

Assessment of Food Safety Standards of Eating Housing in Calabar South Local Government Area

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ABSTRACT: *The main aim of the study is to examine Assessment of Food Safety Standards of Eating Housing in Calabar South Local Government Area. To achieve this, two specific objectives were raised from which the research questions and hypothesis were formulated in line with the variable of the study. The study adopted a survey research design. The sample of the study was 110 respondents selected using a simple random sampling technique. The instrument used was questionnaire to gather information for the study. Chi-Square analysis was used for the analysis of the data at 5% level of significance. The result of the findings in hypothesis one revealed there is significant relationship between the structure layout of eating houses and the safety of food. It was also discovered in hypothesis two there is significant relationship between the the type of equipment and the quality of food in eating houses. The study conclusion that food safety can help your restaurant to maintain profits and minimise wastage as it acts as a benchmark for quality control. Much less food will be wasted once your staff are fully trained in food safety and hygiene best practices. Two additional benefits are that your kitchen will become more cost-effective, and your reputation as a provider of high-quality food will improve. The study recommended that laws should be enacted and properly enforced on the proper layout of eating houses in order to minimize the distances raw food materials are to be passed from one unit to another. Secondly, equipments used for preparation and consumption of food should be kept in hygienic condition and at all times.*

KEYWORDS: assessment, food safety standards, Calabar South, Local Government Area.

INTRODUCTION

Food borne illness is a major public health problem in both developed and developing countries. Most outbreaks are caused by food that has been mishandled or mistreated during preparation or storage. This is matter of particular concern for the food service industry, since the serving or contaminated food can have significant impact, not only on the health of the consumers, but also in terms of economic loss for the establishment itself. It is therefore, essential for the premises within which food is handled to be structurally designed with separate units for the different processes of food preparation, the equipment used must be adequate and hygienic, the environment where food is processed should be clean and the personnel to handle such food material to be healthy as well. The layout for the eating premises is done in such a way that the different operating units are connected to one another. Right from the point where raw food materials are received for processing, it is then handled in areas where contamination is prevented. Foods either raw or cooked are properly stored or refrigerated so as to prevent contamination. The materials for the construction of the premises should be such that they would stand the test of time and capable of preventing pests infestation that invariably would cause assent food contamination thereby not ensuring it's safety.

In the same vein, the rise of contaminated cookery, cutlery, pots, pans, knives, chopping boards, surface, sinks and other equipment cannot enhance food safety. Hence, they have to be preserved before use. Food quality can never be guaranteed when the item used for food prevention, consumption and service are unhygienic. Therefore, they should be cleaned each time they have been put to use.

Additionally, the environment where food is prepared plays a vital role to a safety/quality. Well ventilated and properly lighted units of food premises ensure good work practices. Soundings fill from pest (flip, contracted rodents) due to the presence of filthy and four air space, uncontrolled refuse management unhygienic toilet, ongoing offensive odour from attached use cooking/eating equipment should be tolerance food which is intended for sale. In addition, snowflakes upon food is found and served should be properly cleaned.

Statement of the Problem

All food materials intended to be served at home or sold to the public in eating premises must be wholesome in order to ensure the health of the user. However, poor structural layout of the different processing units, the unhygienic nature of the equipment used for grouping food and a filthy environment can being absent poor quality food being offered with it's attending consequences.

The location of an eating house, the material used for it's construction and the layout of the structure contribute to or prevent food safety. Eating houses should not be sited in a waterlogged area, reclaimed land or close to a refuge dump site. Rather it should be on a well drained soil and

not learned by other bridges. This is to prevent disproven, cracks on the walls where remain on hide and to prevent port having eating human should be durable enough to enhance pest, ensure a comfortable indoor/working environment and must be enable of including pest. Also, the layout of the structure should be designed in such a way that the different units implement each other. For example, the stores should not be far from the reading areas, kitchen and dining halls etc. The floor of the store kitchen, dining halls etc should be made of materials that can be easily cleaned. The walls should be firm and erect devoid of any kind of dilapidation, and must be able to support a door(s) and windows for proper ventilation and adequate lighting as well as anything attached to it. The toilet, washing room, working area, cloak room etc should be properly designed to achieve the purpose for which it is meant. Most importantly, premises must be made a distinctive area for the storage of refuse.

Besides the layout, the equipment used for food processing, preservation, consumption and well as maintenance should be given priority. The utensils pots, pans ladles, cooked or stores should be free from default and maintained hygienically, cutleries such as knives, chopping boards, plates, cups, glasses must be kept clean too. All electrical appliances used for storage and cooking and eating of food such as refrigerators, electric stove, mired woven must be in good condition all the time to ensure the safety of food. Hence, all equipment used for preventing, cooking, eating and maintenance (sink) should be in sand condition and of better quality too.

Additional, food safety is ensured when food processing is carried out in a clean and safe environment. This has to do with the internal and external environment. Internally, storage temperature for raw and processed food material should be taking seriously. The kitchen and working area in addition to the surface upon which food are prepared, cooked and eaten must be clean enough. The eating halls and surface of table must be free from contaminating. The kitchen working area, and eating hall must be properly lighted and adequately ventilated either naturally or artificially in order to achieve a comfortable indoor environment devoid from dust, smoke and the uncontaminated. In the same view, the indoor environment must be free from condition that will encourage pests infestation and odour nuisance much as blocked drain,presence of hygiene, bushing surrounding etc.

Specific Objective

- I. To find out if the layout of an eating house contribute to food safety.
- II. To determine whether equipment use for food processing enhance food safety.

Research Questions

1. Does the structural layout of a eating house contribute to the safety of food?
2. Does equipment use in food processing enhance food safety?

Research Hypothesis

- a. There is no relationship between the structural layout of an eating house and the standard of food.
- b. There is no relationship between condition of equipment and the quality of food in eating house.

LITERATURE REVIEW

Eating House Layout and the Standard of Food Safety

Before a premises is approved and certified as an eating house it must meet the requirements by law such requirements according to Oreyeni (2005) and Nnah (2012) are that the structure must be on a good site free from water logging, presence of refuse, free from automobile noise, dust and smoke at all times.

Nwerakoro (2004) noted that the premises must be constructed of durable building materials that will stand from adverse weather conditions such as cold (rainfall) and heat (sum) as well as strong wind (storm) thereby contributing to a comfortable indoor environment. The layout of an eating house should be such that the different operating units are closely linked to each other such that food would not be handled for long distance to avoid contamination.

Clean and attractive premises of sand structure and signed for use work, should provide food safety (Jacob, 1989). The basic principles of food structure and layout should be understood by every management of eating houses on the play a contributive part in designing kitchen and work areas. Unfortunately, many catering premises are not purpose-built or in the most suitable places, so careful planning is needed to make the most of what is available.

The amount of natural lighting and ventilation, access, possible storage area and the quality of the water supply are among the things that has to be considered when planning eating premises. For example, separate areas will be needed for kitchen, store, working area, washing room, cooking room, crockery store, toilet, cloakroom and bathroom as well as premises for adequate supply of potable water and means for refuse disposal, the provision should be planned so that so that they are in air eating the premises should be clean, free from smoke and other pollutants and that the providing area should contain potentials or actual breeding ground for rat, mice, flies and other harmful pest. (Kgwarre, Mariram and Maharaay, 2009).

The further food was to be carried and the more often it has to be handled, the greater the chance of it becoming contaminated. Ideally, premises should be arranged so that food can be more in an orderly progression from the point of delivering to the areas uses for preparation, cooking, serving,

washing up etc. A food delivering entrance that is separate from the customer's entrance is desirable. The owner should open on to a yard so that delivery rooms can drive right up to the door. The yard should have one entrance as well as a drained surface, rained and caused accommodation for regime bins, and well maintain drains.

The store for raw food materials should be close to the food delivery entrance. It should be cool, dry, well ventilated and use enough to allow for orderly storage. While that storing prepared food should not be far from the dining hall or eating room. The store entrances and vent openings must be fly-propped with removal 1.55mm (16mesh) screen over windows and doors with controlled temperature for each.

Nkwa, (2009) stated that the surroundings of an eating house should be well drained and free from refuse or any form of filth. It should be either concerted or pones in such a name to enhance cleaning.

Marcel D, (2020) noted that food safety can help your restaurant to maintain profits and minimise wastage as it acts as a benchmark for quality control. Much less food will be wasted once your staff are fully trained in food safety and hygiene best practices. Two additional benefits are that your kitchen will become more cost-effective, and your reputation as a provider of high-quality food will improve.

All areas within an eating house should have floor that is built with materials that can facilitate cleaning. Damage or even surface and open joint should be required. The wash must be smooth.

Kitchen: Wallace, Neal and Last (2008) noted that the kitchen should never be used as a thoroughfare to other parts of the building. In planning, the chief factors to consider are the workflow, the nature of the work and the portion of windows, doors and drains. The floor, should be built of materials that can easily be cleaned. The wall most times has a smooth surface that can be easily be cleaned as well, the ceilings should be constructed of smooth, improving materials and must be free from dirt and cobwebs. The door and windows should fly-proof and fitted with metal gauze if suitable to include rodents. The window should be sizeable enough as to facilitate adequate ventilation and proper lighting.

Stores: Cichy (2008) assented that every eating houses should have separate stores for raw food as well as cooked food in order to avoid cross contamination. Like the kitchen, the store should be constructed with material that can be cleaned easily on the floor, wall and ceiling. The doors and windows should be rodent and fly-proofed.

Working areas: It is different to formulate a general rule about the amount of space required, but working areas should be large enough to allow employees to carry out the work comfortably

without feeling crowded at table or having to queue for the large that extra walking is necessary. Employees will tend to neglect practices if they involve additional, waiting or working uncomfortably close to colleagues (Jacob,1999).

Washing-up rooms: Ideally there should be two washing-up rooms or areas - the pot-wash for heavy kitchen utensils that are likely to be greasy and an area from washing the glasswork, crockery and cutlery used by the customer's. Customers' glass wine, crockery and utensils should not be in the pot- working sinks.

Both the pot-wash and the washing-up area should be at a distance from anywhere where food is prepared or stored sinks well for working utensils should be used for the preparation of vegetables, rent of fish, or for hand-washing.

Crockery store: This should be accessible from both the kitchen a d dining-room. Plates, cups, surcers, dishes, basins, and the crockery should be stored in clean, dry cupboards or in a separate room, protected from dust, insects and other semic of contamination.

Toilet and checkroom: Separate toilets should be provided for employees and customers, although this may not be possible in very small establishment, toilets for catering workers should have to go more than 30 meters from the room where he or she is working to reach them. The toilet should be well lit and separate from any workroom or dining room by an interviewing ventilated space. Fully equipped hand wash-basins are required in areas near the toilet. A plentiful supply of warm water, soap, nail brushes and disposable towels should be available. Hot-air hand dryers should be well maintained. The use special soaps containing bactericide can be harmful in helping to promote the idea of clean and 'bacteria-free' hands.

Cloakroom or worker facilities are essential for the staff to keep any clothing and personal belonging not being worn during working hours.

Dining rooms: It is difficult to suggest precise standards of space needed for dining-rooms. This depends on the total member of meals served during a working period, the number of meal served at peak times when the dining room is full; the type of meal provided, and type of menu. It is not durable for customers to be crowded together in the dining room.

Waiters and waitress need to have clear access to every part of each table so that dirty dishes and cutlery can be removed promptly, and so that the tables can be kept clean.

NATURE OF EQUIPMENT AND THE QUALITY OF FOOD

Equipment for food preparation should be kept in good condition and be frequently cleaned and disinfected. Silce and mixers should be cleaned thoroughly after each use. At the end of working

periods, all machines and similar equipment should be cleaned in accordance with the manufacturer instructions. Raw meat and cooked meat must never be preserved on the same machine without thorough cleaning in between. Utensils should not have wooden components or handles. They should be made of metal or other nonabsorbent materials.

Crockery, cutlery, pots and pans - Rosary (1999) said if these items are to be washed by hand, twin sinks should be used, one for washing and one for rinsing. This ensures efficient rinsing. Water containing detergent and rinsing water should be changed frequently. The rinse water will have no disinfecting effect unless it is kept at 75 - 82^o c. This temperature is too high for bare hands, so baskets will be needed. Nylon brushes, washed and thoroughly dried between each use are preferable to cloths. Cutlery should be machine-washed at a minimum temperature of 60^o c with a final rinse of 82^o c.

Surfaces - World Health Organization (2000) said preparation should be impermeable, and constructed so that they can be cleaned thoroughly. Wooden surfaces should not be used. Cutting slabs and chipping blocks or boards should be made of polypropylene or a similar material. The supporting structures must be maintained to a high standard and should be regularly inspected and cleared. Tables should stand away from the wall or be built into the walls. The junction of the table and the wall should be covered and sealed.

Food preparation storage surfaces should be kept clean at times. It is important that surfaces in direct contact with food are clean and dry before use, particularly if the food being prepared is to be eaten without further cooking (WHO, 2000).

Blum D, (2012) who stressed that Conventional food preservation techniques like drying, freezing, chilling, pasteurization, and chemical preservation are being used comprehensively throughout the world. Scientific advancements and progress are contributing to the evolution of existing technologies and innovation of the new ones, such as irradiation, high-pressure technology, and hurdle technology. The processing of food preservation has become highly interdisciplinary since it includes stages related to growing, harvesting, processing, packaging, and distribution of foods. Therefore, an integrated approach would be useful to preserve food items during food production and processing stages.

Sinks - Sink units should preferably be made of stainless steel. They should be designed and sited so that any cleaning and maintenance needed behind or below the sink can be easily carried out.

Refrigerators - Refrigeration facilities should be as far away as possible from stoves and other sources of heat. Whatever the size, a kitchen requires proper refrigeration facilities for temperature-controlled storage of foods. If possible, they should be separate storage for raw and cooked meats. Refrigerators should be cleaned and defrosted regularly.

Vending machines - These used for perishable foodstuffs should be cleaned daily in accordance with the manufacturer's instruction. Their cleaning should be specifically allocated to a member of staff. Details of the cleaning instructions should be displayed next to the machine and should be strictly followed.

METHODOLOGY

This chapter gives the framework in which methodology is based, such as research design, the population of the study, the sample size and sampling techniques, data collection instrument, validity and reliability of instrument, data collection procedure and method of data analysis.

Research Design

This study adopted a descriptive survey design to answer the research questions of this study. The researcher selected a descriptive survey design since it attempts to describe the characteristics of the variables of this study (Mugenda and Mugenda, 2003). According to Robson, (2002) asserts that descriptive research design studies have advantages in that they may be adopted to collect information that can be generalized from all population and that they provide relatively simple and straight forward approach to the study of values, attitudes, beliefs and motives.

The underlying principle of social survey research is that the consensus of individual opinions of the sample population on a particular subject or problem is expected to provide solution to the problem studied. These are in line with the nature of this study; which is to seek the opinion of the sample population of male and female on the subject matter and then generalized it about the whole population.

Population of the Study

The Population of the study is 110 which consist of the involvement of Environmental Health Officers, Environmental Health Technicians and other health professionals in Calabar South Local Government Area.

Initially, the study was intended to cover the entire health workers and Environmental Health professionals of Calabar South Local Government Area, but due to the volume of work and the

time and financial constraints, this work had to be restricted to the above mentioned health practitioners in Calabar South Local Government Area.

Calabar South is a Local Government Area of Cross River State, Nigeria . Its headquarters are in the town of Anantigha. It has an area of 264 km² and a population of 191,630 at the 2006 census. It has a latitude of 04°58'36"N and longitude of 08°20'18"E. The people living here speak English, and Efik.

Sample and Sampling Technique

The sample for the study consisted of 110 respondents which were randomly selected from Environmental Health Officers, Environmental Health Technicians and other health professionals respectively from Calabar South Local Government Area, via male and female. The purposive sampling technique which is a non-probability sampling was used for the study. Balloting was also adopted to give equal chance to everybody in the sample space to be selected and participate in the investigation.

Data Collection Instruments

The research instrument adopted for the study was a set of questionnaire which consisted of 24 item questions. The questionnaire was divided into two sections:- Section "A"- consists of 4 item questions on Demographic Data while section "B"- consists of 20 item questions on the "Assessment of Food Safety Standards of Eating Housing in Calabar South Local Government Area". The 110 copies of the questionnaire were administered personally to the selected categories of health workers and patients from the above named institution, the other instruments also adopted were interview and documentary evidence.

Validity and Reliability of Instruments

Validity refers to the degree to which an instrument measures what it is intended to measure or the extent to which a true and accurate measure of a trait is probably. Validity of the research instrument was determined through consultation with experts and the content validity were established by using experts in the Department of Environmental Health and the Supervisor. The experts and the supervisor certified that the instrument was face and content valid and could then

be used for the study. The corrections and suggestions of the experts and the supervisor led to a modification of some items in the questionnaire.

Reliability refers to the degree of consistency that an instrument demonstrates in measuring what it does. The reliability of the instrument was tested by the consistency of response, which was tested using pilot testing. That is, the researcher gave some group of respondents the questionnaire to complete after a week interview, the same questionnaires was given again to the same group. The scores for the questionnaire administered were collated. This method gave the instrument reliability over time.

Data Collection Procedure

In the data collection procedures, 110 copies of the questionnaire were administered to Environmental Health Officers, Environmental Health Technicians and other health professionals respectively from Calabar South Local Government Area bringing the total number of the questionnaire to 200 copies. The completed 200 copies of the questionnaire were collected; representing 100% were analyzed to facilitate a precise result of the investigation.

Method of Data Analysis

The data collected were presented first on a tabular form to show the various questions from which the data were collected. The analysis of the data were firstly descriptive in nature and were statistically presented in chi square analysis which revealed the respondents view on each question, conclusion were drawn on each analysis while testing the hypotheses in chapter four using the chi-square statistical analysis

$$X^2 = \sum \frac{(O_i - e_i)^2}{e_i}$$

RESULTS AND ANALYSIS

This chapter is principally focused on the presentation of demographic characteristics of respondents/data obtained from the field through the questionnaires and the analysis of the data obtained in relation to the hypotheses postulated. The demographic characteristics of the respondents are presented in simple frequency and percentages table with the data are presented using dichotomous table and analyzed using chi-square (X^2) test of statistics.

4.1 PRESENTATION OF FREQUENCY DISTRIBUTION

Table 4.1: Showing the demographic characteristics of respondents

VARIABLES	NO OF RESPONDENTS	PERCENTAGES
SEX		
Male	26	24%
Female	84	76%
Total	110	100%
AGE		
18-22 years	12	11%
23-27 years	35	32%
28-32 years	31	18%
33-37 years	20	18%
38-42 years	7	6%
43 years and above	5	5%
Total	110	100%
MARITAL STATUS		
Single	78	71%
Married	30	27%
Seperated	2	2%
Divorced	-	-
Total	110	100%
ACADEMIC QUALIFICATION		
No formal education	4	4%
FSLC	10	9%
SSCE	15	14%
ND/NCE	41	37%
HND/B.Sc	40	36%

Master and above	-	-
Total	110	100%

According to the data on demographic characteristics of respondents as shown in table 4.1 above, sex distribution revealed that 26 (24%) were male while 84 (76%) were female. In terms of distribution in age in years, 12 (11%) were between 18-22 years; 35 (32%) were between 23- 27 Years; 31(28%) were between 28-32 years; 20 (18%) fell between 33-37 years. Similarly, 7(6%) were between 38-42 years while 5(5%) fell between 43 years and above.

Furthermore, data obtained on marital status reveal that 78(71%) were single; 30(27%) were married; 2(2%) were separated while there was non- divorced, in terms of educational qualification, out of a total of 110 respondents 4(4%) had no formal education; 10(9%) acquired First School Certificate of Education. In the same vein, 41(37%) had ND/NCE; 40(36%) backed HND/B.Sc and non-acquired a master degree and above.

Hypothesis 1 : There is no relationship between the structure layout of eating houses and the safety of food.

Table 4.2: Showing the relationship between the structural layout of eating houses and the standard of food.

Structural layout	Food Safety		
	Standard	Substandard	
Good	60 (47.3)	20 (32.7)	80
Poor	5 (17.7)	25 (12.3)	30
Total	65 (65)	45 (45)	110

Source: Field study (2016)

To get the expected frequency: $\frac{CT \times RT}{GT} = \frac{65 \times 80}{110} = 47.3$

$$GT = 110$$

$$df = (c-1) (r-1)$$

(2-1) (2-1)

(1) (1)

1 df at 0.05 = 3.84

$$\begin{aligned}
 X^2 &= \sum \frac{(O_i - e_i)^2}{e_i} \\
 &= \frac{(60 - 47.3)^2}{47.3} + \frac{(20 - 32.7)^2}{32.7} + \frac{(5 - 17.7)^2}{17.7} + \frac{(25 - 12.3)^2}{12.3} \\
 &= \frac{161.29}{47.3} + \frac{161.29}{32.7} + \frac{161.29}{17.7} + \frac{161.29}{12.3} \\
 &= 3.4 + 4.9 + 9.1 + 13.1
 \end{aligned}$$

$$X^2_{\text{Cal}} = 30.5$$

Decision:

If X^2_{Cal} is greater than X^2 tabulated, reject H_0 : But if X^2_{Cal} is less than X^2 tabulated, accept H_0 : therefore since X^2_{Cal} 30.5 is greater than X^2 tabulated 3.84, reject H_0 : thereby accepting the H_1 : meaning that there is significant relationship between the structure layout of eating houses and the safety of food.

Hypothesis 2: There is no relationship between the type of equipment and the quality of food in eating houses.

Table 4.3: Showing the relationship between the condition of equipment and the quality of food in eating houses.

Condition of the equipment	Quality of food		
	Wholesome	Unwholesome	
Hygienic	81 (72)	9 (18)	90
Unhygienic	7 (16)	13 (4)	20
Total	88 (88)	22 (22)	110

Source: Field Study (2016)

To get the expected frequency: $\frac{CT \times RT}{GT} = \frac{88 \times 90}{110} = 72$

GT 110

df = (c-1) (r-1)

(2-1) (2-1)

(1) (1)

1 df at 0.05 = 3.84

$$X^2 = \sum \frac{(O_i - e_i)^2}{e_i}$$

$$= \frac{(81 - 72)^2}{72} + \frac{(9 - 18)^2}{18} + \frac{(7 - 16)^2}{16} + \frac{(13 - 4)^2}{4}$$

$$= \frac{81}{72} + \frac{81}{18} + \frac{81}{16} + \frac{81}{4}$$

$$= 1.1 + 4.5 + 5.1 + 20.3$$

$$X^2\text{Cal} = 31$$

Decision:

If X^2 Cal is greater than X^2 tabulated, reject H_0 : But if X^2 Cal is less than X^2 tabulated, accept H_0 : therefore since X^2 Cal 31 is greater than X^2 tabulated 3.84, reject H_0 : thereby accepting the H_1 : meaning that there is significant relationship between the the type of equipment and the quality of food in eating houses.

DISCUSSION OF FINDINGS

After a careful analysis of the above data, it was discovered that there is significant relationship between the structure layout of eating houses and the safety of food as proved in hypothesis 1. This is in line with Marcel D, (2020) who noted that food safety can help your restaurant to maintain profits and minimize wastage as it acts as a benchmark for quality control. Much less food will be wasted once your staff are fully trained in food safety and hygiene best practices. Two additional benefits are that your kitchen will become more cost-effective, and your reputation as a provider of high-quality food will improve. The basic principles of food structure and layout should be understood by every management of eating houses on the play a contributive part in designing kitchen and work areas. Unfortunately, many catering premises are not purpose-built or in the most suitable places, so careful planning is needed to make the most of what is available. Finally, it was affirmed that there is significant relationship between the type of equipment and the quality of food in eating houses as proved in hypothesis 2. This is in line with Blum D, (2012) who stressed that Conventional food preservation techniques like drying, freezing, chilling, pasteurization, and chemical preservation are being used comprehensively throughout the world. Scientific advancements and progresses are contributing to the evolution of existing technologies and innovation of the new ones, such as irradiation, high-pressure technology, and hurdle technology. The processing of food preservation has become highly interdisciplinary since it includes stages related to growing, harvesting, processing, packaging, and distribution of foods. Therefore, an integrated approach would be useful to preserve food items during food production and processing stages.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter gives the concluding part of the research work after the investigation was completed and so it requires the summary, conclusion, recommendation, Bibliography and appendices.

Summary

The study investigates the Assessment of Food Safety Standards of Eating Housing in Calabar South Local Government Area. The instrument used was the questionnaire which was distributed to 110 respondents for data collection and analysis on the subject matter. The specific objectives,

research questions and hypotheses were formulated and tested at 0.5 level of significant and use of chi-square test statistics. The results of the data analyzed showed;

1. There is significant relationship between the structure layout of eating houses and the safety of food.
2. There is significant relationship between the type of equipment and the quality of food in eating houses.

Conclusion

After a step by state analysis of the data should during the field study, it was necessary to conclude that there is a relationship between the structural layout of eating houses and the safety of food, there is no relationship between the condition of the equipment and the quality of food, there is a relationship between the type of environment and the safety of food in eating houses and there is a relationship between the health of a personnel in eating houses and the safety of food. From the collected and analyzed, these are statements of facts that should therefore hold in all circumstances where comparison of these kinds are required.

Recommendation

Based on the findings and conclusion made so far, the researcher wishes to recommend that the following measures should be adopted in order to avert or minimize the problems associated with unsafe food offered for sale in eating houses.

1. Laws should be enacted and properly enforced on the proper layout of eating houses in order to minimize the distances raw food materials are to be passed from one unit to another.
2. Equipments used for preparation and consumption of food should be kept in hygienic condition and at all times.
3. Both the indoor and outdoor environment of eating houses should be free from all manner of waste materials that may attract pests that will contaminate food thereby undermining its safety.
4. Workers in eating houses should carry out periodic Medical examination in order to detect early cases of infections as well as treat already established ones.
5. Workers found to be ill should be banned from handling food until he/she gets well.
6. Periodic inspection of eating houses should be carried out in order to face out these with short comings.
7. More environmental health officers should be trained employed and empowered in order to carry out inspections.

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