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AWARENESS AND KNOWLEDGE OF GASTROINTESTINAL ULCERS AMONG RURAL FARMING HOUSEHOLDS IN ONDO STATE, NIGERIA

Akintade, T. F.

Department of Agricultural Science, Adeyemi Federal University of Education, Ondo, Nigeria.

*Corresponding authors' email: folafunmi1005@gmail.com

ABSTRACT

Awareness and knowledge of gastrointestinal ulcers among rural farming households are critical aspects of public health that can influence both prevention and early intervention strategies. Thus this study was conducted to assess the awareness and knowledge of rural farming household to gastrointestinal ulcer in Ondo State Nigeria. A multistage sampling technique was used in the selection of one hundred and twenty respondents for the study. Frequency counts, percentages, mean and regression analysis were used in analyzing the data for the study. Primary data for the study was collected with a questionnaire coupled with an interview schedule. The mean age of the respondents was 47 years. Majority (63.32%) of the respondents were males. The mean farming experience was 6 years. Mean farming household size was 8 while majority were married. The respondents also had a mean farm size of 4 hectares. The level of awareness and knowledge was relatively low. Also majority (70.3%) sourced their information from Co Farmers while the perception of the respondents was fairly moderate. The regression analysis showed that only means of information was not significant to the level of awareness of respondents to gastrointestinal ulcer. The study concludes that awareness and knowledge levels are low, necessitating targeted health education programs to improve rural household health outcomes. The study recommends that community health education program should be organized to teach rural household farmers about the causes, symptoms and treatment of gastrointestinal ulcer in the study area.

Keywords: Rural Farming, Gastro-Intestinal Ulcer, Ondo State, Digestive Tract, Veterinary

INTRODUCTION

The digestive tract is a long muscular tube that moves food and accumulated secretions from the mouth to the anus. As ingested food is slowly propelled through this tract, the gut assimilates calories and nutrients that are essential for the establishment and maintenance of normal bodily functions. Protein, fats, carbohydrates, vitamins, minerals, water, and orally ingested drugs (prescription and nonprescription) are digested in this tract (Laine, 2016). The digestive system is composed of the esophagus, stomach, small intestine, and large intestine. Each of these components performs specific functions as ingested substances move through the different anatomic areas (Drossman *et al.*,2019). Additionally, the exocrine functions of the pancreas, liver, and gall bladder combine to complete the assimilation of dietary calories and nutrients. The prevalence of gastro-intestinal ulcer in Nigeria is getting more alarming and increasingly becoming a thing of concern among both urban and rural population. Studies in Nigeria show that Helicobacter pylori (H.pylori) infection is very high. Malu *et al.,* (2020) reported that a prevalence of 87% in Jos Metropolis Solomon *et al.,* (2015) reported 73% in the southern part of Nigeria.

Gastrointestinal system is the most essential system of the body which has got a relation with diet in turn helps in maintaining normal growth and development and normal functioning of the body (Dongo *et al.,* 2017). Gastric diseases are becoming very common, unless treated promptly and completely, they can cause problems throughout life. There are many contributing factors which irritates the gastric mucosa and it adversely affects the health of the people even may cause death (Saleh *et al.,* 2023). The two main causes of gastrointestinal ulcers of the stomach and the small intestine are Helicobacter pylori (*H. pylori*) bacteria and a class of pain relievers called nonstereidal anti-inflammatory drugs less common causes of stomach ulcers include excess stomach acidity and zollinger Allison syndrome. Excess stomach acidity can occur for a range or reasons including genetics, smoking, stress and some foods (Oluwagbenga *et al.,* 2022). A study found out that people who had irregular meal timing particularly deviating more than two hours had higher risk of developing gastritis and *H. pylori* infection by thirteen-fold compared to those who ate regularly (Lim *et al.,* 2015). Gastro-intestinal ulcer has caused more harm than good in our society, the sickness has become a silent killer among people living in the society, and there are several causes of gastro-intestinal ulcer in which rural farming household are ignorantly not aware of, such as cigarette smoking was a common factor among those diagnosed with ulcer. When a person is affected by stress he may also smoke more, sleep less and take more non-steroidal anti-inflammatory drugs thereby increasing their susceptibility to ulcer by mechanisms that are related to acidity.

Many people with ulcers experience minimal indigestion, abdominal discomfort that occurs after meals, or no discomfort at all. Some complain of upper abdominal burning or hunger pain one to three hours after meals or in the middle of the night (Debruyne *et al.,* 2016; Nix, 2017). These symptoms often are promptly relieved by food or antacids that neutralize stomach acid. It may also result to frequent illness and absenteeism in daily farming activities. Extensive work has been done on the nutritional status and other areas of life among rural households but there is paucity of information on the awareness and knowledge of gastro-intestinal ulcer among rural farming households. It is against the background information that the study will examine the awareness and knowledge of this disease among rural farming households and devise measures that would ensure good health status and improved livelihood healthwisely among rural farming households.

The main objective of the study is to determine the awareness and knowledge of rural farming household to gastro-intestinal ulcer in Ondo State, Nigeria. Also, the hypothesis is presented in null form i.e. H_{oi}: There is no significant relationship

between the socio economic characteristic and level of awareness to gastro-intestinal ulcer among rural farming households in the study area.

Moreover, the following research questions were raised for the purpose of this study;

What is the socio-economic characteristics of the respondents in the study area?

What is the level of awareness of rural farming households towards gastro-intestinal ulcer in the study area?

What is the level of knowledge of rural farming households on gastro-intestinal ulcer in the study area?

What is the perceived symptoms of gastro-intestinal ulcer and local means of treatment among rural farming household in the study area?

What is the perception of respondents towards gastro-intestinal ulcer in the study area?

MATERIALS AND METHODS

Study Area

The study area is located in Ondo State, a state in south-western Nigeria. Ondo State was created on February 3, 1976 from the former Western State (Solomon et al., 2015). Ondo State borders Ekiti State to the north, Kogi State to the northeast, Edo State to the east, Delta State to the southeast, Ogun State to the southwest, Osun State to the northwest, and the Atlantic Ocean to the south (Solomon et al., 2015).

Population of the Study

The population for the study comprised of rural farming households in Ondo State, Nigeria.

Sample and Sampling Technique

The study was carried out in Ondo State and a multi stage sampling procedure was used in the selection of Ondo south, Ondo central and Ondo North out of which Akoko South, Ondo East, and lleoluji/Okeigbo L.G.A's based on the notable rural households in the state. Selection was made from the selection two communities from each of the selected L. G.A under each of the senatorial district in the state. Finally 20 respondents from each of the communities was randomly selected from each of the three selected L.G.A in the state thus making a total sampling of 120 respondents that was used for the final data analysis.

Instrument for Data Collection

The research instrument used was questionnaire and interview schedule.

Data analysis

The primary data collected were subjected to descriptive statistical tools for analysis such as frequency counts, percentages and mean. Logistic regression analysis was used to test for the hypothesis. A 4 point likert type scale of highly aware (4), moderately aware (3), fairly aware (2) and not aware (1) was used to analyze the level of awareness of rural farming household on gastro-intestinal ulcer in the study area. While a 5 point likert type scale of strongly Agree (5), Agree (4), Undecided (3), strongly disagree (2), disagree (1) was used to analyze the perception of rural farming households in the study area

RESULTS AND DISCUSSION

Socio-Economic Characteristics of Respondents

Table 1 shows the distribution of respondents by age. 85.83% of the respondents were between 41 – 50 years of age, while 14.17% of the respondents were between 51 – 60 years of age. The mean age of the respondents was 47 years. This implies that farmers were young and in their active years and expected to be agile to undertake rigorous activities like farming. This is in line with the findings of Borokini *et al.* (2023) that farmers age group typically possess a wealth of experience, which can enhance their understanding of agricultural practices and health issues that may affect both livestock and themselves. This experience is likely to contribute to a higher level of awareness about gastro-intestinal ulcers, as these farmers may have encountered such health challenges in their careers or within their communities.

On gender, 63.3% of the respondents were male while 36.7% were female. This implies that both male and female were involved in farming but it was dominated by male respondents and participation in farming is more preferred by male counterparts. Because they are more energetic to work than the female counterparts.

Regarding the marital status of the respondents, 83.3% of the respondents were married, 7.5% of the respondents were separated, while 9.2% of the respondents were widowed. This implies that majority of the respondents were married and are more likely to participate in farming than the single ones due to the fact that married farmers have more family responsibility than the single ones. On educational attainment of respondents, 19.2% of the respondents had no formal education, 59.2% of the respondents had primary education, while 21.7% of the respondents had secondary education. This infers that majority of the respondents are literate. By implication high education attainment will assist the respondents in accessing information on their health status.

On religion of the respondents, it shows that 56.7% of the respondents were Christians, 26.7% of the respondents were Muslims while 16.7% of the respondents were traditional worshippers. This showed that the dominance of Christianity in the study area. On years of farming experience of the respondents, 51.7% of the respondents were between 1 – 5 years, 41.8% of the respondents were between 6 – 10 years, while 6.7% of the respondents were between 11 – 15 years. The mean years of farming experience of the respondents was 6 years. This implies that majority of the respondents in the study area had been engaged in farming not quite long. this data indicates that most respondents are relatively new to agriculture. This relatively short duration of farming experience has several implications for understanding the knowledge and awareness of rural farmers regarding agricultural practices and health issues, such as gastro-intestinal ulcers. The findings support the study of Oluwagbenga *et al,* (2020) that farmers with less experience may not yet have developed a comprehensive understanding of the various health challenges that can affect their lives. Consequently, they might be less aware of the signs and symptoms of gastrointestinal ulcers, which could impact their ability to manage these conditions effectively.

On farming system of the respondents, 70.0% of the respondents engaged in crop production, 23.3% of the respondents engaged in animal husbandry, while 6.7% of the respondents engaged in both crop production and animal husbandry. This implies that majority of the respondents engaged in crop production. On farm size, 77.5% of the respondents had farm size of between 1 – 5 hectares, while 22.5% of the respondents had farm size of between 6 – 10 hectares. The mean farm size of the respondents was 4 hectares. This implies that majority of the respondents in the study area had a relatively small farm size. On household size, 14.1% of the respondents had below 2 household size, 29.1% had between 3 – 5, 34.2% had between 6 - 8 while 22.5% of the respondents had above 8. The mean household size is 30 which imply that, a larger household may mean more hands to share the workload, reducing the physical strain on the farmer. It can also provide emotional support and foster a sense of community, which positively impacts mental health.

Table 1: Socio-Economic Characteristics of respondents

Variables	Frequency	Percentage	Mean
Age			
Less than 40	0	0	
41 – 50	103	85.83	47 years
51 - 60	17	14.17	
61 & above	0	0	
Gender			
Male	76	63.3	
Female	44	36.7	
Marital Status			
Single	0	0	
Married	100	83.3	
Separated	9	7.5	
Widowed	0	0	
Divorced	11	9.2	
Educational Attainment			
No Formal Education	23	19.2	
Primary Education	71	59.2	
Secondary Education	26	21.7	
Tertiary Education	0	0	
Religious Background			
Christianity	68	56.7	
Islam	32	26.7	
Traditional worshipper	20	16.7	
Years of Farming Experience			
1 – 5 years	62	51.7	
6 – 10 years	50	41.8	6
11 - 15 years	8	6.7	
Farming System			
Crop production	84	70.0	
Animal husbandry	28	23.3	
Both	8	6.7	
Farm size			
Less than 1 hectare	0	0	
1 – 5 hectares	93	77.5	4 hectares
6 – 10 hectares	27	22.5	
Household size			
< 2	17	14.1	
3 – 5	35	29.1	
6 - 8	41	34.2	
Above 8	27	22.5	8

Source: Field Survey, 2024

Level of awareness of rural farming households towards gastro-intestinal ulcer in the study area

Table 2 below revealed the respondents' level of awareness towards gastro-intestinal ulcer in the study area. The table revealed that 30.8% of the respondents are aware of gastro-intestinal ulcer, while 69.2% of the respondents are not aware. This implies that there is low level of awareness of gastro-intestinal ulcer among household farmers in the study area. This low level of awareness poses serious implications for the health and productivity of both the farmers and their livestock. The limited awareness suggests that many farmers may not recognize the symptoms or understand the causes of gastro-intestinal ulcers. This lack of knowledge can lead to delayed diagnosis and treatment, exacerbating health issues that could otherwise be managed effectively. As a result, farmers may experience increased health complications, which can hinder their ability to work and manage their farms effectively. This is in concordance with the findings of Nwafor *et al.* (2019) that the low awareness level may contribute to broader health implications within the farming community. Farmers who are uninformed about gastro-intestinal ulcers are less likely to implement preventive measures or seek appropriate veterinary care, potentially resulting in higher incidence rates of the condition among their livestock. This can lead to economic losses due to decreased productivity and increased veterinary expenses, further impacting the livelihoods of these farmers.

Table 2: Awareness of respondents towards gastro-intestinal ulcer

Awareness	Frequency	Percentage
Aware	37	30.8
Not aware	83	69.2

Source: Field Survey, 2024

Level of knowledge of rural farming households on gastro-intestinal ulcer in the study area

Table 3 below revealed the respondents' level of rural farming households on gastro-intestinal ulcer in the study area. The table revealed that 25.8% of the respondents had moderate knowledge, while 74.2% of the respondents had no knowledge. This implies that majority of the respondents had no knowledge of gastro-intestinal ulcer in the study area. The predominance of respondents lacking knowledge about gastro-intestinal ulcers suggests that many farmers may be unaware of the symptoms, causes, and management strategies associated with this condition. The findings support the study of Ogechi *et al.*(2022) that the absence of information could lead to serious health repercussions, as farmers and their livestock may go undiagnosed and untreated, allowing gastro-intestinal ulcers to develop and worsen over time. Such conditions can impair the well-being of farmers, affecting their ability to perform daily tasks and manage their farms effectively. Furthermore, the lack of knowledge can perpetuate a cycle of misinformation and neglect regarding health issues within the farming community. When farmers are uninformed, they may miss opportunities for early intervention, which can prevent more severe health complications and ultimately lead to higher medical costs and lost productivity.

Table 3: Knowledge of respondents towards gastro-intestinal ulcer

Knowledge	Frequency	Percentage
High knowledge	0	0
Moderate knowledge	31	25.8
Low knowledge	0	0
No knowledge	89	74.2
Total	120	100

Source: Field Survey, 2024

Sources of information on local means of treatment among rural farming household in the study area

Table 4 below revealed the perceived local means of treatment of gastro-intestinal ulcer among rural farming household. The table revealed that 29.2% of the respondents confirmed that gastro-intestinal ulcer was treated by their family members, while 70.8% of the respondents said gastro-intestinal ulcer was treated by co-farmers.

Table 4: Sources of information local means of treatment of gastro-intestinal ulcer among rural farming household

Local treatment	Frequency	Percentage
Family members	35	29.2
Co-farmers	85	70.8
Total	120	100

Source: Field Survey, 2024

Perception of respondents towards gastro-intestinal ulcer in the study area

Table 5 below revealed the respondents' perception towards gastro-intestinal ulcer in the study area. The table revealed that respondents agreed that Ulcer patients are not ready to give details of the health status ($\bar{x}$ = 4.82) ranked 1st, Consuming of bitter leaves is a contributory factor ($\bar{x}$ = 3.98) ranked 2nd, Excessive alcohol can also aggravate gastro-intestinal ulcer ($\bar{x}$ = 3.98) ranked 2nd, Smoking of various drugs is also a factor ($\bar{x}$ = 3.67) ranked 3rd, Excessive drug intake cannot aggravate it ($\bar{x}$ = 3.65) ranked 4th, Farming households are not even aware of it ($\bar{x}$ = 3.57) ranked 5th, Stress is not a contributory factor to gastro-intestinal ulcer ($\bar{x}$ = 3.34) ranked 6th, Gastro-intestinal ulcer is not a killer ($\bar{x}$ = 3.09) ranked 7th, Detection of ulcer cant held treatment ($\bar{x}$ = 3.01) ranked 8th, Gastro-intestinal ulcer is always affected by wrong diet ($\bar{x}$ = 2.81) ranked 9th, Gastro-intestinal ulcer limit the productivity of the rural farming households ($\bar{x}$ = 2.81) ranked 9th, Indigenous preventive measure is not the best curative means ($\bar{x}$ = 2.63) ranked 10th, Gastro-intestinal ulcer is often mistaken for other illness ($\bar{x}$ = 2.62) ranked 11th, Gastro-intestinal ulcer is very rare among farming households ($\bar{x}$ = 2.41) ranked 12th, Lack of adequate education also contributes to non-treatment of ulcer ($\bar{x}$ = 2.09) ranked 13th. This perception on the 1st rank suggests a prevalent belief that patients may be reluctant to disclose their symptoms or medical history, which could stem from stigma or a lack of understanding surrounding gastrointestinal ulcers. This reluctance to share health information can hinder effective diagnosis and treatment, as healthcare providers may struggle to gather necessary information for proper care. The lowest rank perception suggests a disconnect between awareness of health issues and the perceived need for education. If farmers believe that education is not a contributing factor to the non-treatment of ulcers, they may overlook the importance of educational initiatives designed to raise awareness and promote proper management of gastrointestinal ulcers. The above findings are in line with the study of Onwuka *et al.* (2021).

Table 5: Distribution of respondents by their perception towards gastro-intestinal ulcer in the study area

Statement	SA		A		U		SD		D		Mean	Decision
	(F)	(%)	(F)	(%)	(F)	(%)	(F)	(%)	(F)	(%)		
Ulcer patients are not ready to give details of the health status	98	81.7	22	18.3	0	0	0	0	0	0	4.82	Strongly Agreed
Consuming of bitter leaves is a contributory factor	21	17.5	84	70.0	7	5.8	0	0	8	6.7	3.98	Agreed
Excessive alcohol can also aggravate gastro-intestinal ulcer	52	43.3	28	23.3	25	20.8	0	0	15	12.5	3.98	Agreed
Smoking of various drugs is also a factor	22	18.3	72	60.0	8	6.7	18	15.0	0	0	3.67	Agreed
Excessive drug intake cannot aggravate it	37	30.8	39	32.5	23	19.2	14	11.7	7	5.8	3.65	Agreed
Farming households are not even aware of it	23	19.2	64	53.3	0	0	9	7.5	24	20.0	3.57	Agreed
Stress is not a contributory factor to gastro-intestinal ulcer	6	5.0	62	51.7	26	21.7	7	5.8	19	15.8	3.34	Agreed
Gastro-intestinal ulcer is not a killer	0	0	57	47.5	34	28.3	17	14.2	12	10.0	3.09	Agreed
Detection of ulcer cant held treatment	32	26.7	5	4.2	35	29.2	20	16.7	28	23.3	3.01	Agreed
Gastro-intestinal ulcer is often mistaken for other illness	8	6.7	30	25.0	9	7.5	19	15.8	54	45.0	2.62	Undecided
Gastro-intestinal ulcer is very rare among farming households	11	9.2	14	11.7	7	5.8	19	15.8	69	57.5	2.41	Undecided
Gastro-intestinal ulcer is always affected by wrong diet	0	0	64	53.3	0	0	31	25.8	25	20.8	2.81	Undecided
Lack of adequate education also contributes to non-treatment of ulcer	0	0	16	13.3	14	11.7	35	29.2	55	45.8	2.09	Undecided
Indigenous preventive measure is not the best curative means	20	16.7	26	21.7	12	10.0	49	40.8	13	10.8	2.63	Undecided
Gastro-intestinal ulcer limit the productivity of the rural farming households	0	0	35	29.2	41	34.2	14	11.7	30	25.0	2.81	Undecided

Source: Field survey, 2024 Grand Mean = 3.23

Rating scale: Strongly Agree (SA) = 5.00 – 4.00, Agree (A) = 3.99 – 3.00, Undecided (U) = 2.99 – 2.00, Disagree (D) = 1.99 – 1.00, Strongly Disagree (SD) = 0.99 – 0.00

Testing of Hypothesis

Correlation analysis of the relationship between the socio economic characteristic and level of awareness to gastro-intestinal ulcer among rural farming households in the study area

Result of regression analysis showing between the socio-economic characteristic and level of awareness to gastro-intestinal ulcer among rural farming households in the study area at 0.05 level of significance. The result revealed that Age (X_1) (with 0.000 value), Sex (X_2) (with 0.000 value), Marital Status (X_3) (with 0.000 value), Farming Experience (X_4) (with 0.000 value), Farm Size (X_5) (with 0.000 value), Household Size (X_6) (with 0.001 value), Religious Attraction (X_7) (with 0.040 value), Level of Knowledge (X_8) (with 0.000 value) had significant relationship on the level of awareness to gastro-intestinal ulcer among rural farming households in the study area. However, Means of Information (X_9) (with 0.994 value) had no significant relationship on the level of awareness to gastro-intestinal ulcer among rural farming households in the study area.

Table 6: Result of Regression Analysis showing relationship between the socio economic characteristic and level of awareness to gastro-intestinal ulcer among rural farming households in the study area

Variables	B	Standard error	*β*	T-value	Sig.	D
Age	0.072	0.006	0.664	11.855**	0.000	S
Sex	-0.297	0.060	-0.310	-4.941**	0.000	S
Marital Status	-0.402	0.043	-0.533	-9.275**	0.000	S
Farming Experience	-0.047	0.013	-0.230	-3.623**	0.000	S
Farm Size	0.102	0.016	0.419	6.264**	0.000	S
Household Size	0.182	0.055	0.189	3.281**	0.001	S
Religious Attraction	-0.049	0.023	-0.080	-2.077**	0.040	S
Level of Knowledge	0.501	0.017	0.950	30.187**	0.000	S
Means of Information	0.000	0.048	0.000	-0.008	0.994	NS

Source: Author's Computation, 2024 P≤ 0.05 Significant

CONCLUSION

The study concluded that the level of awareness of rural farming household on gastro-intestinal ulcer was rather too low likewise their level of knowledge. Also rural farming household lacks adequate measures or modern ways of treating gastro-intestinal ulcer among co-farmers for treatment rather than seeking proper medical attention, indicating a reliance on informal knowledge rather than evidence-based practices.

Based on the findings of the study, it is recommended that community health education programs should be organized to teach rural farming households about gastro-intestinal ulcers, including their symptoms, causes, and treatment options. Government and Local health officials should work together with these rural farming households to ensure that accurate medical information and resources are accessible. Awareness campaigns through radios, community events and others means of communication should be used to spread information regarding gastro-intestinal ulcer among farmers. Government and other stakeholders should strive to support rural farming households with necessary medications to reduce the attack of gastro-intestinal ulcer.

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