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Influence of Role of Campus-Eatery Regulatory Board on the Production of Safe and Quality Food for Universities of Ilorin Community

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Abstract. Several health problems may manifest from the food we eat, because of problem that can occur, the food handlers have responsibility to ensure that food provided for consumers are diseases. Several outbreak of food borne illness had happened in campuses and several Nigerian cities. This study examines the role of campus eatery regulatory board on the production of safe and quality food in University of Ilorin.

The research design adopted for this study was descriptive research design of survey type. Through a multistage sampling techniques, a sample population of 380 (three hundred and eighty) was selected for the student's categories and 130 (one hundred and thirty) was selected from the eatery operator's categories in University of Ilorin community. The instrument for the study was two researchers structured questionnaire made up of two sections and a focus group discussion guide. The instrument was later validated by three experts in relevant field and test for reliability with the use of Spearman Brown Order. Using split half method, a reliability of 0.76r was obtained. Personal data collected were analyzed with the use of frequency counts and simply percentage while the postulated hypotheses were tested with the use of inferential statistic of chi-square. Two researcher hypotheses were tested at 0.05 alpha level of significance. All the hypotheses were rejected.

The result revealed that:

- periodic inspection by campus eatery regulatory board influence production of safe food in university of Ilorin (cal.X^2=355.50> Table value= 16.92 @ DF=9),
- routine medical screening of eatery operators influence the production of safe food in University of Ilorin (cal.X^2=301.29> Table value= 16.92 @ DF=9),

The study concluded that periodic inspection by C.E.R.B will ensure production of safe foods in the university of Ilorin community, routine medical screening of food handlers will go a long way in influencing production of safe food for the university community, sensitization of food eatery operators will improve eatery operators' knowledge of quality food production. Based on the conclusion drawn, the following recommendation were made: that the university should empower C.E.R.B to embark on more vigorous inspected which may include food test in order to further strengthen the

already performing board, C.E.R.B as a matter of importance ensures that all food handlers possess routine medical screening certificate, effective use of customers, complaint hotlines should be encouraged. sensitization on environmental hygiene, personal hygiene and food safety should be doubled, other higher institution of learning should create C.E.R.B in order to forestall food borne diseases outbreak, certified should be issued on a yearly basis to eatery operator after successful inspection.

1. Introduction

Many health problems encountered today arise from the consumption of unsafe food, and that is why National Disease Surveillance Center NDSC (2003), affirmed that several health problems may manifest from the food we eat, because of problems that can occur, the food handlers have responsibility to ensure that the food provided for consumers are safe and does not become a vehicle foe disease outbreak or transmission of communicable diseases. Arizon-Ogwu (2008) lend credence to sources of food contaminants by affirming that over 300 substances are being added for the purpose of food preservation, coloring, texture and adding flavor. Food however is any substance used, available to be used for drinking or eating by human being and substance which enters into or is used in production, composition or preparation of these substance (Food Safety Authority of Ireland Act, 1998).

Musa and Akande (2003) opined that food poisoning and the other food born disease could occur in institution such as schools, hostels, hospitals and prisons, where food and drinks are served or sold to groups of people by food vendors or other handlers. Several factors are known to favor food borne disease or food poisoning during food handling processes. Such factors include; dirty environment, food handlers with diseases, and the food preservation methods. In food safety practices, a number of routines are usually followed in order to avoid health hazard such as effective environmental situation, hand washing practices, use of clean water for production and good method of food preservation.

According to National Disease Surveillance Center (2003), food illness causes distress, preventable death and avoidable economic burden for some consumers. Food borne illness can also result in mild, temporary discomfort, lost time from work or other daily activities, especially vulnerable groups such as children, older people and those with impaired immunity. Food borne illness may have some serious or longtime consequences and, most seriously may be life threatening.

Consumer health is the education or information given to a consumer in order to make wise choice about health product and services. In order for this to happen, the consumer must be knowledgeable about those services and products among which he or she is to make decision (Ogunsakin, 2008).

It is the researcher's view that the consumer protection is done by regulatory bodies to ensure the food safety and maintain health of all the sundry. To maintain a state of well-being within the university, the possibility of food contamination as indicated by Omojokun earlier cannot be over emphasized. Hence, the constitution of eatery regulatory board in the university of Ilorin. The Vice-Chancellor of university of Ilorin constituted the campus eatery regulatory board with the following terms of reference; to ensure categorization of eatery based on their facilities; set up task force for monitoring and ensure strict compliance with regulations; conduct periodic inspection of the eateries in other to ensure the source of water supply, method of waste disposal, storage of raw food and that food prepared are kept at good temperature. A food inspector may handle and observe food dishes to determine if the food safe for consumption by public consumers. A food inspector also may observe the cleanliness of the kitchen or preparation area in a factory to check for condition, such as pests, that may make the food unsafe. (Daniels 2014). This is also in line with Jones, Pavlin, Lafleur, Ingram and Schaffner(2004), the Food Drugs Administration FDA inspect domestic and imported food products as well as food-processing plants. The FDA inspects meat, poultry, egg and the processing plant for these product, FDA addition inspect the rest of foodstuffs and their plants. Restaurant inspection is usually carried out by

local, county, or state health department personnel.

Promote the acquisition of medical screening certificate which enable and ensure all operators to be certified as been free from becoming a vehicle for transfer of diseases, Annual medical certificate is a legal requirement for food workers in meat plants, plants producing meat products and minced meat production plants; workers in the dairy sector who handle raw milk have to ensure that there is no impediment to such employment; medical certificate is required of food workers in the fish processing sector and workers with direct contact with food at the time of recruitment (Harker 2001). Develop avenue for sensitization for proper hygiene, food safety and environmental upkeep; ensure all eateries have minimum standards to operate; and to create avenue for complaint by dissatisfied customer.

The purpose of this study is to: investigate whether periodic inspection of eatery operators by campus eatery regulatory board will improve the quality of food produced for the University of Ilorin community; assess if routine medical screening of eatery operators by campus eatery regulatory board will promote the production of safe food in the University of Ilorin community.

2. Statement of the Problem

In Nigeria, many cases of food borne disease had been reported. Armstrong (2014), in a punch newspaper submitted that Bauchi state government admitted that sixty 60 persons was killed as at the time of the publication, and over 1000 had infection with the outbreak of cholera in Bauchi metropolis Bauchi state.

Omojokun (2013) in affirmation states a great concern about mycotoxin particular aflatoxin-poisoning outbreaks in state of Nigeria which causes the death of scores of infants and children shows poor attention given to toxic metals in food consume in Sub-Sahara Africa.

The institution of campus Eatery Regulatory Board in the University of Ilorin was done to guide against problems associated food borne diseases. The functions of the Board include periodic inspection, sensitization and enforcement of routine medical screening. The researcher has observed that, there are high risk food handlers among the eatery operators within the University. This reportedly lead to the outbreak of food borne illness in Obafemi Awolowo University Ile Ife in 2010. This may not be unconnected to majority of operators without portable source of water supply as most operators use gallons to fetch water for the purpose of food preparations, the environment of bakeries and water factory visited by the researcher are not well kept, and majority of operators are without medical screening certificate and operation license, all this can predispose University of Ilorin community members to health hazards.

Eating outside is a common thing in an academic environment. The act is inevitable as students and staffs usually stay in school over two meals time in the class or office. The researcher observed that there are increases in the rate of terminal diseases among the elite class. There is a sharp drop in the life expectancy in the country, a distributing trend to Nigerians and even the government.

Despite series of task force and regulatory bodies in the country, concern with standardization and certification of food producer and consumer protection, it is obvious that the irregularities among operators is still very rampant, which will put the health and academic concentration of University community members at risk. Upon this premise, theResearcher intends to investigate the level of regulatory roles that campus eatery regulatory board is performing to safeguard the health of university of Ilorin community members.

3. Research Questions

The following research questions were raised for study:

- Will periodic inspection of eatery operators by campus eatery regulatory board influence the quality of food

produced for the university of Ilorin community ?
- Will periodic inspection of eatery operators by campus eatery regulatory board influence the quality of food produced for the university of Ilorin community?

4. **Research hypotheses**

The following research hypotheses must be tested:

- Periodic inspection of eatery operators by campus eatery regulatory board will not significantly influence the quality of food produced for the university of Ilorin community.
- Routine medical screening of eatery operators by campus eatery regulatory board will not significantly influence the production of safe food in University of Ilorin community.

5. **Methodology**

Descriptive research design of survey type was used to carry out this study. The population for this study consists of both the eateries and the students. The operators of; eateries, bakeries that supplies breads and kiosks that sell snacks and water factories that supply University of Ilorin Campuses (Main Campus, College of Medicine (OkeOyi) and Fufu Campus) a operators of each eatery was purposively selected and a one hundred and thirty five (135) sample that consist of eateries, bakeries snacks points and water factories and multi-stage sampling methods was used to select three hundred and eighty (380) respondents who are students was sampled from five (5) faculties namely; Agriculture (45), Clinical Sciences (51), Education (120), Life science(62), Physical science (107). The stages are as follows:

Stage one: systematic random sampling technique was used to select five faculties from the fifteen faculties present in University of Ilorin by assigning numbers and picking from every third faculty.
Stage Two: simple random sampling technique of fish bowl method was used to select a department from each of the faculty.
Stage Three: One (1) level is purposively selected to represent each of the department.
Stage Four: Proportionate sampling method was used to select 70% of student from each of the departments.
Stage Five: systematic random sampling technique was use to generate the study respondents. The sample size is deemed adequate because Research Advisors, (2006) opined that for the population of 10,000 a simple size of 380 is adequate at 95% confidence and with 5% margin of error.

The researcher instrument used was researcher-designed structure questionnaire tagged "Role of Campus Eatery Regulatory Board on Production of Safe and Quality Food in university of Ilorin". The instruments were validated three (3) jurors in the Department of Health Promotion and Environmental Health Education, and Test, Measurement and Evaluation, university of Ilorin, Nigeria. In ensuring the reliability of the instruments, split half method was used. Twenty respondents from kwara state college of education, Ilorin eatery operators and students were selected. The data collected were split into two halves for correlational analysis using Spearman Brown Rank Order Correlation. The result obtained was 0.76r and 0.71r respectively. This is seen to be reliable enough to carry out the study. The instruments were administered by the researcher and the help of trained research assistants. Inferential statistics of chi-square was used to analyze the result at 0.05 alpha level of significance.

Table.1:
Shows population distribution Eateries, Bakeries, Snacks points and Water factory

CAMPUS	EATERIES	BAKERIES	SNACKS POINT	TABLE WATER
MAIN CAMPUS	25	10	30	12
OKE OYI (UITH)	10	7	10	10
FUFU CAMPUS	8	4	5	4
TOTAL	**43**	**21**	**45**	**26**

Total population of Eateries: 135

Table 2:
Shows the stages of sample selection for student's category

Faculty	Department	level	70% sample selected
Agric (1091)	H/E	500L (045)	040
Clinical science (264)	Medicine	600L (084)	051
Education (4018)	HP&EHE	400L (145)	120
Life sci. (3045)	Biochem	300L (089)	062
Physical sci. (3806)	Ind.chem	200L (150)	107
Total (12,224)	**(513)**	**380**	

6. Results

Hypothesis 1: periodic inspection of eatery operators by campus eatery regulatory board will not significantly influence the quality of food produced for the university of Ilorin community.

Table 3:
Shows chi-square analysis of the periodic inspection of eatery operators by campus eatery regulatory board will on quality of food produced by the university of Ilorin community based on eatery.

S/N	ITEMS	SA	A	D	SD	ROW TOTAL	DF	CAL VALUE	TABLE VALUE	REMARKS
1	Inspection is done by C.E.R.B. on sources of water supply and this improves health of university of Ilorin community.	117 (86.7%)	17 (12.6%)	.1 (0.7%)		135				
2	Inspection is done by C.E.R.B on method of waste disposal which can improve production of safe food.	12 (8.9%)	120 (88.9%)	3 (2.2%)		135				
3	Inspection is done by C.E.R.B on raw food used in preparation of food and this promotes production of quality food.	12 (8.9%)	95 (70.4%)	28 (20.7%)		135	9	355.50		Ho Rejected
4	General inspection is done by C.E.R.B to ascertain that produced foods are maintained at good temperature.	16 (11.9%)	38 (28.1%)	74 (54.8%)	.7 (5.2%)	135				
	Column total	**157**	**270**	**106**	**7**	**540**				

@0.05 alpha level of significance

Table 3 above shows that the calculated chi-square value is 355.50 and the table value is 16.92 with the degree of freedom 9 at 0.05 alpha level of significance. Since the calculated chi-square value of 355.50 is greater than the table value of 16.92 at 9 degree of freedom, the null hypothesis is thereby rejected. This implies that periodic inspection by campus eatery regulatory board had significant influence on the quality of food provided for the university of Ilorin community. The findings are in accordance with the assertion of Daniel (2014) who affirmed that a food inspector should handle and observe food dishes to determine if the food is safer for consumption by public consumers. A food inspector should also observe the cleanliness of kitchen or preparation area in a factory to check for conditions, such as pests, that may make the food unwholesome for human consumption.

Table 4:
Shows chi-square analysis of periodic inspection on eatery operators by campus eatery regulatory board on the quality of food produced by the university of Ilorin community based on students.

S/N	ITEMS	SA	A	D	SD	ROW TOTAL	DF	CAL VALUE	TABLE VALUE	REMARKS
1	Inspection of sources of water supply by C.E.R.B reduces risk of food borne diseases in community.	54 (14.2%)	152 (40.0%)	101 (26.6%)	73 (19.@%)	380				
2	Checking on waste disposal methods by C.E.R.B prevents production of substandard food.	62 (16.3%)	124 (32.9%)	51 (13.4%)	142 (37.4%)	380				
3	Inspection of raw food by C.E.R.B leads to production of quality food.	156 (41.1%)	164 (43.2%)	48 (12.6%)	12 (3.2%)	380	9	158.63	16.92	Ho Rejected
4	Ensuring production of foods by C.E.R.B ensures production of food.	173 (45.5%)	133 (35.0%)	63 (15.3%)	11 (2.3%)	380				
	Column total	**445**	**573**	**263**	**238**	**1520**				

@0.05 alpha level of significance

Table 4 above shows that the calculated chi-square value of 158.63 and table value is 16.92 with the degree of freedom 9 at 0.05 alpha level of significance. Since the calculated value of 158.63 is greater than table value of 16.92 at the degree of freedom of 9, the null hypothesis is therefore rejected. This implies that periodic inspection of eatery operators by campus eatery regulatory board had significant on influence the quality of food produced for the university of Ilorin community. The findings agree with Onyeneho and Hedberg (2013) that restaurants with food safety-certified kitchen managers are less likely to have critical violations on their food safety inspections than restaurants without these managers.

Hypothesis 2: Routine medical screening of eatery operators by campus eatery regulatory board will not significantly influence the production of food for the university of Ilorin.

Table 5: Shows chi-square analysis of the routine medical screening of eatery operators by campus eatery regulatory board will not significantly influence the production of safe food by the university of Ilorin community based on eatery.

S/N	ITEMS	SA	A	D	SD	ROW TOTAL	DF	CAL VALUE	TABLE VALUE	REMARKS
1	Pre-entry screening of food handlers is done by C.E.R.B to ensures production of safe food.	9 (6.7%)	25 (18.5%)	36 (26.7%)	65 (48.1%)	135 (100%)				

2	Mandatory routine medical screening of all food handlers done by C.E.R.B help ensures production of safe food.	86 (63.7%)	42 (31.1%)	3 (2.2%)	4 (3.0%)	135 (100%)				
3	Follow up medical check-up done by C.E.R.B. for food handlers isolated for problem relating to food borne diseases help ascertain food safety.	38 (28.1%)	83 (61.5%)	13 (9.6%)	1 (0.7%)	135 (100%)	9	301.29	16.92	Ho Rejected
4	Sanctuary are levied against eatery operators who do not comply with required medical screening by C.E.R.B and this safe guard food contamination.	12 (8.9%)	85 (63.0%)	33 (24.4%)	5 (3.7%)	135 (100%)				
	Column Total	**145**	**235**	**85**	**75**	**540**				

@0.05 alpha level of significance

Table 5 show that the calculated chi-square value of 301.29 and table value is 16.92 with the degree of freedom of 9 at 0.05 alpha level of significance. Since the calculated value of 301.29 is greater than table value of 16.92 at degree of freedom of 9, the null hypothesis is therefore rejected. This implies that routine medical screening of eatery operators by campus eatery regulatory board had significant on influence the production of safe food in University of Ilorin. The result was in line with the findings of Harker (2001) who stressed that annual medical certificate is a legal requirement for food workers in meat plants; workers in the diary sector who handle raw milk have to ensure that there is no impediment to employment. The findings is also in line with Onyeneho and Hedberg (2013) that restaurants with food safety-certified kitchen managers are less likely to be associated with food borne illness outbreaks than restaurants without these managers.

Table 6:

Shows chi-square analysis of the routine medical screening of eatery operators by campus eatery regulatory board on the production of safe food by the university of Ilorin community based on students.

S/N	ITEMS	SA	A	D	SD	ROW TOTAL	DF	CAL VALUE	TABLE VALUE	REMARKS
1	Pre-entry screening of all food handlers is done by C.E.R.B to ensures production of safe food.	169 (44.5%)	141 (37.1%)	51 (13.4%)	19 (5.0%)	380				
2	Mandatory routine medical screening of all food handlers done by C.E.R.B help ensures production of safe food.	142 (37.4%)	181 (47.6%)	41 (10.8%)	16 (4.2%)	380				
3	Follow up medical check-up done by C.E.R.B for food handlers isolated for problem relating to food borne diseases help ascertaining food safety	137 (36.1%)	161 (42.4%)	65 (17.1%)	17 (4.5%)	380	9	729.84	16.92	Ho Rejected
4	Sanctions are levied against eatery operators who do not comply with required medical screening by C.E.R.B and this safe guard food contamination.	115 (40.8%)	180 (47.4%)	30 (7.1%)	15 (3.9%)	380				
	Column Total	**563**	**663**	**187**	**67**	**1520**				

@0.05 alpha level of significance

Table 6 shows that the calculated chi-square value of 729.84 and table value is 16.92 at degree of freedom of 0.05 alpha level of significance. Since the calculated value of 729.84 is greater than table value of 16.92 at degree of freedom of 9, the null hypothesis is therefore rejected. This implies that routine medical screening of eatery operators by Campus Eatery Regulatory Board had significant influence on production of safe food

in the University of Ilorin. The result was in line with the findings of Harker (2001) who stressed that annual medical certificate is a legal requirement for food workers in meat plants; workers in the diary sector who handle raw milk have to ensure that there is no impediment to employment. The findings is also in line with Onyenho and Hedberg (2013) that restaurants with food safety-certified kitchen managers are less likely to be associated with food borne illness outbreaks than restaurants without these managers.

7. Conclusion

Based on the findings, it was concluded that:

- Periodic Inspection by C.E.R.B on sources of water supply, waste disposal methods and production process will ensure production safe foods and reduce risk of food borne illnesses in the University of Ilorin Community.
- Routine Medical Screening of Food Handlers such as pre-entry medical screening, follow up medical check-up and sanctions for handlers without screening will go a long way in influencing production of safe food and safe the University community from possible transmission of transmittable diseases through food handlers.

8. Recommendation

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

(i) The University authority should empower C.E.R.B to embark on more vigorous inspection which may include food test in order to further strengthen the already performing board.
(ii) C.E.R.B as a matter of importance should ensures that all food handlers possess routine medical screening certificate.

References

Arizon-Ogwu L.C. (2008). National Agency for Food and Drug Administration and Control: Agency for security fees or safe food. Nigeria world article available athttp://www.nigeriaworld.com. Retrieved on 12/02/2014

Amstrong A. (2014) cholera outbreak in Bauchi: punch newspaper. Available at www.punchnewsonline/choleraoutbreak.com. Retrieved on 12/09/14

Daniels, N. A. (2000). A food-borne outbreak of gastroenteritis associated with Norwalk-like Viruses: first molecular trace back to Delhi sandwiches contaminated during Preparation. 181(4)1467-1470

Food safety authority of Ireland act (1998) A Compendium of Food Laws in Ireland, Ireland Government press.

Harker, C. (2001) Pre-Employment Health Assessment for Food Handlers: A Survey of Occupational Physicians in the Food Industry. Journal of Occupational Medicine; 51(5)332-335.

Karim , R. (2011). Categorization of Eatery in University of Ilorin. Workshop for Eatery Operators On campus titled towards acceptable food hygiene, safety and quality on campus. Unilorin Press.

Musa, I.O &Akande, M.T. (2003) Food Hygiene Practices of Food Vendors in Secondary Schools' in Ilorin. Nigerian Postgraduate Medical journal, 10, (3) 4-7

National Disease Surveillance Center, (2004). Preventing foodborne diseases: A Focus on the Infected food handler. Report Sub-Committee of N.D.SC's Scientific advisory committee. Available at www.nationaldiseasessurvellancecenter.org. retrieved on 18/06/14

Omojokun, J. (2013). Regulation and Enforcement of Legislation on Food Safety in Nigeria.National Agency for Food Drug Administration and Control. Available at http://dx.doi.org/10.5772/54423. Retrieved on 05/04/14

Onyencho,S.N & Hedberg G.W (2013) An Assessment of Food Safety Needs of Restaurant in Owerri. International Journal of Education Research and Public Health 10(8): 3296-3309

Shehu, R.A. (2011) Food Standard on Campus. Workshop for Eatery Operators on Campus Titled Towards Acceptable Food Hygiene, Safety and Quality on Campus. Unilorin Press.