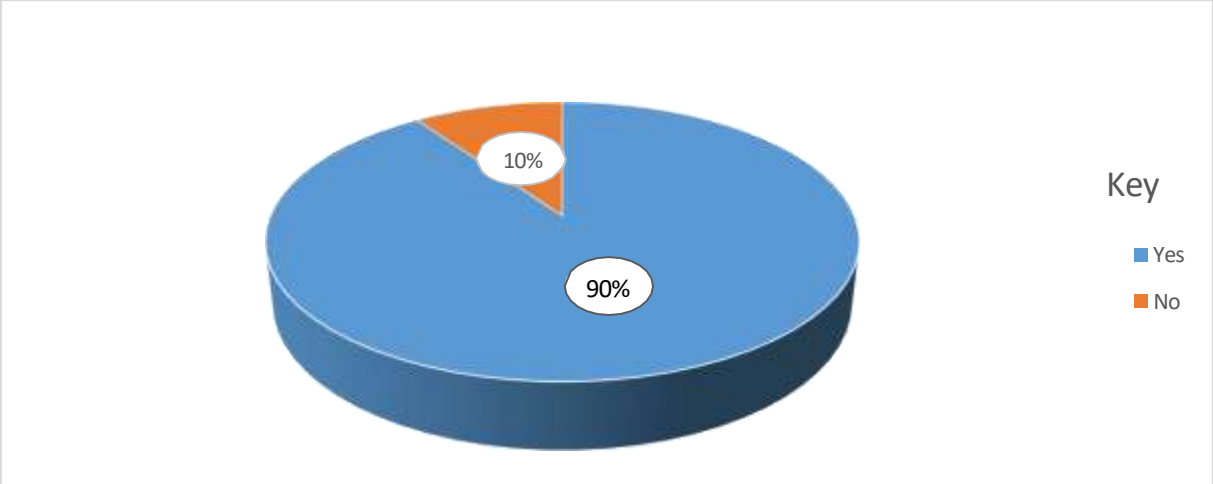

Figure 2 shows that the majority (90%) of the respondents had ever used NSAIDs, while the least (10%) of the respondents had never used NSAIDs.

Table 3: Shows the distribution of the respondents according to the whether they are diagnosed of helicobacter pylori (N=72).

Response	**frequency (f)**	**Percentage (%)**
Yes	60	83.3
No	12	16.7
Total	**72**	**100**

Table 3 shows that the majority (83.3%) of the respondents have been diagnosed with H. pylori before, while the minority,(16.7%) of the respondents have never been diagnosed with H. pylori before.

Figure 3: Shows the distribution of respondents according to whether they have ever been diagnosed of dyspepsia

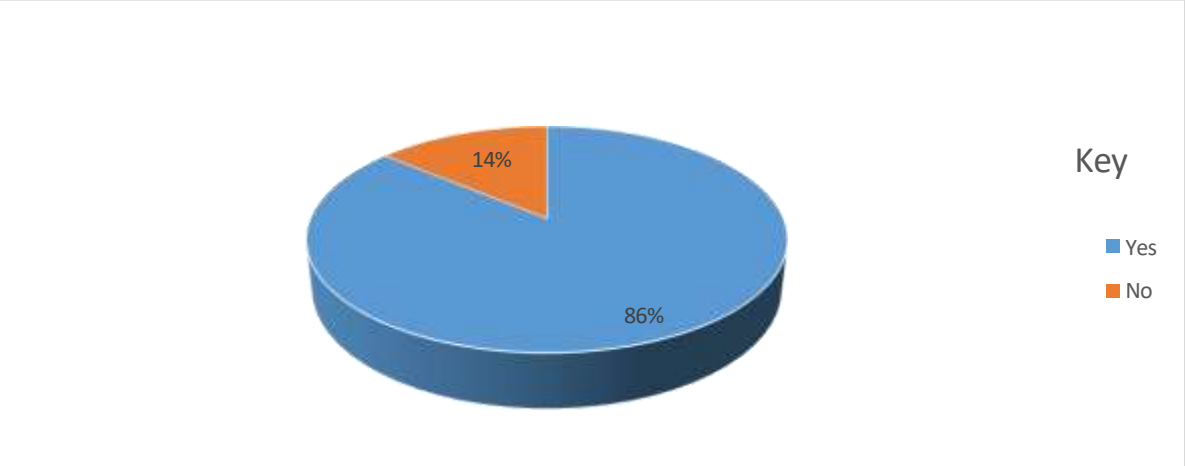

Figure 3 shows that, majority (86%) of the respondents had ever been diagnosed of dyspepsia and the minority (14%) had never been diagnosed of dyspepsia.

Table 4: Shows the distribution of respondents according to a depression (N=72)

Response	**Score**	**Frequency (f)**	**percentage (%)**
Never	0	3	4.7
Rarely	1	7	9.7
Sometimes	2	10	13.9
Always	3	52	72.2
Total	**5**	**72**	**100**

Table 4 indicates that the majority (72.2%) of the respondents had depression, while a minority 4.2% of the respondents had no depression.

Results

Health related factors contributing to increasing cases of PUD among patients aged 18-70years

The findings of the study reported that the majority (90%) of the respondents had ever used NSAIDs and acetyl salicylic acid. This could be because NSAIDs and acetyl salicylic acid reduce prostaglandin production, which protects the stomach lining. This was in line with the research study by (Assefa *et al.*, 2022), which reported that Medications associated with developing uncomplicated PUD included the current use of acetyl salicylic acid NSAIDs.

From the study findings, the Majority (83.3%) of the respondents had been diagnosed with Helicobacter pylori. This could be because H. pylori damages epithelial cells, disrupting stomach lining integrity, thus leading to PUD. This was in line with the research study by (Jonaitiset *al.*,2018*)*, who stated that *H. pylori* remained the main

etiopathogenetic factor in complicated and uncomplicated PUD. The study findings revealed that the majority, 69.4% of the respondents, were obese. Obesity puts pressure on the stomach, increasing acid reflux and mucosal damage, leading to PUD, and this agrees with the research study by (Pyo *et al.*, 2019*)*, who stated that the cumulative incidence rate of PUD and GU was significantly higher in the obese group than the non-obese group. The study findings revealed that the majority, 72.2% of the respondents, had depression, and a minority, 4.2% of the respondents, never had depression. Depression can lead to unhealthy eating habits, consuming spicy, fatty, or acidic foods contributing to PUD, and it is in line with a research study by *(Yang et al.*, 2019), which indicated that the cumulative incidence of PUD was higher in depressed 10.1% than in non-depressed participants 5.3%.

Conclusion
The study established that the health-related factors contributing to PUD were NSAIDs use, history of being diagnosed with H. pylori, depression, and dyspepsia.

Recommendation
There is a need for designing and implementing an education program targeting to educate men on good lifestyle practices to prevent peptic ulcers.

Acknowledgment
I would like to express my sincere gratitude to the following individuals in their capacities for their valuable support and contributions to this research report on peptic ulcer disease: Kampala School of Health Sciences for providing access to resources, data, and facilities.My supervisor, Dr. Niwagiira Mulodokayi, for guidance and expertise throughout this project,My colleagues and peers: Katusime Fortinate Erimirwa Lauben, Gibutai Patience, HamenyaFred, Ntwasi Peter, Atuhura Patience, and Opio Nathan, for their insightful feedback and encouragement.To my parents, whose selfless dedication and sacrifices have shaped my intellectual curiosity to reach this milestone, and I am forever grateful.To Principal Mubangizi Prosper for fostering a culture of excellence and innovation
My siblings: Mukite Rebecca, Mutsopa Emmanuel, Wanyetse Viola, Nansobolamaria, Kakai Mercy, and Agaba John, for being my rock, my confidants, and my biggest cheerleaders.

LIST OF ABBREVIATIONS
CDC	:	Centers for Disease Control
DU	**:**	Duodenal Ulcer
MOH	:	Ministry of Health
NSAIDs	:	Non-Steroidal Anti-inflammatory Drugs
PPI	:	Proton Pump Inhibitor
PUD	:	Peptic Ulcer Disease
WHO	:	World Health Organization.

Source of funding
There is no source of funding.

Conflict of interest
No conflict of interest declared.

Availability of data
Data used in this study is available upon request from the corresponding author

Author's contribution
BW designed the study, conducted data collection, cleaned and analyzed data, and drafted the manuscript, and MN supervised all stages of the study from conceptualization of the topic to manuscript writing.

Ethical approval
A recommendation letter was obtained from the Kampala School of Health Science to obtain permission from KRRH to be able to carry on the research. During data collection, consent was obtained from the respondents, and there was confidentiality of the information to be collected by storing data in a double-locked cupboard, and the key was only accessed by the researcher.

Informed consent
A consent form was filled out by the respondents after explaining the purpose of the study to them. The respondents were assured of confidentiality as no names would appear on the questionnaire. No participant was forced to participate in the study, and all the study materials used during the interviews were safely kept under lock and key, only accessible by the researcher.

Author's biography
Bruno Walubata is a student of diploma in clinical medicine and community health at Kampala School of Health Sciences.
Mulodokayi Niwagiira is a research supervisor at Kampala School of Health Sciences.

References
1) Assefa, B., Tadesse, A., Abay, , Z., Abebe, A., Tesfaye, T., Tadesse, M., & Molla , A. (2022). . Peptic ulcer disease among dyspeptic patients at endoscopy unit, University of Gondar hospital, Northwest Ethiopia. BMC Gastroenterol 22, 164 (2022).

2) Jonaitis, L., Pellicano, R., & Kupcinskas, L. (2018). Helicobacter pylori and nonmalignant upper gastrointestinal diseases. WILEY.

3) Mnichil, Z., Nibret, E., Hailegebriel, T., Demelash , M., & Mekonnen , D. (2024). Prevalence and associated risk factors of Helicobacter pylori infection in East Africa. Braz J Microbiol 55, 51–64 (2024).

4) MOH. (2022). prevalence of Peptic ulcer disease in Uganda.

5) Pyo , J. H., Lee , H., Kim, J. E., Choi, Y. H., Kim , T. J., Min , Y. W., . . . Kim, J. J. (2019). Obesity and Risk of Peptic Ulcer Disease. Nutrients 2019, 11, 1288.

6) WHO. (2020). Prevalence of peptic ulcer disease in Uganda.

7) Yang, S., Liu, H., Zhang , Y., Xu, R., Chen , G., & Boye, F. a. (2019). Association between depression and subsequent peptic ulcer occurrence among older people living alone: A prospective study investigating the role of change in social engagement. , Journal of Psychosomatic Research.

8) Ren, J., Jin, X., Li, J., & Li, R. (2022). The global burden of peptic ulcer disease in 204 countries and territories from 1990 to 2019. International Journal of Epidemiology 51(5).

PUBLISHER DETAILS

PUBLIC HEALTH CORPS AFRICA LIMITED

Contact: +256 702 986 663
Email: info@phafrica.org/worldhealthresearch2024@gmail.com
Website: https://whr.phafrica.org
Address: Scholar's Summit Nakigalala, P. O. Box 166256, Entebbe Uganda, East Africa