

Assessment of Food Vendors' Status in Secondary Schools in Ondo State Nigeria

Kinnubi C. F.¹ Adegboyega J.A.²

¹Department of Physical and Health Education Faculty of Education, Obafemi Awolowo University Ile Ife Nigeria

²Department Of Human Kinetics And Health Education Faculty Of Education, Ekiti State University, Ekiti State Nigeria

Abstract

This study examined the food vendors' status in Ondo State Nigeria. A total of 11 food vendors in rural and 21 food vendors in urban areas were selected from secondary schools using accidental sampling technique. Descriptive research method was used for the study. A self structured questionnaire thoroughly validated by experts in the field was used for the study. The data collected were analyzed using simple percentages and inferential statistics. The results of the study revealed that majority of the respondents 16 (50.1%) and 8 (25%) had primary six certificates and illiterates respectively, majority of the respondents 17 (43.1%) and 12 (37.5%) respondents said seminar/workshop was sometimes and rarely organized for them, they rarely went for medical check up respectively, and foods were prepared in the food vendors' residence. The environmental health inspectors never visited the schools to see the quality of food. It was recommended that the food vendors should be educated to understand the risks in contaminated foods, medical check up and workshop/seminar to be organized, and the foods to be prepared in school premises.

Keywords: Assessment; Food vendors; Secondary Schools; Environmental Health Inspectors; Medical Check Up; Workshop/Seminar; Mid Day Meal; Educational Background

Introduction

The need for hygiene practice of food vendors in schools is predominantly important with particular reference to the health of the students. These students are the nation builders of tomorrow so their life should not be in jeopardy. Food safety is a corporate social responsibility as food is a product where consumption is not just a matter of choice, but is ultimately a matter of life and death (Peattie, 2006). Fidel (2005) defined food vendors as people who prepare food at home and are being consumed in the school without further preparation, food vended are the source of affordable food for student. But foods served in schools do not often meet proper hygienic standard, because of inadequate food safety laws, lack of financial resources to invest in safer equipment, and lack of education enlighten for food-handlers. Food handlers are very important people when considering food safety. Their hygiene practices affect a larger part of the population who depend on them for their meals (Addo, Mensah, Bonsu and Ayeh 2007).

According to Musa and Akande (2003) food vending business assures food security for students at school and provides a livelihood for a large number of people who would otherwise be unable to establish a business for want of capital. In a study carried out by Musa and Akande (2003) majority of the vendors (56.8%) had no formal education and less than 40% of the total respondents had any form of training on food hygiene, while the authors found a low level of involvement of under-aged food vendors in educational schools in Ilorin, Nigeria In a study conducted by Agyei, and Owusu (2013) it was observed that the (5%) food vendors had at

least primary school education, almost half of them (48.0%) attaining senior high school (SHS) education and (37.0%) attaining junior high school (JHS) education. According to Addo, et al (2007,) most food vendors have barely any formal education. Food vendors below 18 years were not found in the educational institutions since the school authorities regard it as a form of child labour (Monney, Agyei, and Owusu 2013).

Medical examination of food handlers according to FAO (2009) and WHO (1996), is necessary if causes or transmission or observation of diseases or medical treatment are indicated. This can help to ban people with infectious diseases from food handling. All the same, as a form of precaution, Section 286 of the Criminal Code, (Amendment) Act, 2003 (Act 646) of Ghana charges all food vendors to be examined to ensure they do not infect consumers with communicable diseases. In a study conducted by Monney, Agyei, and Owusu (2013), 68% of the vendors had been medically examined, out of which 95% showed their certificates as evidence during the study while the remaining 5% could not readily produce their certificate at the time of the interview. Odugbemi (1992) claimed that most authorities in developing countries still emphasize medical examination as a pre-requisite for people to be engaged in food trade.

Medical examinations of food handling personnel are valid only for the time at which they came out and therefore is valueless if it is not backed up with periodic medical examination or re-examination of vendors reporting ill (Abdul-Salam and Kaferstein 1993,WHO.1989, WHO.1980). In Nigeria, the National Agency for Food Drug Agency (NAFDAC) has done a lot in relation to drugs, yet, there exists a huge vacuum in monitoring food vendors. Demands for accurate data and monitoring and evaluation from national statistical agencies and food and drug regulators are also expected, and would help raise and maintain the standard (Agbanyim 2011).

Food and Agricultural Organization (2008) explained that people are often discouraged about eating school prepared foods due to uncleanness and non freshness of the food resulting from the food vendors. According to Asiedu (2000), the hygienic ways of promoting health through prevention of human contact with hazardous wastes is sanitation. Food handlers in schools need to be frankly supervised so as to handle food in hygienic ways. In a survey conducted in the Regional Capital of Ghana by Tomlins, Johnson, Aseidu, Myhara and Greenhalgh, (2002), it was reported that most consumers did not associate poor hygiene with illness. This showed the low level of awareness in term of enlightenment among consumers on potential diseases that one might contact when cleanliness is not practiced Ababio, and Adi,(2012).

Okuneye (2005), stressed that major stakeholders should draw public attention to the numerous issues that surround quality and safety of school vended food by carefully educating our school food vendors and environmental health workers on these issues. According to Akinbode (2005), school foods businesses have become common and important features of urban towns in many developing countries including Nigeria. Food can be said to be safe when it contains no hazardous substance that could be injurious to health (Wallace, 2006 and Codex Alimentarius, 2009). According to Osei and Duker, (2008), Africa alone accounts for 90% of cholera cases worldwide. The important factors contributing to food borne related diseases are considered to be very important, this can be attributed to no educational background they have and hence have low understanding of food safety issues (Mensah et al, 1999).

The lives of the students should be of vital significance to the society, because they are the builders of tomorrow. Therefore we can not afford to toil with their lives. It is therefore very important to identify and examine the food vendors' status in secondary schools in rural and urban areas of Ondo State.

Research Questions

- 1.What is the level of educational background of the food vendors in the secondary schools?
- 2.How often is the seminars/workshop organized for food vendors?
- 3.How often do the food vendors go for medical test or medical check up?

4. Where do the food vendors prepare the mid day meal for the student’s consumption in the school premises?

5. How often do the environmental sanitary inspectors visit the school to inspect the quality of food prepared for the students’ consumption in the school premises?

2. Research Hypothesis

Hypothesis 1. There is no significant difference between where the food vendors prepare the mid day meal for the student’s consumption in the rural and urban schools.

3. Methodology

This study utilized descriptive research method. The study was conducted using 14 food vendors from rural area and 18 food vendors from urban areas making a total number of 32 respondents from Ondo State using convenient sampling technique. A self developed questionnaire on hygiene status of food vendors in secondary schools tagged (HSFVSS) was used. The questionnaire was designed to elicit information on the areas of the research questions and one hypothesis. To ensure that the instrument was valid and good enough, three experts from the university validated the instrument. A test- retest reliability coefficient of 0.75 was recorded. The respondents were required to indicate whether they agreed or disagreed with the listed items. The researcher administered the questionnaire personally and collected them immediately. Data collected were analyzed using frequency count, simple percentages and t-test analysis at 0.05 level of significance using t-test statistics.

Table 1: Frequency of age distribution by location

School	No of Respondents %	AGES				
		21-25	26-30	31-35	36-40	40 Above
Urban	21(65.5)	01 (3.1)	07 (21.9)	10(31.2)	01(3.1)	02(6.3)
Rural	11(34.5)	0 (0)	04(12.5)	05(15.6)	01(3.1)	01(3.1)
Total	32 (100)	01 (3.1)	11(34.4)	15(46.9)	02 (6.3)	03(9.4)

Research Questions 1

What is the level of educational background of the food vendors in the secondary schools?

Table 2: Frequency and percentage analysis of educational background level of food vendors in the secondary schools

Educational background	Rural %	Urban %
No Education/illiterate	04 (12.5)	04(12.5)
Primary six certificate	06 (18.8)	10 (31.3)
Junior Secondary school certificate	01 (3.1)	06 (18.8)
Senior Secondary school certificate	0(0)	01(3.1)
School Certificate examination result	0 (0)	0 (0)
Higher Education certificate	0(0)	0(0)

Table 2 showed that a total of 6 (18.8%) respondents in rural and 10 (31.3%) respondents from urban areas signified that they had primary six certificate, 04 (12.5%) respondents from rural and 04 (12.5%) respondents from urban identified that they were illiterates, a total of 01 (3.1%) respondents from rural and 6 (18.8%) from urban areas had Junior Secondary school certificate, only 01 (3.1%) respondents from urban areas had Senior Secondary school certificate.

Research Questions 2

How often is the seminars/workshop organized for food vendors?

Table3: Frequency and Percentage analysis of how often is the seminar/workshop organize for food vendors.

No	How often is the seminars/workshop organized for food vendors?	Always	Sometimes	Rarely	Never %
1.	Rural (11)	0 (0)	04 (12.5 %)	05 (15.6%)	02 (6.3%)
2.	Urban (21)	0 (0)	13 (40.6%)	07 (21.9%)	01 (3.1%)

Table 3 showed that no respondent from both rural and urban areas signified that Seminar/workshop was always organized for the food vendors, a total of 04 (12.5%) respondents from the rural and 13 (40.6%) respondents from the urban signified that seminar/workshop was sometimes organized for the food vendors. A total of 05 (15.6 %) respondents from the rural and 07(21.9%) respondents from the urban identified that Seminar/workshop was rarely organized for food vendors, while 02(6.3%) respondents from the rural and 01(3.1%) respondent from the urban areas identified that Seminar/workshop was never organized for food vendors.

Research Question 3

How often do the food vendors go for medical test/ medical check up?

Table 4: Frequency and Percentage analysis of how often the food vendors go for medical test or medical check up by location

No	The food vendors do go for medical test/ check up	Always%	Sometimes%	Rarely%	Never%
1.	Rural (11)	0(0%)	2 (6.3%)	6(18.7%)	3(9.4%)
2.	Urban (21)	0(0%)	5(15.6%)	14(43.8%)	2(6.3%)

Table 4 showed that none of the respondents both from rural and urban areas indicated that the food vendors always go for medical test/ check up, a total of 02(6.3%) respondents from rural and 05(15.6%) respondents from the urban areas identified that the food vendors sometimes went for medical test/ check up, a total of 06(18.7%) respondents from the rural and 14(43.8%) respondents from the urban areas signified that the food vendors rarely went for medical test/ check up. While 03(9.4%) respondents from the rural and 02(6.3%) respondents from the urban areas indicated that the food vendors never went for medical test/ check up.

Research Question 4:

Where do the food vendors prepare the mid day meal for the student’s consumption in the school?

Table 5: Frequency and percentage analysis of where the food vendors prepare the mid day meal for the student’s consumption in the school.

Variable	Always	Sometimes	Rarely	Never
The mid day meal is prepared at home and bought to the school premises.				
Rural 11	11 (34.4%)	0 0%	0 0%	0 0%
Urban 12	16 (50%)	0 0%	0 0%	5 15.6%
The mid day meal is prepared in the school premises	Always	Sometimes	Rarely	Never
Rural 1	0 0%	0 0%	0 0%	11 (34.4%)
Urban 2	5 (15.6%)	0 0%	0 0%	16 (50%)

Table 5 showed that 11(34.4%) respondents from the rural and 16(50%) respondents from the urban areas indicated that the mid day meal was prepared at home and bought to the school premises, no respondent from both the rural and urban areas ever identified that the food vendors sometimes and rarely the mid day meal was prepared at home and bought to the school premises. while no respondent from the rural and 5 (15.6%) signified that the mid day meal was never prepared at home and brought to the school premises. It was further seen that 11(34.4%) respondents from rural and 16 (50%) respondents’ areas said that the mid day meal was never prepared in the school premises, while 5 (15.6%) respondents from urban areas said the mid day meal was always prepared in the school premises

Research Questions 5:

How often do the environmental health officers/ inspectors visit the school to inspect the quality of food prepare for the students’ consumption in the school premises?

Table 6; Frequency and percentage analysis of how often do the environmental health officers/ inspectors inspect the quality of Food prepare for the students’ consumption in the school premises.

NO	The environmental health officers/ inspectors do inspect the quality of Food prepared for the students’ consumption.	Always%	Sometimes%	Rarely %	Never %
1.	Rural (11)	0 (0%)	03 (9.4%)	05(15.6%)	03 (9.4%)
2.	Urban (21)	0 (0%)	04(12.5%)	15 (46.9%)	2 (6.3%)

Table 6 showed that none of the respondents in the rural and urban areas identified that environmental health officers/ inspector were always in the school to inspect the food prepared by the food vendors, 03 (9.4%) respondent in the rural and 04(12.5%) respondents in the urban areas said that environmental health officers/ inspectors sometimes come to school to inspect the food prepared by the food vendors, a total of 05(15.6%)

respondents in the rural and 15(46.9%) respondents in the urban areas identified that environmental health officers/ inspectors rarely come to the school to inspect the food prepared by the food vendors, while a total of 03(9.4%) respondents in the rural and 2 (6.3%) respondents indicated that health officers/ inspector never came to the school to inspect the food prepared by the food vendors.

Hypothesis1. This is no significant difference where the food vendors prepare the mid day meal for the student's consumption in the rural and urban schools.

Table 7: t-test analysis of where the food vendors prepare the mid day meal for the student's consumption in the school by location.

Location	mean	n	sd	df	cal-t	table-t	decision
Rural	1.29	14	0.45	30	0.22	1.70	Not significant
Urban	1.47	18	0.31				

Table 7 showed that the calculated t-value at 0.05 level of significance and 30 df was 0.22, since $0.22 < 1.70$ a and t 0.05 level of significance, hence the null hypothesis of no difference was accepted. This indicated that there was no significant difference of where the food vendors prepare the mid day meal for the student's consumption in the school by location.

4. Discussion of Findings

The study sought to find out the food vendors' status in secondary schools, their level of educational background, how often the seminars/workshop is organized for food vendors, the medical test or medical check up, inspection of the quality of food prepared for the students' consumption and where the mid day meal for the students' consumption is prepared.

The study revealed that the highest educational background level among these food vendors was 16 (50.1%) primary six school certificate, 8(25%) illiterates while only 7 (21.9%) respondents had junior secondary school certificate. This showed that their level of educational background was very low. This corroborates with the findings of Addo, et al (2007) which states that most food vendors have barely any formal education, and the study carried out by Musa and Akande (2003) which stated that majority of the vendors (56.8%) had no formal education and that the food vendors could be alleged to be a potential threat to food safety due to their low educational background.

It was revealed that 17 (43.1%) respondents said seminar/workshop was sometimes organized for the food vendors, while 12 (37.5%) respondents said seminar/workshop was rarely organized for the food vendors, which serves as a form of training for food vendors. This is in line with the study carried out by Musa and Akande (2003) which stated that less than 40% of the total respondents had any form of training on food hygiene.

The study also revealed that 20 (62.5%) respondents said they rarely went for medical test/ check up. It showed that the food vendors did not usually go medical test/check up. This finding disagreed with Odugbemi (1992) who claimed that most authorities in developing countries still emphasize medical examination as a pre-requisite for people to be engaged in food trade, it contradicts the study conducted by Monney, Agyei, and Owusu (2013), which stated that 68% of the vendors had been medically examined, out of which 95% showed their certificates as evidence during the study and Abdul-Salam M. and Kaferstein F. K. (1993), WHO.(1989), and WHO.(1980) which stated that Medical examinations of food handling

personnel are valid only for the time at which they came out and therefore is valueless if it is not backed up with periodic medical examination or re-examination of vendors reporting ill.

In the findings, it was revealed that the mid day meal was prepared at home and bought to the school premises. When food is prepared at home and brought to school premises for student's consumption, it is likely that the food is not prepared in a hygienically way and clean environment thereby contacting germs which are deleterious to human health. Therefore when food is prepared in the school environment there is the tendency for thorough supervision from the teachers or whosoever is in charge of health / sanitation or students welfare in the school. This is in line with the statement of Agbanyim (2011) who stated that in Nigeria, the National Agency for Food Drug Agency (NAFDAC) has done a lot in relation to drugs yet; there exists a huge vacuum in monitoring food vendors.

It was also observed that Health officers/ inspectors did not come to the school to inspect the food prepared by the food vendor. This is contrary to Asiedu (2000) who concluded the Food handlers in institutions such as schools need to be closely supervised to ensure that they handle food in most hygienic ways.

5. Conclusion

Based of the data analyses and findings, the following conclusions were drawn:

Many of the food vendors had primary six school leaving certificate, and illiterates, while some of them had junior secondary school certificate.

The seminars/workshop was sometimes organized for food vendors in other to train them

It was also seen that the food vendors rarely went for medical test/ check up.

The environmental health officers/ inspectors never came to school to inspect the food prepared by the food vendor, but few respondents said the environmental health officers/ inspectors sometimes came for the food inspection prepared by food vendors.

Finally, the mid day meal was prepared at home and bought to the school premises.

6. Recommendations

Based on the research findings of this study, the following recommendations were made:

1. The minimum qualification for the food vendors should be Junior Secondary School Certificate or West African Examination Council result, so that they can be able to read and write and to have understanding of the risks in contaminated foods.

2. The health officers/inspectors should always visit schools to inspect the quality of food served in the school for the students' consumption.

3. The food vendors should be mandated by the government and the school authority/ parent teachers association to:-

a) Prepare the food in the school premises.

b) Go for medical test/ medical check up.

4. Finally the 3tier of government should be involved in organizing workshop/seminar very often to train the food vendors on essential values of food safety.

References

- [1] Ababio P.F., and Adi D.D., (2012). Evaluating Food Hygiene Awareness and Practices of Food Handlers in the Kumasi Metropolis. *Internet Journal of Food Safety*, Copyright© 2012, FoodHACCP.com Publishing Vol.14, 2012, 35-43
- [2] Addo K. K., Mensah G. I, Bonsu C, Ayeh, M. L. (2007). Food and its preparation in hotels in Accra Ghana. A concern for Food Safety. *AJFAND* 7 (5).
- [3] Abdul-Salam M. and Kaferstein F. K. (1993) Food Safety: safety of street foods. *World Health Forum* 1993; 14: 191-194. Agbanyim Olich (2011) Food hygiene Waste and Sanitation West Africa Insight <http://allafrica.com/stories/200911021342.html>.
- [4] Akinbode, S.O. (2005). Nigerian Commentaries: Quality and Safety of Street Vended Food in Nigeria. 2-5.
- [5] Codex Alimentarius (2009). Food hygiene. Basic text 4th Edition.
- [6] Fidel, A.A. (2005). Nigerian Commentaries: Quality and safety of street vended foods Nigeria, Agriculture and Consumer Protection. Pp. 30-35.
- [7] Mensah, P., Yeboah-Manu, D., Owusu-Darko, K., Ablordey, A., Nkurmah, F.K. and Kamiya, H. (1999). The role of street food vendors in the transmission of enteric pathogens. *Ghana Medical Journal*, 1999, 33:19-2.
- [8] Monney I, Agyei D., and Owusu W., (2013) Hygienic Practices among Food Vendors in Educational Institutions in Ghana: The Case of Konongo *Foods* 2, 282-294; doi:10.3390/foods2030282 ISSN 2304-8158 www.mdpi.com/journal/foods
- [9] Musa O I. and Akande T.M. (2003) Food Hygiene Practices of Food Vendors in Secondary Schools in Ilorin *The Nigerian Postgraduate Medical Journal*, Vol. 10, 3, 192-196.
- [10] Odugbemi T. (1992) Food poisoning: Cause, management, control and recent advances. *Nig. Med. Practitioner*. 24: 41-45.
- [11] Okuneye, P. (2009). Nigerian Commentaries: Quality and safety of street vended food in Nigeria P 3-5.
- [12] Osei F.B., Duker A.A. (2008). Spatial and demographic patterns of cholera in Ashanti Region. *Ghana Int.J. Health and Gerographics*
- [13] Peattie, K. (2006). Corporate social responsibility and the food industry. *FS&T* 20(2): 46
- [14] Tomlins K., Johnson P.N, Aseidu OP, Myhara B, Greenhalgh P. (2002) Street food in Ghana: a source of income, but not without hazards. Available at <http://www.iita.org/info/phnews5/mr8.htm> (Accessed on Jan. 3 2011)
- [15] Wallace CA. (2006). Intermediate HACCP. Highfield.co.uk limited
- [16] World Health Organization: (1989). Health surveillance and management procedures for food-handling personnel: WHO Technical Report, 1989; 785: 5-47.
- [17] World Health Organization: (1980). Health examination of food handling personnel. Report of a working group, Copenhagen, (Unpublished document). 1980; WHO Regional office for Europe.
- [18] World Health Organization. *Essential Safety Requirements for Street-Vended Foods*; World Health Organization: Geneva, Switzerland, (1996). Available online: <http://apps.who.int/iris/handle/10665/63265> (accessed on 22 May 2013).