Volume: 2, Issue: 2
Page: 51 - 63
2021

International Journal of Medicine, Nursing & Health Sciences (IJMNHS) ®
(IJMNHS.COM)

Factors Predisposing to Peptic Ulcer Disease Among Patients Attending Gastrointestinal Clinics in Two Selected Tertiary Hospitals in Ogun State, Nigeria

Author(s), IROEGBU, Chioma Anita (RN, RM, BNSc)
AND
DR. POPOOLA, Rabiu Olalekan (RN, Ph.D)

Abstract:

Peptic ulcer disease is one of the major prevailing diseases throughout the world and predominantly common in low and middle income countries. PUD poses an important cause of morbidity and mortality throughout the world affecting the lives of millions of people in their everyday life. The main purpose of the study was to evaluate the factors predisposing to peptic ulcer disease among patients attending gastrointestinal clinics in two selected tertiary hospitals in Ogun State (Federal Medical Centre, Abeokuta and Babcock University Teaching Hospital, Ilishan-Remo). This study utilized a descriptive quantitative research design and total enumeration of 140 participants from the two study tertiary hospitals in Ogun state. A self-designed questionnaire was used to collect data for the study. Data obtained were analyzed using Statistical Package for Social Sciences (SPSS) version 27. The study used the descriptive statistics of simple percentage, mean and standard deviation. About two-third of the participants from the two hospitals had moderate level of knowledge about PUD. There was moderate prevalence of *helicobacter pylori* infection among the participants presented in the two tertiary hospitals. Also, there was moderate level of *H. p* infection 30(50%, BUTH), 44(55%, FMC) among study participants while most of the factors influencing PUD

IJMNHS
Accepted 28 April 2021
Published 30 April 2021
DOI: 10.5281/zenodo.4746476

were reported to be intake of NSAIDs (32% Ibuprofen) and steroids (30%), consumption of alcoholic beverages (37.1%), followed by smoking (30%). 68(48.6%) of the participants reported hypertension as one of the most common medical conditions affecting them. It was recommended among others that the general public needs to be aware about the causes and prevention of PUD.

Keywords: Peptic ulcer disease, *helicobacter pylori*, Factors, Knowledge and NSAIDs,

About Author

Author(s): IROEGBU, Chioma Anita (RN, RM, BNSc)
Department of Adult Health Nursing,
School of Nursing Science,
Babcock University, Ilishan-Remo, Ogun State, Nigeria.

And

DR. POPOOLA, Rabiu Olalekan (RN, Ph.D)
Department of Adult Health Nursing,
School of Nursing Science,
Babcock University, Ilishan-Remo, Ogun State, Nigeria.

Introduction

Peptic ulcer disease (PUD), as well as the countless of its complications is a usual medical problem encountered by the gastroenterologists worldwide. Ulcers are diverse group of ulcerative disorders that occur in the upper gastrointestinal tract (Lanas & Chan, 2017). Peptic ulcer disease (PUD) is clinically defined as a disruption of the continuity of the gastrointestinal mucosa lining leading to sores of about 0.5cm or 5mm in diameter in endoscopic findings. PUD is an endoscopic diagnosis in contrast to dyspepsia, which is a clinical diagnosis based on symptom alone. PUD occurs in distal esophagus, jejunum and Meckel's diverticulum with heterotrophic gastric mucosa and mostly in stomach and first part of duodenum (Lanas & Chan, 2017).

PUD is broadly classified as gastric ulcers (GU) and duodenal ulcers (DU) depending on the section of the gastrointestinal tract (GIT) that is affected. Gastric ulcers occur mostly in the elderly while duodenal ulcers are more rampant than the gastric ulcers (Bojuwoye, et al, 2021). Another type of PUD is the Idiopathic PUD (IPUD) described as a peptic ulcer with no definite causes such as *H. pylori* infection, NSAIDs use or hypergastrinaemia. The main symptom is epigastric pain which may lessen when food or alkali is consumed (Yim, et al., 2021).

Peptic ulcer disease (PUD) is caused by an imbalance of acid secretion (mucosal damaging factors) which includes gastric acidity, pepsin, *H. pylori* infection, and NSAIDs; mucosal blood flow, mucosal defences (mucosal protective factors) such as gastric mucus layer, prostaglandin, bicarbonate that resist acid digestion (Lanas & Chan, 2017). *H pylori* infection is responsible for 90% of duodenal ulcers and 70%-90% of gastric ulcers (Malik & Singh, 2019). While the activities of *H. Pylori* causes imbalance in acid production and regulation through inflammation-induced-increased gastrin secretion and decreased somatostatin secretion, NSAIDs tend to affect the Cyclo-Oxygenase (COX) pathways, leading to the production of prostanoids (prostaglandins, prostacycline, and thromboxane) which alters the mucosal protection mechanism and subsequently damage the mucosal surface of the affected region (Yim et al., 2021). Studies have identified other factors associated with PUD such as environmental, socioeconomic, and psychological characteristics and other potential factors part from the activities of *H. pylori* and NSAIDs,

PUD is an essential cause of illness and death globally affecting the lives of millions of people in their everyday life. In the United States, an estimate of four million people has peptic ulcers (duodenal and gastric), with about 350, 000 new cases yearly (Ali, 2018). Also, about 180,000 patients are hospitalized yearly while about 5,000 people die yearly as a result of peptic ulcer disease. The likelihood of developing peptic ulcer in one's lifetime is about 4% for females and 10% for males (Ray-Offor & Opusunju, 2020).

According to Ray-Offor and Opusunju (2020), the incidence of PUD is lessening in the developed countries while it is increasing in the developing countries. The reason for the decrease in the developed countries is related to early detection and treatment of the risk factors linked with infections such as *H. pylori* infection acquired through poor food hygiene as well as increase in health awareness. Also 30%-40% of the population in developed countries have lower prevalence of carriers of *H. pylori* which is acquired during childhood unlike 70%-90% in the developing countries.

According to Shah, et al., (2019), the prevalence of PUD in Nigerian populace can be estimated as that of H. pylori since 82% of gastric ulcer (GU) patients and 100% of duodenal ulcer (DU) patients in Nigeria are H. pylori positive. This has been confirmed by recent studies with similar prevalence rates for duodenal and gastric ulcers in both southern and Northern Nigeria. According to Bello, et al (2018), studies from some states in Nigeria reported that there was prevalence of H. pylori of 81% in Kano in Jos, and 73% in South West. Likewise, people have always had painful stomach complaints and also got ways to live with their symptoms, which may respond to various treatments.

In Babcock University Teaching Hospital) (BUTH), about 15 to 20 patients are seen at the gastrointestinal (GIT) clinic on a weekly basis with gastrointestinal symptoms. A number of these patients diagnosed with PUD were also referred to the endoscopy unit of the same facility for gastroscopy/oesophagastroduodenoscopy (EGD) and Urea Breath Test (UBT) respectively. In some of the patients, EGD revealed gastric or duodenal ulcers while some are already having gastric or duodenal cancers resulting from peptic ulcer disease. Also, UBT and gastric biopsies for histological examinations revealed positive *H. pylori* tests in majority of the patients. In a period of 6 months (January-June, 2019), from a total number of 148 patients aged 18-80years that had gastroscopy done, about 90 of them were found to have PUD while 25 out of the 90 patients were already having gastric or duodenal cancer. The majority of these patients were from the rural setting with limited access to healthcare facilities. They were sick at presentation to the hospital demanding extensive nursing care, psychological as well as financial support. In addition, within the past three months (April-June, 2019), about seven (7) of the patients diagnosed with gastric cancer caused by PUD were reported dead due to late presentation, lack of financial support and ignorance.

PUD impacts negatively on the health-related quality of life of affected individuals. Also, employers as well as healthcare systems are burdened with high economic costs of dealing with the disease. Despite studies in various parts of the world on peptic ulcer disease, the condition has remained among the world's leading cause of morbidity and mortality while little attention has been paid to the factors associated with PUD in Ogun state. Hence, this study evaluated the factors predisposing to peptic ulcer disease among patients attending gastrointestinal clinics in the two selected tertiary hospitals in Ogun state, Nigeria.

Thus, the main objective of the study was to assess the factors predisposing to peptic ulcer disease development among patients attending gastrointestinal clinics in two selected tertiary hospitals in Ogun State (Federal Medical Centre, Abeokuta and Babcock University Teaching Hospital, Ilishan-Remo). This study specifically examined:

1. the level of knowledge of PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals;
2. the prevalence of *H. pylori* infection among study participants;
3. the factors associated with the occurrence of PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals; and
4. the factors influencing PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals.

Research Questions

The following research questions were raised for this study:

1. What is the level of knowledge of PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals?

2. What is the prevalence of *H. pylori* infection among study participants?
3. What are the factors associated with the occurrence of PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals?
4. What are the factors influencing PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals?

Methodology

Descriptive quantitative research design was adopted to assess the factors predisposing to peptic ulcer disease among patients attending GIT clinics in two selected tertiary hospitals in Ogun state. The population for this study consisted of all patients aged 18 years and above attending adult GIT clinics in the two selected teaching hospitals in Ogun state. Total enumeration of all patients aged 18 years and above attending GIT clinics in the two selected teaching hospitals in Ogun state was used for the study. The instrument used for data collection for this study was self-structured questionnaire which consists of three sections A, B and C. Section A contains 11 questions and measured the socio-demographic variables associated with PUD, section B contains 11 questions which measured the knowledge of PUD among study participants and was categorized as low, moderate and adequate knowledge. Section C contains 19 questions which measured the factors influencing PUD, making a total of 41questions

Face and content validity of the instrument was ensured by giving copies of the instrument to experts in nursing science. Test re-test of the instrument/questionnaire was done to test for the reliability of the questionnaire. The reliability of the questionnaire was ascertained using Pearson's Product Moment Correlation coefficient calculated to be 0.890. Participants were met at the gastrointestinal clinics of the selected tertiary hospitals where explanation of the study was done. Data collected was analysed using Statistical Package of Social Sciences (SPSS) version 27. Descriptive statistics of frequency count and percentages were used to answer the research questions.

Results

Research Question 1: What is the level of knowledge of PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals?

Table 1: Participants' Knowledge of Peptic Ulcer Disease N=140

Knowledge of Peptic Ulcer Diseases	Categories	BUTH N = 60		FMC Abeokuta N= 80	
		Yes	**No**	**Yes**	**No**
Meaning of Peptic Ulcer Disease	a disease of the large intestine	43(71.7%)	17(28.3%)	61(76.3%)	19(23.8%)
	a disease that causes pain in the upper part of the stomach	40(66.7%)	20(33.3%)	55(68.8%)	25(31.3%)

	(belly)				
	a disease that makes one to stool or vomit blood	44(73.3%)	16(26.6%)	61(76.3%)	19(23.8%)
Signs of Peptic Ulcer Disease	Pain in the upper part of the stomach	40(66.7%)	20(33.3%	55(68.8%)	25(31.3%)
	Vomiting	44(73.3%)	16(26.7%)	61(76.3%)	19(23.8%)
	Bloating	45(75%)	15(25%)	63(78.8%)	17(21.3%)
	Heartburn	46(76.7%0	14(23.3%)	47(58.8%)	33(41.3%)
	Dark stool	42(70%)	18(30%)	57(71.3%)	23(28.7%)
Can Staying with someone who smokes often increase your chances of developing peptic ulcer disease?		15(25%)	45(75%)	16(20%)	64(80%)
Can the use of drugs such as Ibuprofen, Diclofenac, and Aspirin cause peptic ulcer disease?		23(38.3%)	37(61.7%)	28(35%)	52(65%)
Can smoking cause peptic ulcer disease?		21(35%)	39(65%)	29(36.3%)	51(63.7%)
Can alcohol consumption cause peptic ulcer disease?		23(38.3%)	37(61.7%)	28(35%)	52(65%)

Can disease condition such as malaria cause peptic ulcer disease?	13(21.7%)	47(78.3%)	17(21.3%)	63(78.8%)
Can drinking too much of water cause peptic ulcer disease?	16(26.7%)	44(73.3%0	23(28.7%)	57(71.3%)
Can physical and psychological stress cause peptic ulcer disease?	26(43.3%)	34(56.7%)	34(42.5%)	46(57.5%)

Table 1 above indicated that majority of the participants in BUTH and FMC reported that PUD is a disease that causes pain in the upper part of the stomach. Also, 25% of the participants in BUTH reported that it is a disease of the stomach and intestine, while 16.3% in FMC reported the same thing. Most of the participants from the two tertiary hospitals, (33.3% and 36.3%) reported that there are three types of PUD respectively. 27.5% of participants from FMC Abeokuta, and 21.7% of the participants in BUTH. 21.7% reported vomiting as a sign of PUD from BUTH, while 21.3% from FMC. 23.8% of the participants in FMC reported pain in the upper part of the stomach while 18.3% were reported in BUTH. More than 80% of the participants from the two hospitals affirmed that staying with someone who smokes can increase the chances of developing PUD. Also, about 60% of the participants from the two hospitals also reported that the use of drugs such as Ibuprofen, Diclofenac, and Aspirin can cause PUD. Most of the participants from BUTH (61.7%) and FMC (65%) respectively reported that the intake of alcohol causes PUD. 78.3% of the participants reported that disease conditions such as malaria cannot cause PUD while more than 70% of the participants from the two hospitals also believe that drinking of too much water cannot cause PUD. Over half of the participants (56.7%) reported that physical and psychological stress cannot cause PUD.

Table 2: Level of Participants' knowledge of PUD N=140

Category	Criteria	BUTH N=60 %	FMC, Abeokuta N = 80 %
17-25	High	12(20%)	16(20%)
9-16	Moderate	38(63.3%)	47(58.8%)
1-8	Low	10(16.7%)	17(21.3%)
Mean =23.6, Std. Dev = 4.15			

This study asked 10 questions relating to knowledge of the participants towards PUD from the two tertiary hospitals in Ogun State. Their knowledge categorized as high (17-25), moderate (9-16) and low (1-8). About two-third of the participants from the two hospitals had moderate level of knowledge about PUD 38 (63.3%) in BUTH while 47(58.8%) was reported in FMC. 20% of the participants had high level of knowledge about PUD in the two

tertiary hospitals. 16.7% and 21.3% of the participants had low level of knowledge about PUD in BUTH and FMC respectively

Research Question 2: What is the prevalence of *H. pylori* infection among study participants?

Table 3: History of Medical Conditions N=140

Causes of PUD	Yes	No
Hypertension	68(48.6%)	72(51.4%)
Arthritis	34(24.3%)	106(75.7%)
Have you been screened for PUD before	71(50.7%)	69(49.3%)
Does any member of your family suffer from PUD	51(36.4%)	89(63.6%)
Diabetes mellitus	46(32.9%)	94(67.1%)
Have you had any history of PUD	60(42.9%)	80(57.1%)

Table 3 presented above showed the level of history of medical conditions, 51.4% of the participants reported not to have hypertension, followed by 75.7% of the participants who reported not to have arthritis. 50.7% reported to have been screened for PUD, followed by 63.6% reporting that they have members of their families who suffer from PUD. 67.1% reported not to have diabetes mellitus while 57.1% reported not to have history of PUD.

Table 4: Summary of level of prevalence of *H. pylori* infection N=140

Criteria	BUTH N=60 %	FMC, Abeokuta N = 80 %
High	7(11.7%)	11(13.8%)
Moderate	30(50%)	44(55%)
Low	23(38.3%)	25(31.3%)

Table 4 presented above indicated that there was moderate prevalence of *H. pylori* infection among the participants presented in the two tertiary hospitals, while 38.3% of the patients in BUTH had low prevalence of *H. pylori* infection, 31.3% was reported in FMC. 11.7% of the participants in BUTH had high level of prevalence while 13.8% of those in FMC, Abeokuta reported high level of *H. pylori* infection.

Research Question 3: What are the factors associated with the occurrence of PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals?

Table 5: Factors associated with peptic ulcer disease

Factors associated with peptic ulcer disease	BUTH		FMC, Abeokuta	
	Yes	No	Yes	No
Helicobacter pylori infection	43(71.7%)	17(28.3%)	61(76.3%0	104(74.3%)
Level of education	42(70%)	18(30%)	55(68.8%)	25(31.3%)
Place of residence	43(71.7%)	17(28.3%)	55(68.8%)	25(31.3%)
Occupation	43(71.7%)	17(28.3%)	61(76.3%)	19(23.8%)
Religion	21(35%)	39(65%)	28(35%)	52(65%)
Age	21(35%)	39(65%)	25(31.3%)	55(68.8%)
Gender	16(26.7%)	44(73.3%)	25(31.3%)	55(68.8%)

Table 5 indicated that *H. pylori* infection is associated with PUD, 70% reported level of education for both hospitals. 71.7% and 76.3% of the participants from the two hospitals (BUTH and FMC) also reported occupation. Over sixty percent also reported religion is not associated factor for PUD. Over 73.3% of the respondents reported gender is not associated with PUD.

Research Question 4: What are the factors influencing PUD among participants attending gastrointestinal clinics in the two selected tertiary hospitals?

Table 6: Factors influencing PUD **N=140**

Factors influencing PUD	Categories	Location	
		BUTH	FMC, Abeokuta
Do you consume alcoholic beverages?	Yes	48	55
		80.0%	68.8%
	No	12	25
		20.0%	31.3%
How many bottles per day?	1-3bottles	25	38
		41.7%	47.5%
	4-6bottles	33	35
		55.0%	43.8%
	7bottles and above	2	7
		3.3%	8.8%
Are you currently smoking cigarettes?	Yes	27	41
		45.0%	51.2%
	No	33	39
		55.0%	48.8%
How many pieces per day?	1-3pieces	25	31
		41.7%	38.8%
	4-6pieces	21	26
		35.0%	32.5%
	7pieces and above	14	23
		23.3%	28.7%
Do you take carbonated drinks?	Yes	42	53
		70.0%	66.3%
	No	18	27
		30.0%	33.8%
How many bottle?	1-3bottles	31	44
		51.7%	55.0%
	4-6bottles	23	30
		38.3%	37.5%
	7bottles and above	6	6
		10.0%	7.5%
Do you take NSAID Drugs	Yes	40	53

(Aspirin, Ibuprofen, Diclofenac)?		66.7%	66.3%
	No	20	27
		33.3%	33.8%
How many times do you take it in a day?	1-2times daily	33	48
		55.0%	60.0%
	3 times or more per day	27	32
		45.0%	40.0%
Are you currently on steroid medications (Prednisolone, Dexamethasone, Betamethasone, and Hydrocortisone)?	Yes	47	61
		78.3%	76.3%
	No	13	19
		21.7%	23.8%
How many times do you take it in a day?	1-2times daily	28	42
		46.7%	52.5%
	3 times or more per day	32	38
		53.3%	47.5%
How long have you been on it?	Less than 3month	37	51
		61.7%	63.7%
	above 3months	23	29
		38.3%	36.3%

Table 6 presented above indicated that majority of the study participants 80% from BUTH and 68.8% from FMC reported that they consume alcoholic beverages. Also, 45% of the participants from BUTH smoke while majority from FMC (55%) does not smoke cigarettes. In BUTH, 66% of the participants take carbonated drinks while 66.3% from FMC. On the categories of NSAID use, 66.7% and 66.3% of the participants form BUTH and FMC respectively take NSAIDs. Also, majority of the participants from the two hospitals take steroids (78.3% BUTH, 76.3% FMC).

Discussion

The result of research question one showed that 63.3% of the participants had high level of knowledge about PUD from the two tertiary hospitals. The result is consistent with the findings of Eniojukan, et al (2017) that there is an increased level of knowledge about PUD among patients presented in teaching hospitals in Ibadan. This is also similar to the findings of Ndububa, (2014) that most of the patients presented in primary health care centre of Nsukka were given three weeks education on PUD and methods of its prevention. There was significant increase in the level of knowledge of peptic ulcer among study participants. Also, Dafalla et al., (2021), reported significant differences in the knowledge of the participants' based on their gender, age, level of education at 0.002, 0.000, and 0.010 p-values respectively while high level of knowledge reported to be associated with male gender (25-24years) age group, and graduate participants.

The result of the analysis reported based on the history of medical conditions; hypertension was reported to be the most significantly common, followed by arthritis. Majority of the participants have been screened for PUD with family history of PUD, diabetes mellitus. The result of the findings is consistent with that of Shah, et al., (2019). They reported that patients with hypertension and diabetes mellitus are often at a high risk of PUD and those residing in low and middle income countries of the world. Similar study by Egwuonwu, et al., (2019), reported that intake of NSAIDs or aspirin can damage the entire digestive tract, from the esophagus to the rectum. NSAID-associated complications, however, are six times more frequent in the upper gastrointestinal (GI) tract than in the lower GI tract. In another study Lanas and Chan (2017) estimated the incidence of hospital admissions in patients taking NSAIDs due to major events in the entire gastrointestinal tract to be 121.9/100,000 persons/year with mortality of upper GI complications of approximately 5%, while Low-dose Aspirin (LDA) was responsible for 8.2% to 12.2% of all complications and deaths.

The result on the level of *H. pylori* infection indicated that there was moderate prevalence of *H. pylori* infection among the participants presented in the two tertiary hospitals. 38.3% of *H. pylori* infection was reported among the participants in BUTH, while 31.3% was reported in FMC. 11.7% of the participants in BUTH had high level of prevalence while 13.8% of the patients in FMC, Abeokuta reported high level of *H. pylori* infection. The result corroborates with the findings of Ayodele, et al, (2017), that *H. pylori* is a gram-negative, microaerophilic, highly motile fastidious bacterium that resides in the human gastric mucus epithelium. It is a common infection worldwide with prevalence rates in the general population ranging from 30% -40% in the United States, 80-90% in South America, and 70%-90% in Africa. Similar study was reported by Smith, et al (2019) *H. pylori* is influenced by age from 20% among teenagers to 50-60% of subjects in the 6th and 7th decades of life, gender, geographical location, ethnicity, and socio economic factors. Prevalence of *H. pylori* is influenced by multiple factors such as age, host genetic predisposition, sanitation, dietary and socioeconomic factors (Kim, et al 2020).

The result on the factors associated with PUD among study participants in the two selected tertiary hospitals showed that majority of the patients reported to consume alcoholic beverages (78% in BUTH, 68.8% in FMC) with the highest bottle per day as 4-6 bottles (55%) in BUTH, and 1-3 bottles (41.7%) in FMC. Smoking was reported to be high in FMC (51.2%) with 1-3 pieces (38.8%) among the majority and low in BUTH (55%) with (41.7%) among those that take between 1-3 pieces per day. Intake of carbonated drinks was significant in both hospitals with 70% in BUTH and 66.3% in FMC with the maximum number of bottles per day in both hospitals as 51.7% and 55% for BUTH and FMC respectively. Use of NSAIDs among study participants showed that majority of them use NSAIDs in both facilities (66.7% BUTH and 66.3% FMC). They also reported that majority of the participants (55% in BUTH) and (60% in FMC) takes it between 1-2times in a day. Also, majority of the participants reported to be on steroids in both hospitals with 1-2times as the maximum dosage per day. In both hospitals, majority of the participants also reported being on NSAIDs for less than 3months. The result of the analysis in tandem with the findings of Hooi, et al., (2017) that environmental and dietary impacts, multiple virulence factors of *H. pylori* have been studied in the context of disease progression of which the most important is the Cytotoxin-

Associated-Gene Pathogenicity Island (cagPAI). The result is consistent with the findings that *H. pylori* has become a major aetiological (causative) factor considered in cases of chronic gastritis (chronic inflammation of the stomach), peptic ulcer disease, gastric carcinoma, and gastric-mucosa-associated lymphoid tissue (MALT) lymphoma (Ayodele, et al., 2017). Additionally, Ugwu (2018) reported that *H. pylori* as a class I carcinogen with gastric cancer reported as the fifth most common cancer and third leading cause of cancer related deaths worldwide.

Conclusion

The study concludes that about sixty percent of the participants have moderate level of knowledge about PUD, most of the factors influencing PUD was reported to be intake of NSAIDs and steroids, the consumption of alcoholic beverages, followed by smoking. Majority of the participants reported hypertension as one of the most common medical condition affecting the patients. In terms of the level of prevalence of Helicobacter pylori, there was over fifty percent moderate level of *Helicobacter pylori* infections.

Recommendations

Based on the outcomes of this study, it is hereby recommended that:

1. There is need for increased awareness on PUD that is interpreted in different local languages in Nigeria.
2. The general public needs to be aware about the causes and prevention of PUD.
3. There is need for all nurses to be involved in the prevention and management of PUD among patients in Nigeria
4. Government of Nigeria should also facilitate the provision of financial aid and health insurance coverage for persons experiencing PUD in Nigeria.

References

Ayodele, M.B.O., Aaron, U.U., Oluwatoyin, G. A., Wariso, K.T. (2017). Prevalence of *Helicobacter pylori* infection among suspected patients in Portharcourt, South-South, Nigeria. Gazette of Medicine, *6*(1), 2315-7801.

Bello, A.K, Umar, A.B., Borodo, M.M., (2018). Prevalence and risk fators for *helicobacter pylori* infection in gastroduodenal diseases in Kano, Nigeria. *Afr J Med Health Sci* 17:41-6.

Bojuwoye, M. O., Ogunmodede, J. A., Ogunlaja, O. A., Fasiku, M. M., Oyeleke, G. K., Olokoba, A. B. (2021). The Knowledge and Attitude of a Nigerian Tertiary Institution about Peptic Ulcer Disease. *Research Journal on Health Sciences,* 9(2), 56 – 67

Dafalla, S., Alghamdi, H., Alsaedi, A., Alzain, M., Alsaedi, O., AbdullahKhormi, M., Alsaedi, A., Baghdadi, A., & Alsaedy, A. (2021). Awareness of the general population in Jeddah about peptic ulcer disease. *International Journal of Medicine in Developing Countries*, 656-662. https://doi.org/10.24911/ijmdc.51-1609363527

Egwuonwu, O., Chinedu, O., Chianakwana, G., Anyanwu, S., Emegoakor, C., and Nzeako, H. (2019). Changing pattern of perforated PUD: are NSAIDs to be blamed? *Turkish Journal of Surgery, 35*(2), 105-110.

Eniojukan, J. F., Okonkwo, O. C., & Adje, D. (2017). Risk factors, management and other correlates of peptic ulcer disease in a university community in south-south Nigeria. *Journal of Pharmaceutical and Biosciences, 5*(6), 07-15.

Hooi., J. K. Y., Lai, W.Y., Suen, M.M.Y., Underwood, F.E., Tanyingoh, D., Malfeitheriner, P., Graham, D.Y., Wong, V.W.S., Wu, J.Y., et al. (2017). Global prevalence of *Helicobacter pylori* infection: systematic review and meta-analysis, *J. gastro, 153*, 420-429. Doi: 10.1053*/j.gastro*, *04*(022)

Kim, S.Y., Min, C., Oh, D. J., Choi, H. G. (2020). Reciprocal association between depression and peptic ulcers: Two longitudinal follow-up studies using a national sample cohort. Scientific Reports, 10, 1747 https://doi.orh/10.138/s41598-020-58783-0.

Lanas, A. & Chan, F. K. (2017). Peptic Ulcer disease. *Lancet, 390*(10094), 613-24.

Ray-Offor, E. & Opusunju, A.K. (2020). Current status of peptic ulcer disease in Port Harcourt metropolis, Nigeria. *African Health Sciences, 20*(3), 1446-1451.

Shah, S.A., Tayyaba, U., Rabia, A. (2019). Global incidence of peptic ulcer disease: a systematic review study. *Am. J. P.Sci, 06*(06), 11267-11273

Ugwu, (2018). Determinant of *Helicobacter pylori* infection among adults attending general outpatient clinics, Federal Medical Centre, Asaba, Delta State, Nigeria. African Digital Health Repository Project.

Yim, M. H., Kim, K. H. & Lee, B. J. (2021). The number of household members as a factor for peptic ulcer disease. *Scientific Reports, 11*(1).

Cite this article:

Author(s), IROEGBU, Chioma Anita (RN, RM, BNSc), DR. POPOOLA, Rabiu Olalekan (RN, Ph.D), (2021). " Factors Predisposing to Peptic Ulcer Disease Among Patients Attending Gastrointestinal Clinics in Two Selected Tertiary Hospitals in Ogun State, Nigeria", **Name of the Journal**: International Journal of Medicine, Nursing & Health Sciences, (IJMNHS.COM), P, 51 –63. DOI: www.doi.org/10.5281/zenodo.4746476 , Issue: 2, Vol.: 2, Article: 5, Month: April, Year: 2021. Retrieved from https://www.ijmnhs.com/all-issues/

Published By

AND

ThoughtWares Consulting & Multi Services International (TWCMSI)