



Attitude to and Awareness of Precautionary Measures against COVID 19 among Street Food Vendors in Enugu Urban, Enugu State.

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Abstract

COVID 19 is a pandemic that has taken the world by surprise with countries in all continents of the world recording mortality and morbidity from this disease which had its origin in Wuhan, China. Enugu state is one of the first few states in Nigeria to record cases of COVID 19. Experts have advised that precautionary measures be taken to avoid the spread of this deadly disease. This study seeks to determine the attitude to and the awareness of street food vendors to precautionary measures against COVID 19 in Enugu Urban. To achieve the purpose of the study, two research questions were raised and two null hypotheses formulated and tested at 0.05 degree of significance. The descriptive survey research design was adopted and a sample size of 400 students was selected using Yaro Yamane statistical formula while the multistage sampling procedure was adopted to draw the sample from the the 18 prominent residential areas in Enugu Urban. The instrument for data collection was a 24-item researcher structured questionnaire with four point response options. The validity of the instrument was established through the judgement of three health education experts while the reliability of the instrument was established using the split half method which yielded a reliability coefficient value of .88. Mean was used to analyse the two research questions while the two null hypothesis were tested using one way ANOVA statistics. The finding of the study revealed that street food vendors in Enugu Urban show negative attitude to and have low level awareness of precautionary measures against COVID 19. Implications of the findings for



healthy living were articulated before recommending that awareness of their preventive measures should be increased among others.

Keywords: Attitude, Awareness, Precautionary measures, COVID 19, Street food vendors

Introduction

Coronavirus disease 2019 (COVID 19) has become a major health concern globally. A disease which was first identified in December 2019 in Wuhan, the capital of China's Hubei province, has since spread globally, becoming a pandemic (World Health Organization (WHO), 2020). According to WHO (2020), the novel COVID 19 is caused by the virus SARS-CoV-2 with bat as its most likely ecological reservoirs, but it is believed that the virus jumped the species barrier to humans from another intermediate animal host. This intermediate animal host could be a domestic food animal, a wild animal, or a domesticated wild animal which has not yet been identified. Whatever the case may be, one thing that remains clear is that the world today has experienced morbidity and mortality in an unprecedented scale as a result of this virus.

European Centre for Disease Prevention and Control (ECDC) (2020) revealed that globally, a total of **9,952,507** cases of COVID 19 have been confirmed with **498 519** deaths and that the United States of America identified as the epicentre of the disease has a total confirmed cases at 2 510 323 and 125 539 deaths as of June 28, 2020. In Africa, the first case was recorded on the 14th of February 2020 in Egypt (Egypt Today, 2020). Since then, there have been a steady rise in the occurrence of the disease. As of June 28, 2020 a total of 371,448 cases and 9,480 deaths from COVID 19 have been reported in Africa (ECDC 2020). Nigeria had her index case on the 27th February 2020 (Nigeria Centre For Disease Control (NCDC), 2020) and as of June 28 2020, the number of cases have risen to 24,077 with a death toll of 558 within 36 states including Enugu (NDDC 2020). It is therefore worrisome that the rate of morbidity and mortality due to the coronavirus has continued to rise creating fear that the worse is yet to come especially in Africa where the health care services leave so much to be desired.

Expert advice is that precautionary measures should be taken considering the mode of spread of the coronavirus which mainly is through direct contact with an infected person or when a



COVID 19 case coughs or exhales producing droplets that reach the nose, mouth or eyes of another person. Alternatively, as the droplets are too heavy to be airborne, they land on objects and surfaces surrounding the person and people become infected with COVID-19 by touching these surfaces, then touching their eyes, nose or mouth (WHO, 2020). Some of the precautionary measures against COVID 19 include social distancing, good hygiene practises of frequent washing of hands with soap and water and the use of sanitizer and coughing into the elbow or tissue paper and disposing of it and then washing of hands. Regular cleaning of all surfaces that people come in contact with is advised and reporting suspected cases to appropriate authorities NCDC (2020). Street food vendors are therefore expected in addition to adhering to all the precautionary measures to also make available soap and water or sanitizer for customers and ensure they thoroughly wash their hands before touching utensils. Furthermore, food must not be left in the open and frequent washing and sanitizing of all food contact surfaces and utensils as well as condiment containers and the proper use of face masks and gloves should be observed. WHO (2020) revealed that it is possible that food handlers who may be asymptomatic or pre-symptomatic could introduce virus to the food or onto surfaces within the food business by coughing and sneezing or through hand contact. Hence the need for adequate precautionary measures to be taken by street food vendors to prevent the spread of COVID 19.

The attitude of the street food vendors has a part to play in the fight against COVID 19. Attitude is a feeling or opinion about something or someone or a way of behaving that is caused by this (Cambridge Dictionary, 2020). Attitude can manifest in two ways, which are positive or negative and may also depend on the level of awareness. Akintaro (2012) observed that in many developing countries (including Nigeria) street food vendors have formed an integral part of the food supply chain, particularly following the advent of urbanization. Al-Mamun Rahman and Turin (2013) revealed that approximately 2.5 billion people eat street food every day. This shows that street food vendors by the nature of their job are always in close contact with many members of the community which may expose them to the danger of contracting COVID 19 and spreading it to the customers if due to negative attitude precautionary measures are not observed.



Reports have shown that lack of awareness has resulted in lack of compliance with or poor attitude towards food hygiene. Awareness is the mental state of knowing about something (Cambridge Dictionary, 2020). Lack of it is described as ignorance. A study by Omojokun (2013) revealed that in Sub-Saharan Africa especially Nigeria, despite the efforts of Government to improve the safety of food supply, food safety still remains a major issue that has been in part exacerbated by the peoples' ignorance of food hygiene. To further emphasize the poor awareness among food vendors, Gavaravarapu and Nair (2015) stated that food handlers (such as street food vendors) have little knowledge about food hygiene and are not much aware about their roles in ensuring food hygiene. This poses the danger of spread of infections such as COVID 19. Whether this challenge is applicable to street food vendors in Enugu Urban is not clear. It then becomes needful to determine the awareness of street food vendors in Enugu Urban to the precautionary measures against COVID 19.

Although street food vendors have been recognized to serve the daily feeding need of many in Enugu urban, their services have been observed to have contributed to some health challenges if poorly managed, making street food safety a major concern. Guven, Mutlu, Gulbandilar and Cakir (2010) observed that street food has been identified as a common medium for transmission of antimicrobial-resistant pathogens. In corroboration, a more recent study by Aluko, Ojeremi, Olakele and Ajidagba (2014) acknowledged that street food has been associated with outbreaks of foodborne diseases. This report shows that street food vendors in the past did not adhere adequately to food hygiene which may be as a result of ignorance or negative attitude. This may signify a danger in the present situation of COVID 19. Street food made available by street food vendors may therefore be described as a two-edged-sword which when poorly handled in this pandemic period may lead to a widespread of COVID 19 resulting in unprecedented morbidity and mortality that may overwhelm the nation's already poor health system spelling doom for all citizens. This is why this study to determine the Attitude and Awareness of Precautionary Measures against COVID 19 among Street Food Vendors in Enugu Urban, Enugu State has become necessary.

Enugu Urban which is the area of interest in this study is the city centre of Enugu state and it is made up of three local government areas, which include Enugu East, Enugu North, and Enugu South. There are 18 prominent residential areas in Enugu Urban. These are Abakpa,



Trans-Ekulu, Nike, GRA, Ogui, Asata, New Heaven, Obiagu, Ogbete, Iva valley, Independence Layout, Achara Layout, Ugwuaji, Maryland, Awkanaw, Uwani, Agbani, and Coal Camp. Enugu Urban is the most developed urban area in Enugu state(Enete, Ifeanyi & Alabi 2012). Many people in Enugu state enjoy the services of street food vendors who regardless of their educational background usually adopt these makeshift structures, portable sheds or food truck to move food around making it accessible to many of their customers who are often in need of a quick meal. Study in the past by Ababio and Adi (2012), showed that the higher the education level of food vendors, the better the food handlers' position to take appropriate action towards preparation and service of safe food. The fact that street food vendors in Enugu Urban possess different levels of education therefore raises the question whether their level of education will affect their attitude to and awareness of precautionary measures against COVID 19.

Purpose of the Study

The purpose of the study is to determine the Attitude and Awareness of Precautionary Measures against COVID 19 among Street Food Vendors in Enugu Urban, Enugu State. Specifically, this study aimed to:

1. determine the attitude of street food vendors towards the precautionary measures against COVID 19 in Enugu Urban, Enugu State.
2. determine the level of awareness of precautionary measures against COVID 19 among street food vendors in Enugu Urban, Enugu State.

Research Questions

The following research questions guided the study:

1. What is the attitude of street food vendors towards the precautionary measures against COVID 19 in Enugu Urban, Enugu State?
2. What is the level of awareness of precautionary measures against COVID 19 among street food vendors in Enugu Urban, Enugu State?



Hypotheses

The following hypotheses were formulated to guide the study and tested at 0.05 level of significance:

Ho₁ There is no significant difference in the attitude to precautionary measures against COVID 19 among street food vendors in Enugu Urban based on level of education.

Ho₂ Level of education will show no significant influence on the level of awareness of precautionary measures against COVID 19 among street food vendors in Enugu Urban.

Method

Descriptive survey design was adopted for this study which was carried out in Enugu Urban made up of 18 clusters of residential areas. Enugu Urban was chosen because of its large population and high number of food vendors. The population for the study comprised of all the 5,137 registered street food vendors in Enugu Urban (Ministry of Health Facilities, 2013). A sample size of 370 street food vendors was used. This was determined using Taro Yamane formula.

Multistage sampling technique was adopted to select sample for the study. Stage one involved clustering Enugu Urban into 18 representing the 18 prominent residential areas. Stage two was purpose selection of 10 predominant area of Abakpa, GRA, Ogui, New Heaven, Obiagu, Independence Layout, Achara Layout, Awkanaw, Agbani, and Coal Camp. Third stage was drawing of drawing of 37 respondents from each of the 10 clusters using random sampling to produce 370.

The instrument for data collection was 24-item questionnaire structured by the researcher. The questionnaire was made up of three sections, A, B and C. Section A elicited demographic information which is level of education while section B and C contain 11 and 12 items on attitude and awareness respectively which have four option responses. Section B has option responses of Always, Often, Rarely and Never while Section C has the option responses of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The validity of the instrument was established through the judgement of three health education experts. The reliability of the instrument was established using the split half method. Copies of the questionnaire were administered on twenty (20) street food vendors in Onitshawhich is a city



in Anambra state. The responses were split into two equal halves. The Cronbach Alpha statistics was employed to correlate the two sets of scores. The reliability coefficient value of .88 was obtained and considered high enough to be adjudged reliable. Data collection was undertaken personally by the researcher with the help of four research assistants. The modalities for administering and collecting back the instrument was explained to the research assistants. Consequently analysis was based on data obtained from 364 duly completed copies of the questionnaire.

Mean was used to analyse the data for the purpose of answering the research questions. The responses of Always/Strongly Agree (SA), Often/Agree (A), Rarely/Disagree (D) and Never/Strongly Disagree (SD) were assigned numeric values of 4, 3, 2 and 1 respectively. A criterion mean of 2.50 was established by dividing the sum of the values by 4. For the purpose of answering research question one, mean score of 2.50 and above was regarded as positive (PA) attitude while scores below 2.50 were regarded as negative attitude (NA). For research question two, mean scores of 2.50 and above were regarded as high level awareness (HLA) while mean score below 2.50 were considered low level awareness (LLA). One way ANOVA statistics was used to test the null hypotheses at .05 level of significance and appropriate level of freedom. Null hypothesis would be accepted if F-critical value was greater than F-tab value. Otherwise hypothesis would not be rejected.



Results

Table 1: Mean Ratings and Standard Deviations of Attitude to Precautionary Measures against COVID 19 among Street Food Vendors in Enugu Urban, Enugu State.

n= 364

S/n	Item	\bar{X}	SD	Decision
2	How often do you consider washing your hands with soap and water or using hand sanitizer necessary?	3.01	0.79	PA
3	How often do you consider wearing face mask?	2.34	0.78	NA
4	How often do you give attention to disposing of your face masks and washing reusable face mask after a day use?	2.27	0.75	NA
5	How often do you consider wearing hand gloves or washing hands with soap and water before touching food or food utensils important?	2.02	0.67	NA
6	How often do you consider changing your hand gloves after touching other object or items other than food items necessary?	1.98	0.56	NA
7	How often do you give attention to sanitizing food condiment containers?	2.20	0.68	NA
8	How often do you consider needful sanitizing surfaces that come in contact with feeding utensils or food?	2.49	0.80	NA
9	How often do you consider avoiding touching your face?	2.34	0.77	NA
10	How often do you consider coughing into the elbow or into a tissue paper, disposing of it immediately and then washing your hand?	2.60	0.82	PA
11	How often do you show concern to non-practise of social distancing?	2.01	0.60	NA
12	How often do you consider reporting suspected case?	1.48	0.45	NA
	Grand Mean	2.24	0.64	NA

Data in Table 1 show a grand mean of 2.24 which falls below 2.50 and implies that street food vendors in Enugu Urban show negative attitude to precautionary measures against COVID 19. However, the same data also show that these street food vendors often consider sanitizing their



hands and they also avoid coughing into their palms with mean scores of 3.01, 2.51 and 2.60 respectively which fall within the limit of 2.50 – 4.00.

Table 2: Mean Ratings and Standard Deviations of Level of Awareness of Precautionary Measures against COVID 19 among Street Food Vendors in Enugu Urban, Enugu State. n= 364

S/n	Item	\bar{X}	SD	Decision
13	Frequent washing of hands with soap and water or use of hand sanitizer	2.54	0.78	HLA
14	Proper use of face mask	2.40	0.68	LLA
15	Daily disposal of disposable face masks and washing of reusable face mask	2.47	0.77	LLA
16	Wearing of hand gloves or washing hands with soap and water before touching food or food utensils	2.52	0.77	HLA
17	Regular change of hand gloves after touching items other than food or food utensils	2.30	0.53	LLA
18	Sanitizing food condiment containers regularly	2.32	0.54	LLA
19	Sanitizing surfaces that come in contact with feeding utensils regularly	2.36	0.56	LLA
20	Avoiding touching the face	2.49	0.78	LLA
21	Coughing into the elbow or into a tissue paper and disposing of it immediately and then washing hands	2.74	0.88	HLA
22	Practising social distancing	2.29	0.54	LLA
23	Keeping food covered	2.81	0.92	HLA
24	Reporting suspected cases to the relevant authority?	2.33	0.55	LLA
	Grand Mean	2.31	0.63	LLA

Data in table 2 show a grand mean of 2.45 which falls below 4.00 and indicates that the level of awareness of COVID 19 precautionary measures among street food vendors in Enugu Urban is low. The data also show that these street food vendors are however aware of frequent washing of hands, sanitising their hands before touching food or food utensils, avoiding coughing into the palms and keeping food covered with mean scores of 2.54, 2.52, 2.74 and 2.81 as precautionary measures against COVID 19.



Table 3: Mean Ratings and Standard Deviations of Attitude to Precautionary Measures against COVID 19 among Street Food Vendors in Enugu Urban, Enugu State According to Level of Education.

S/n	Item	n = 364			Decision
		FSLC 96	SSCE 133	Tertiary 135	
			\bar{X}	SD	
2	How often do you consider washing your hands with soap and water or using hand sanitizer necessary?	FSLC	2.98	0.83	PA
		SSCE	3.15	0.86	PA
		Tertiary	3.10	0.85	PA
3	How often do you consider wearing face mask?	FSLC	2.22	0.61	NA
		SSCE	2.17	0.59	NA
		Tertiary	2.60	0.71	PA
4	How often do you give attention to disposing of your face masks and washing reusable face mask after a day use?	FSLC	2.22	0.61	NA
		SSCE	2.16	0.58	NA
		Tertiary	2.42	0.68	NA
5	How often do you consider wearing hand gloves or washing hands with soap and water before touching food or food utensils important?	FSLC	2.00	0.56	NA
		SSCE	2.02	0.54	NA
		Tertiary	2.02	0.53	NA
6	How often do you consider changing your hand gloves after touching other object or items other than food items necessary?	FSLC	1.89	0.52	NA
		SSCE	2.01	0.53	NA
		Tertiary	2.02	0.53	NA
7	How often do you give attention to sanitizing food condiment containers?	FSLC	1.84	0.51	NA
		SSCE	2.15	0.58	NA
		Tertiary	2.01	0.53	NA
8	How often do you consider needful sanitizing surfaces that come in contact with feeding utensils or food?	FSLC	2.35	0.67	NA
		SSCE	2.28	0.60	NA
		Tertiary	2.84	0.79	PA
9	How often do you consider avoiding touching your face?	FSLC	2.19	0.59	NA
		SSCE	2.41	0.68	NA
		Tertiary	2.44	0.69	NA
10	How often do you consider coughing into the elbow or into a tissue paper, disposing of it immediately and then washing your hand?	FSLC	2.18	0.59	NA
		SSCE	2.81	0.77	PA
		Tertiary	2.70	0.69	PA
11	How often do you show concern to non-practise of social distancing?	FSLC	2.16	0.58	NA
		SSCE	1.92	0.51	NA
		Tertiary	1.99	0.53	NA
12	How often do you consider reporting suspected case?	FSLC	1.67	0.49	NA
		SSCE	1.30	0.45	NA
		Tertiary	1.51	0.46	NA
Grand Total		FSLC	2.15	0.64	NA
		SSCE	2.22	0.65	NA
		Tertiary	2.33	0.66	NA



Data in table 3 show a grand mean of 2.15, 2.22 and 2.33 for FSLC, SSCE and tertiary levels of education respectively. This falls below 2.50 and this implies that street food vendors in Enugu Urban show negative attitude to the precautionary measures against COVID 19 irrespective of their level of education

Table 4: Mean Ratings and Standard Deviations of Level of Awareness of Precautionary Measures against COVID 19 among Street Food Vendors in Enugu Urban, Enugu State According to Level of Education.

S/n	Item	n = 364			Decision
		FSLC 96	SSCE 133	Tertiary 135	
	Taking the following precautionary measures will reduce the spread of COVID 19		\bar{X}	SD	
13	Frequent washing of hands with soap and water or use of hand sanitizer.	FSLC	2.58	0.69	HLA
		SSCE	2.29	0.59	LLA
		Tertiary	2.00	0.51	LLA
14	Proper use of face mask.	FSLC	2.39	0.63	LLA
		SSCE	2.29	0.59	LLA
		Tertiary	2.51	0.61	HLA
15	Daily disposal of disposable face masks and washing of reusable face mask	FSLC	2.57	0.63	HLA
		SSCE	2.70	0.71	HLA
		Tertiary	2.69	0.71	HLA
16	Wearing of hand gloves or washing hands with soap and water before touching food or food utensils	FSLC	2.18	0.53	LLA
		SSCE	2.56	0.57	HLA
		Tertiary	2.62	0.67	HLA
17	Regular change of hand gloves after touching items other than food or food utensils	FSLC	2.06	0.52	LLA
		SSCE	2.14	0.53	LLA
		Tertiary	2.70	0.71	HLA
18	Sanitizing food condiment containers regularly	FSLC	2.07	0.52	LLA
		SSCE	2.12	0.53	LLA
		Tertiary	2.70	0.70	HLA
19	Sanitizing surfaces that come in contact with feeding utensils regularly	FSLC	2.20	0.52	LLA
		SSCE	2.14	0.51	LLA
		Tertiary	2.70	0.69	HLA
20	Avoiding touching the face	FSLC	2.20	0.52	LLA
		SSCE	2.47	0.56	LLA
		Tertiary	2.68	0.72	HLA
21	Coughing into the elbow or into a tissue paper and disposing of it immediately and then washing hands.	FSLC	2.81	0.73	HLA
		SSCE	2.51	0.57	HLA
		Tertiary	2.91	0.77	HLA
22	Practising social distancing	FSLC	2.06	0.52	LLA
		SSCE	2.06	0.52	LLA
		Tertiary	2.62	0.69	HLA
23	Keeping food covered	FSLC	2.80	0.73	HLA
		SSCE	2.66	0.68	HLA
		Tertiary	2.92	0.74	HLA
24	Reporting suspected cases to appropriate authority	FSLC	2.31	0.54	LLA
		SSCE	2.21	0.52	LLA
		Tertiary	2.45	0.53	LLA
Grand Total		FSLC	2.17	0.67	LLA
		SSCE	2.34	0.69	LLA
		Tertiary	2.39	0.71	LLA



The data in table 4 show grand mean of 2.17, 2.34 and 2.39 for FSLC, SSCE and tertiary levels of education respectively. These fall below 2.50 and implies that street food vendors in Enugu Urban have low level of awareness of precautionary measures against COVID 19 irrespective of their level of education.

Table 5: Analysis of Variance of the mean ratings of the significant difference in the attitude to precautionary measures against COVID 19 among street food vendors in Enugu Urban based on level of education.

Source Variable	SS	DF	MS	F-cal	F-critical	Decision
Between	58.16	10	5.806	0.002	1.83	Accept
Within	14255389	3993	3567.93			
Total		4003				

Data in table 5 is the one way ANOVA verifying the attitude of the street food vendors in Enugu Urban according to level of Education. The data show that F-cal of 0.002 is less than F-critical table value of 1.83 at .05 level of significance, therefore, the hypothesis is not rejected. This means that the attitude of street food vendors to COVID 19 precautionary measures is not dependent on their level of education.

Table 6: Anova comparison test of the mean ratings of the level of education showing significant influence on the level of awareness of precautionary measures against COVID 19 among street food vendors in Enugu Urban.

Source Variable	SS	DF	MS	F-cal	F-critical	Decision
Between	176.61	2	88.31	0.12	3.0	Accept
Within	32369.53	4365	745.98			
Total		4367				



Table 6 is the one way ANOVA verifying the level of awareness of the street food vendors in Enugu Urban according to level of Education. The data shows that F-cal of 0.12 is less than F-critical of 3.00 at .05 level of significance. The hypothesis is therefore not rejected and this means that the level of awareness of the precautionary measures against COVID 19 among street food vendors in Enugu Urban does not depend on their level of education.

Discussion

The result of the study revealed that street food vendors in Enugu Urban show negative attitude to precautionary measures against COVID 19 with mean score of 2.24. This result is expected considering the fact that COVID 19 is a novel disease and Nigeria like many other African countries has till date recorded less than 30 thousand cases (Africanews, 2020) which might have left the people in doubt of its existence and perhaps adequate awareness has not been created. The result also revealed that although these food vendors generally show negative attitude to the precautionary measures, they consider sanitizing their hands and they also avoid coughing into their palms. This however is not enough if other precautionary measures are not adhered to. The implication of this result is that the chances of community spread of COVID 19 in Enugu Urban is high considering the closeness of street food vendors to members of their communities.

The finding that these street food vendors have low awareness corroborates the finding by Gavaravarapu and Nair (2015) that food handlers such as street food vendors have little knowledge about food hygiene and are not much aware about their roles in ensuring food hygiene. This result is worrisome because of the important role played by street food vendors in making food available and their closeness to members of the community. Their ignorance of the precautionary measures against COVID 19 implies that they may not practice these measures and it may lead to the spread of COVID 19 which according to WHO (2020) has no cure neither is there any vaccine against yet.

It was revealed in the study that the attitude and the level of awareness of these street food vendors is not dependent on their level of education. This finding contradicts an earlier finding by Ababio and Adi (2012) which showed that the higher the education level of food vendors, the better the food handlers' position to take appropriate action towards preparation and service of safe food. The disparity in findings may be due to the fact that this study is



conducted in Nigeria and focused on COVID 19 precautionary measures while the earlier study was conducted in Ghana with focus on foodborne diseases.

Conclusion

Street food vendors in Enugu Urban show poor attitude to and low level awareness of the precautionary measures against COVID 19 regardless of their level of education. This is dangerous and can impede the fight against COVID 19 in Nigeria and lead to a widespread of the disease and unprecedented mortality rate.

Recommendations

1. Government should collaborate with the private sectors to increase awareness of precautionary measures against COVID 19 on social media, television and radio in order to reach a wide audience including food vendors.
2. Government should involve religious leaders in creating awareness on the prevalence and precautionary measures against COVID 19 because of the huge influence they have on the people.
3. There should be legislation on precautionary measures against COVID 19 to guide street food vendors.
4. Relevant authority should ensure the monitoring and enforcement of adherence to precautionary measures by street food vendors in Enugu Urban.
5. Face masks and hand sanitizers should be made available and affordable by government for street food vendors in order to encourage the use.



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