

Evaluation of Food Safety and Hygienic Practices in the Tourism Industry: A Case Study of Some Selected Restaurants in the Kumasi Metropolis, Ghana

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Abstract *In Ghana, although a number of regulations are in place to guide caterers in their operations, hygienic practices among restaurants in the Kumasi Metropolitan area are inadequate. The hospitality industry alone accounts for about 44% of all the reported food-borne illness outbreaks. The main objective of the study was to assess and evaluate the extent at which licensed restaurants in the Kumasi Metropolis observe food safety and hygienic practices regulations in food provision. Fifty (50) respondents were drawn from the population under study, specifically from staff, managers and regulatory bodies including the Metropolitan Assembly. Primary data was collected from the three groups. Questionnaires were administered and in-depth interview was conducted. The Statistical Package for Social Sciences (SPSS) was used to analyze data collected from the respondents in the survey. The study showed that customers in the selected restaurants were very much satisfied at the extent by which restaurants in the Kumasi Metropolis observe and apply the food safety and hygienic practices. It was also revealed that there is adequate evidence to show that formal education and professional training have a significant impact on food safety and hygienic practices of caterers and restaurant managers in the tourism industry in the Kumasi Metropolis.*

The study recommends that restaurants in the metropolis should be encouraged to sponsor their workers to enroll in some professional programmes to acquire more knowledge for the purpose of practicing food safety and hygiene in the restaurant business. It is further recommended that regulatory bodies should improve their performance by maintaining high standard of food hygiene.

Keywords: *Food Safety, Hygienic Practices, Tourism, Restaurants, Kumasi*

INTRODUCTION

Hospitality related activities in the tourism industry encompass a broad spectrum of services such as hotel/motel accommodation; bed and breakfast; food provision by restaurants and private street food vendors; transportation by tour agencies/public transport/car rental agencies, private car owners; money exchanges and/or transfers by financial

institutions (e.g., banks and forex bureaux); and attraction sites/entertainment venues. Arguably, some services such as food and accommodation are rated relatively higher than others on the list of needs tourists must have for greater comfort and satisfaction. In this regard, most tourists would pay premium price to enable them have access to facilities that would assure their safety and comfort (Foskett et al, 2008). Clients of food service operations attach great

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importance to the sanitary conditions of the premises and surroundings that they patronize (Rande 1996). Customers appraise the hygienic conditions of food services facilities in various ways including the presentation, personal hygiene and cleanliness of the workers; the general state of repair or disrepair of the facility; or from the condition of the utensils, plates, cups and cutlery that they are served with. This virtual obsession with hygienic practices derives from consumers misgivings about taking unsafe material into their bodies that could harm them from within, and put their lives in jeopardy.

Due to the potential health hazards and economic burden posed to individuals and countries by the consumption of unhealthy foods, issues with food quality and safety remain as foremost preoccupations for the hospitality industry worldwide as well as governments and their regulatory agencies (Tieyiri, 2008). Food intake is always associated with risks; because a food may appear good to consumers while in actual fact, it may be contaminated with harmful components (e.g., pathogens and toxicants) that are not detected by consumers in the normal procurement and use of food. Consumers thus rely on governments and regulatory agencies to protect them from unsafe foods. If the perceived risks are low, the food is considered to be safe and acceptable for consumption (Bannion, 1995). Thus, food safety has been defined by the Food and Agriculture Organization (FAO, 2003) as “the assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use.” It is the field of science that teaches food handling, preparation and storage practices to preclude food-borne illnesses (Satin, 2008). Food hygiene on the other hand is the set of food practices that consumers associate with healthy living and the preservation of health (Foskett et al 2008; Bloomfield et al., 2007). Food hygiene is one of the fundamental topics that all foodservice staff/personnel must study, understand and implement in their daily practices. The proportion of food-borne illnesses affecting humans that is imputed to the food service industry is high and the cost to human life is substantial. Thus food safety remains a source of persistent concern for food service providers and consumers (Scott, 1998). The consuming public is becoming increasingly aware of the relatedness of certain types of illnesses to food infections. Diarrhoeal diseases such as dysentery and cholera have been classified as the second foremost cause of deaths in children under five years old, killing about 1.5 million children worldwide on a yearly basis (WHO, 2005). Diarrhoeal diseases cause severe dehydration and loss of essential minerals in the body, and their high prevalence particularly in developing countries takes a heavy toll on human lives (WHO 2005; Knowles, 2002).

All food service operations can potentially cause food borne illnesses when proper sanitary practices are ignored.

Sanitation entails the establishment and maintenance of healthful state of affairs, as well as the handling and preparation of wholesome food in such a way as to obviate contamination with pathogenic bacteria and other harmful substances (Rande, 1996). All things being equal an effective sanitation programme in any foodservice establishment should be capable of protecting and assuring the wellness and safety of the consuming public.

Maintaining sanitary conditions in a food service operation is not an option but necessary and mandatory, and there are laws, regulations, policies and guidelines in place to ensure compliance. National Governments regulate the food service industry through various regulatory agencies. In Ghana, such agencies that enforce policies, regulations and laws enacted by the government include the Ghana Tourist Board (GTB), Environmental Protection Agency (EPA), Food and Drugs Board (FDB), Standards Board and various local bodies. Wholesome food procurement and use by the food service industry in Ghana is managed through licensing and regular inspections as mandated by the food inspectorate and regulatory agencies. In spite of these safeguards to inform as well as regulate safe food hygiene practices, food-borne illnesses continue to be a menace to society (Tieyiri, 2008). Food safety regulations require food service enterprises to conduct their practices in a safe and hygienic way. Nevertheless, the reality is that food service operators show varying degrees of compliance with the food laws that guide safe and hygienic food practices, particularly in developing countries such as Ghana. Various factors contribute to this lackadaisical approach to compliance, such as: the level of education (or uneducation) of food service operators and their staff, inadequate regulatory agency personnel and the tools they require to conduct regular inspections and enforcement efficiently, remote locations of some of these businesses, and unprofessional practices by some of the operators and regulators. Thus, although a number of regulations are in place to guide caterers in their operations, hygienic practices among restaurants in the Kumasi Metropolitan area are inadequate (Tieyiri, 2008). This deficiency was attested to by the Regional Coordinator of the Kumasi Metropolitan Assembly (KMA) at a joint workshop held in Kumasi by the Ghana Tourist Board and Ghana Food and Drugs Board for hoteliers, restaurant operators, chop bar associations and other stakeholders of the hospitality industry. There are also inadequate skilled personnel in most licensed restaurants and other points of the food chain that have the requisite knowledge on food safety and sanitary practices (Knowles, 2002). This state of affairs does not augur well for Ghana's Tourism Development that has as its primary objective to make tourism the leading foreign exchange earner in the country. For Ghana's tourism to be competitive, it is crucial that quality tourism products and services are provided to make the sector attractive to clients worldwide. Several studies have been conducted on street foods in Ghana and

they have affirmed emphatically that most street foods sold in Ghana are prepared under unhygienic conditions (Mensah et al., 1999). These prior studies have invariably focused on microbial proliferation and metabolism in food with little attention paid to actual unhygienic practices, thus leaving a void in this very important area (Rande, 1996).

According to research, the hospitality industry alone accounts for about 44% of all the reported food-borne illness outbreaks. Based on the problems described above, this study was undertaken to evaluate the hygienic practices of caterers in the restaurants in the Kumasi Metropolis, for the safety (or lack of it) of the foods they prepare for human consumption.

METHODOLOGY

This chapter details the methodological approaches employed in the design, sampling and data gathering process undertaken during the research to arrive at the objectives of the research.

Research Design

The study adopted an exploratory method to access information on food safety and hygienic practices of some selected restaurants in Kumasi Metropolis. Sarantakos (1998) sees exploratory research as a research undertaken in order to provide a basis for further research, to formulate hypothesis or to operationalize variables whilst in other cases, it is undertaken to gain information on the issue per se. In this case study, the researcher wanted to gain information on the issue at stake. The study however, combined qualitative and to some extent quantitative research to solve the problem.

Target Population

Managers and staff of the selected restaurants, customers to the selected restaurants and regulatory bodies were targeted. In all 5 restaurants in Kumasi were listed for the study. The proprietors own the restaurants and have the license (permit) to operate the business after it had been inspected. There is however the assumption that they are aware of the hygienic regulations provided by the regulatory bodies. Staff were contacted because they prepare and serve the food to customers; therefore they were supposed to comply with the laid-down regulations provided by the various regulatory bodies. Regulatory bodies were also contacted because they were to ensure that the rules and regulations provided for were being complied with, implemented and practiced by workers.

Sample Size and Sampling Techniques

A sample of seventy-three (73) respondents was drawn from the population under study, specifically from staff, managers, customers and regulatory bodies including the Kumasi Metropolitan Assembly, Environmental Protection Agency (EPA) and Ghana Tourist Board (GTB). The sample size of 73 respondents consisted of 15 restaurant workers, 5 restaurant managers, 50 customers and 3 Officials from the regulatory bodies. This was based on non-probability sampling, specifically, the purposive sampling. This is a type of non-probability sampling where a sample selected in a deliberative and non-random fashion to achieve a certain goal. In choosing a sampling method for the research, the researchers' interest lied in the method that best answers the research question. The questions therefore influenced the objectives on which the methodology was based. Purposive sampling was used with the help of a questionnaire in gathering data on food safety and hygienic practices (Godambe 1982). Robbins et al. (1969) used a questionnaire as a systematic way to find informants in one of their sociological studies. The researchers asked the respondents what would denote the subject in question (acculturation) and ran their responses through a data reduction technique to determine which qualities acculturated people.

Sources of Data

The main sources of data were Primary and secondary.

Primary Data

Primary data was collected from three groups of people namely the workers, managers or proprietors and regulatory bodies. This involved administering questionnaires for the restaurant managers, restaurant workers and the customers as well as an in-depth interview for the regulatory bodies. Personal observation of some issues on performance indicators, including hygienic practices such as personal hygiene, kitchen and food hygiene was employed.

Secondary Data

Secondary data consisted of documentary sources including journals, magazines, bulletins and unpublished thesis, which consists of major aspects of the topic or written by authors interested in the topic. Other documents were collected from some of the regulatory bodies. For instance, the Environmental Permit (EP) must be obtained from the EPA in order to commence or implement an undertaking (e.g. restaurants, hotels in Ghana).

Research Instruments

Questionnaires

Questionnaires were employed to conduct the research. Workers, managers or proprietors and customers of the restaurants in Kumasi Metropolitan Assembly were given questionnaires to answer. This is a record of the questions to be asked the respondent in its administration with appropriate instructions indicating which questions are to be asked, and in which order. This was chosen due to the fact that they are very cost effective and easy to analyze. A likert scale was used in the questionnaire design process to rate the responses of the area under study.

The questionnaire first undergoes reliability test using Cronbach's alpha to ensure internal consistency of the data. A high degree of stability indicates a high degree of reliability of the questionnaire, which means the results are repeatable. Sometimes the reliability method makes the instrument, to a certain degree, unreliable (Joppe, 2000). This method may sensitize the respondent to the subject matter, and hence influence the responses given.

Cronbach's alpha reliability coefficient normally ranges between 0 and 1. However, there is actually no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale.

George and Mallery (2003) provide the following rules of thumb: “ $\alpha > .9$ – Excellent, $\alpha > .8$ – Good, $\alpha > .7$ – Acceptable, $\alpha > .6$ – Questionable, $\alpha > .5$ – Poor, and $\alpha < .5$ – Unacceptable” (p. 231). While increasing the value of alpha is partially dependent upon the number of items in the scale, it should be noted that this has diminishing returns. It should also be noted that an alpha of .8 is probably a reasonable goal. It should also be noted that while a high value for

Cronbach's alpha indicates good internal consistency of the items in the scale, it does not therefore mean that the scale is uni-dimensional.

Interviews

One-to-one interview technique was adopted for the regulatory bodies. An interview guide was designed for to collect the data from these respondents. The researcher administered the interview herself and allowed the respondents to fill the questionnaire in her presence. This enabled the researcher to clarify questions that the respondents find it difficult.

Observation

The observation was also adopted for the collection of preliminary question before the final drafting of the questionnaire. This approach gave the researcher opportunity to find out more information from the facilities visited.

Data Analysis Techniques

The Statistical Package for Social Sciences (SPSS) was used to analyse data collected from the respondents in the survey. The researcher employed descriptive statistics such as frequencies, bar charts, pie charts to analyse the data collected.

RESULTS

This chapter begins with the analysis of data collected in the selected restaurants in the Kumasi Metropolis and discusses the findings of the research respondents. Table shows respondents in the Selected Restaurants Selected for the study.

Table 1: Respondents Interviewed

Name of Restaurants	Restaurant Managers	Restaurant Staff	Customers	Sample Size
Grace Baptist	1	3	10	10
Kumasi Technical University	1	3	10	10
Jofel	1	3	10	10
Royal Park	1	3	10	10
Queens Gate	1	3	10	10
Total	5	15	50	70

Source: Researcher's field data 2017

From the Table 1 it shows that One (1) manager, three (3) restaurant staff and ten (10) customers were interviewed on each the restaurant visited.

Analysis of Selected Restaurant Workers Educational Level of Staff

The study review that the few of the sample respondents had a tertiary level of education and majority of

the staff had followed by advanced catering and National Vocational Training Institute (NVTI) programmes but only few had other levels of education. This means that majority of the sampled respondents taken in the restaurant industry had full knowledge about the food safety and hygienic practices.

Knowledge of Food Safety and Hygienic Practices

Majority of the staff selected display high level knowledge of the food safety and hygienic practices. Most of the respondents acknowledge having learnt from their individual institutions and also have been receiving internal practical training on the above subject.

Trainings and Seminars on Food Safety and Hygienic Practices

Most the respondents interviewed stated that they have attending training and other workshop organized outside the restaurants premises and they taught all these workshops have been beneficial to them. There were only few of the staff selected declined that they have had the chance to attendance seminars on such courses due fact that their supervisors were rather chosen for the training.

Official Visit by Regulatory Bodies

The selected staff interviewed stated that the regulatory bodies normally visit the premises for their routine checks and inspections and the notices have been communicated to us by management so we are always alert of their visits, but all the respondents were not able to indicate frequent interval.

Satisfaction of the Regulatory Bodies' Standards

All the respondents selected indicated they have always matched to the standards set by the regulatory with the reason that their institutions have received various awards from these regulatory bodies.

Washing of Hands and Equipment

The respondents indicated wash of hands and cleaning of equipment are routine task in the day-to-day running of the restaurants business therefore are mindful effect of contagious diseases that food poison can cause. They further indicated it is punishable offence by management if you do not keep your utensils and glass clean during your mis-en-plus period. With regard to the cleaning of floors the respondents stated they have a routine duty roster which is been followed by the staff of the restaurants regularly.

Knowledge of Their Managers on Food Safety and Hygienic Practices

The respondents selected were of view that their managers had a high level of knowledge on food safety and its

preparations. The respondents emphasized that even though the level of knowledge on food safety is good but the managers should also be made to frequently attend seminars on food safety since they in hurry of instructing them to attend food safety workshops.

Analysis of Selected Manager Interviewed

Educational Level

The study shows that all the respondents had tertiary education and other food related certificates and have attended a number of food safety and hygienic standard courses.

Knowledge of Food Safety and Hygienic Practices

The study shows that all the five respondents selected from various restaurants have a high level knowledge about the food safety and hygienic practices. The respondents indicated that before they are employed by the various restaurants they had to exhibit a high level knowledge of food preparation and its safety since it is one of the basic requirement that a manager of restaurant facility should have to qualify them as managers.

Training and Workshops on Food Safety and Hygienic Practices by Regulatory Bodies

The respondents selected all agreed that the regulatory bodies had performed those tasks satisfactorily in the sense that they always insist that if your staff do not have the basic knowledge of food safety and good practices then the facility cannot maintain the restaurant grading that the facility had been licensed by the Ghana Tourist Board. The respondents indicated monthly, quarterly and half yearly training programmes by various programmes as a good indication of industrial practices. This was done to ensure good safety and hygienic practices.

Registration of Facilities with Regulatory Bodies

All the managers interviewed in each of the restaurants agreed that they have registered their restaurant with the regulatory authorities such as Kumasi Metropolitan Assembly and the Ghana Standard Board (GSB). They also confirmed that officials of the regulatory bodies visit them frequently to ensure the policies set were being observed and placed checks on the food safety and hygiene practices.

Fulfillment of Standards of Restaurant Requirement set by Regulatory Bodies

The managers interviewed indicated that they were aware of the standards set by the regulatory and they have made these standards as part of their rules and policies of the working documents which is available to staff. The managers also stressed that due to the importance of these standards, they normally incorporate these rules into their in-house training activities so that it would be observed by all staff in their daily tasks.

Keeping of Restaurant Environment Clean

The managers of the selected restaurants stated that they cleaned their kitchen premises after a day's work to ensure a perfect hygienic environment. The respondents further stated that they also keep their surroundings very clean to reduce the risk of food spoilage and food poisoning and removes materials and food that could provide harbor and nourishment for pest.

Provision of Staff Uniforms

All of the managers interviewed indicated that they provided staffs with a pair of uniforms but the maintenance of the uniforms are the responsibility of the individual staff, but some of the managers interviewed said that the supervisor in the various sections are also tasks to cleanliness and proper dress up of staff.

ANALYSIS OF RESPONDENTS FROM REGULATORY BODIES

Table 2: Regulatory Bodies Interviewed

Name of Regulatory Body	Senior Staff/Manager's Interviewed
Environmental Protection Agency	1
Kumasi Metropolitan	1
Ghana Tourist Board	1

Source: Field work, 2017

Restaurant Business in Ghana

The officials of the Environmental Protection Agency (EPA) and Kumasi Metropolitan Assembly (KMA) were of the view that any establishment fitted for restaurant business in Ghana must meet the entire necessary requirement required by the law. It may be open air or indoors and occupy a whole building or part thereof. The environment protection

agency (EPA) and Kumasi metropolitan Assembly (KMA) did not respond appropriated to this question but were of view Ghana Tourist Board is responsible for the efficient regulation of restaurant business in Ghana.

Minimum Requirement to Operate a Restaurant

The respondent (GTB) was of the view that to qualify for an operational license from the Board, each of the under listed facilities and services must be provided by establishment. These minimum requirements are:

The establishment should provide the following in the dining rooms: satisfactory ambiance/décor, sitting area of suitable size, comfortable table seating and spacing cruet sets; condiment/table linen, table ware, crockery, glassware, napkin and cutlery; adequate natural ventilation; facilities of washing of hands; washroom facilities, adequate lighting; menu card/list and drink/wine list; at least one literate qualified waiter; food presentation taste, texture, appearance; preparation of bill and value for money.

The respondent further stated that the establishment has suitable equipment in the kitchen and preparation area to include at least cooking equipment and preparation equipment. On the staff facilities, changing room with bath/shower and toilet facilities, first aid box as well as a secure locker for the staff. There should be a store facility, washing up area and guest toilets, office premises and adequate security measures must be instituted and maintained.

The respondent from the EPA was of the view that they did not set requirement for the restaurant but they only ensure that the location of the restaurant would not cause any environmental problem during its operations and therefore grant only feasibility report to the establishment to pave the way for GTB assessment criteria. The KMA said they are concern with the health status of the workers, the environment under which the foods are prepared in the restaurants and also the operating permit of the restaurants.

Criteria for Grading Restaurant in Ghana

The respondent stated that the criteria for assessing restaurant before grading them are based on the following: the nature of the dining rooms which varies from satisfactory to luxury according to grade level, reception or lounge and motorable access road which are mandatory and optional for the dependent on the grade type; car park should have a total capacity of 25% to 75% of the area; and other mandatory facilities and service such as guest toilets, level staff facilities, storeroom, a degree of kitchen equipment, different size of cold rooms, utilities for fire-fighting and alternate safe lighting, medical status of the staff, various

level of bar operations, entertainment and security level of the restaurant. The respondent said that restaurants could be licensed under grade 1, grade 2 and grade 3 of which grade one is the highest among the grading criteria.

Qualification for Working in Restaurant

On the issue of staff qualification, the respondent (GTB) was quick to say that there are two types of staff in the restaurant namely skilled and unskilled labour and this vary from restaurant to restaurant. The respondent was of the view even though there is minimum qualification set by the Board but the minimum should be basic certificate or on the job training can also make staff a skilled staff but they should be healthy.

Health Requirement for Staff

The respondents (GTB and KMA) stated that before licenced or permit is given an establishment to operate as restaurant facility all the staff must satisfy a minimum medical requirement that they fit to prepare and handle food. It is mandatory for the management to have monthly medical report from a qualify heath inspectorate which accredited by Ghana Health Service.

Standards for Safety and Hygiene

The respondents (GTB and KMA) have rules and regulations that no catering enterprise shall offer for sale any food that is unfit for human consumption. No person shall sell any food which is of the nature, substance or quality demanded by a customer for example a request for bread and butter shall be met strictly; the customer shall not be supplied bread and margarine or bread with a mixture of butter and margarine without his or her prior consent. No food shall be exposed to the risk of containment. For these rules and regulations to become operative, officials of the regulatory bodies frequently visit these facilities for food sampling.

Official Visit to Licensed Restaurants

With regard to visiting schedule by the regulatory bodies, the respondents (GTB & KMA) confirmed the monthly visit as revealed by the selected managers, workers and the customers of the restaurants

Training Programmes

The regulatory bodies stated that they normally organized seminars on food safety and hygienic programmes as well

as frequent inspections for the restaurants to ensure that standards set for them are always maintained.

Monitoring Mechanism

The regulatory bodies emphasized that as a matter of principle through a frequent inspection at the premises of the restaurants, a report is issued on each establishment and those who fall short are advised to correct all their short fall and those who fail to maintain the standard set for them are closed down or have the grading reduced to the lowest level.

ANALYSIS OF THE RESTAURANTS CUSTOMERS INTERVIEWED

Reliability Statistics

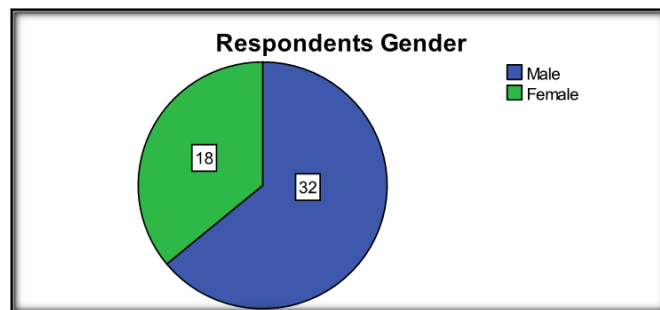
Table 3: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized items	No. of Items
0.730	0.715	14

Source: Field work, 2017

From the fig., a Cronbach's Alpha of 0.73 shows that the questionnaire is stable and reliable and can therefore be used to make inferences about the population. According to George and Marley (2003), as a rule of thumb, a Cronbach's Alpha of more than 0.7 is considered acceptable for research purposes.

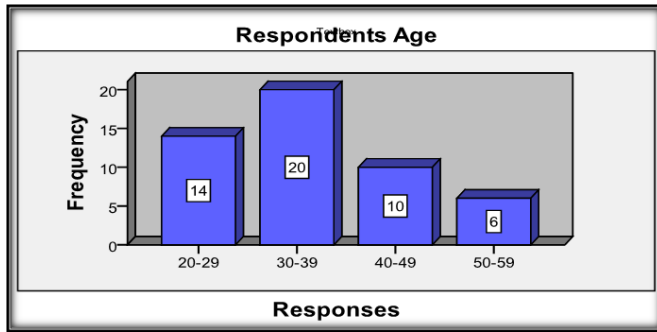
Background Analysis



Source: Field work, 2017

Fig. 1: Gender Analysis

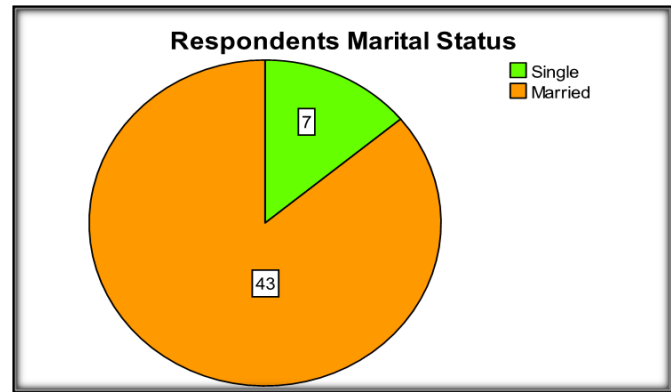
Fig. 1 above shows clearly that out of the 50 (100%) respondents sampled, about 32 (64%) of them were male while 18 (36%) of them were female. This means that the research sample size was a male majority.



Source: Field work, 2017

Fig. 2: Age Analysis

Fig. 2 shows clearly that 20 (40%) of the 50 respondents sampled were between the age of 30-39 years, 14 (28%) were between the age of 20-29 years followed by 10 (20%) between the age of 40-49% and only 6 (12%) were between the age of 50-59. This indicates that the respondents sampled in the Kumasi Metropolis constituted active working group in the industry under study.

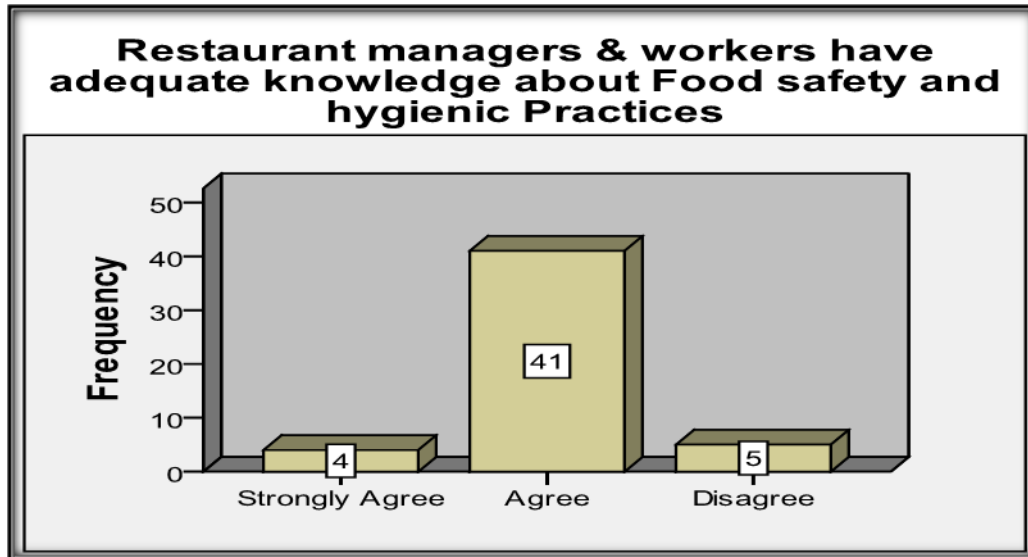


Source: Field work, 2017

Fig. 3: Marital Status

A very high number of the respondents sampled in the research were married. This was indicated by 43 (86%) as shown in Fig. 3 followed by only 7 (14%) of the sampled respondents who are single.

Food Safety & Hygienic Practices Analysis



Source: Field work, 2017

Fig. 4: Knowledge About Food Safety and Hygienic Practices

A greater number of the sampled respondents agreed to the fact that restaurant managers and workers have adequate knowledge about food safety and hygienic practices as indicated by a number of 41 (82%) responses in Fig. 4. This is followed by 5 (10%) of the sampled respondents who disagreed while only 4 (8%) strongly agreed to this fact. This means that almost all the restaurant operators in the Kumasi Metropolis were aware of food safety measures and hygienic practices in their daily business operations.

Restaurants and Their Surroundings

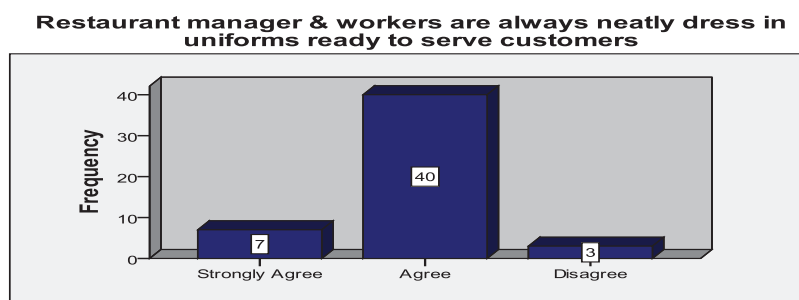
Table 4: Responses from Restaurants and Their Surroundings

Responses	Frequency	Percent	Cumulative Percent
Strongly Agree	3	6.0	6.0
Agree	43	86.0	92.0
Disagree	4	8.0	100.0
Total	50	100.0	

Source: From Field Work, 2017

In Table 4 above, 43 (86%) of the sampled respondents comprised of restaurant managers, workers and customers agreed that all the restaurants and their surroundings in the Kumasi Metropolis were very clean every time to ensure a perfect hygienic environment. This was followed by 3 (6%) of the sampled respondents who strongly agreed

to this hygienic measure while only 4 (8%) disagreed. This showed clearly that majority of the restaurants in the Kumasi metropolis kept their surroundings very clean to reduce the risk of food spoilage and food poisoning and removes materials and food that could provide harbor and nourishment for pests.

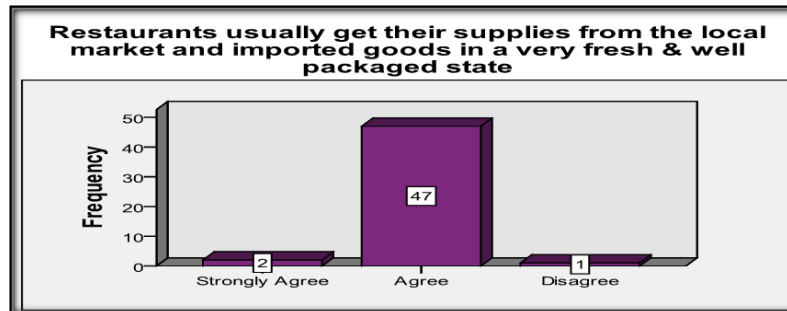


Source: From Field Work, 2017

Fig. 5: Workers Appearance

A greater number 40 (80%) of the sampled respondents agreed that restaurant managers and workers were always neatly dressed in uniforms and ready to serve their customers as indicated in Fig. 5 followed by 7 (14%) who strongly agreed. This means that if there was adequate knowledge

in food safety and hygienic practices, the managers and workers always ensured good practices daily in their business activities. However, 3 (6%) of the sampled respondents disagreed.



Source: From Field Work, 2017

Fig. 6: Restaurant Supplies

In Fig. 6 above, majority of the sampled respondents agreed that most of the restaurants in the Kumasi Metropolis got their supplies from the local market and imported in a very

fresh and well packaged state. This is indicated by 47 (94%) followed by 2 (4%) who strongly agreed with only 1 (2%) of the sampled respondent disagreed to this fact.

Kitchen and Storage Facilities

Table 5: Kitchen and Storage Facilities of These Supplies are Kept Clean and Very Neat Every Time

Responses	Frequency	Percent	Cumulative Percent
Strongly Agree	5	10.0	10.0
Agree	41	82.0	92.0
Disagree	4	8.0	100.0
Total	50	100.0	

Source: From Field Work, 2017

A greater percentage of the respondents sampled were of the view that the restaurants in the Kumasi Metropolis maintained neat and cleaned kitchen and storage facilities. This shown clearly in Table 5 with a high rate of 41 (82%) who agreed and 5 (10%) of the respondents sampled who

strongly agreed to this measure. Conversely, a few of the sampled respondents did not share the same opinion as indicated by a rate of 4 (4%) who disagree to this fact. This clearly indicated that the storage facilities and the kitchens were always kept clean and neat to remove any material that could provide nourishment for pests.

Waste Disposal

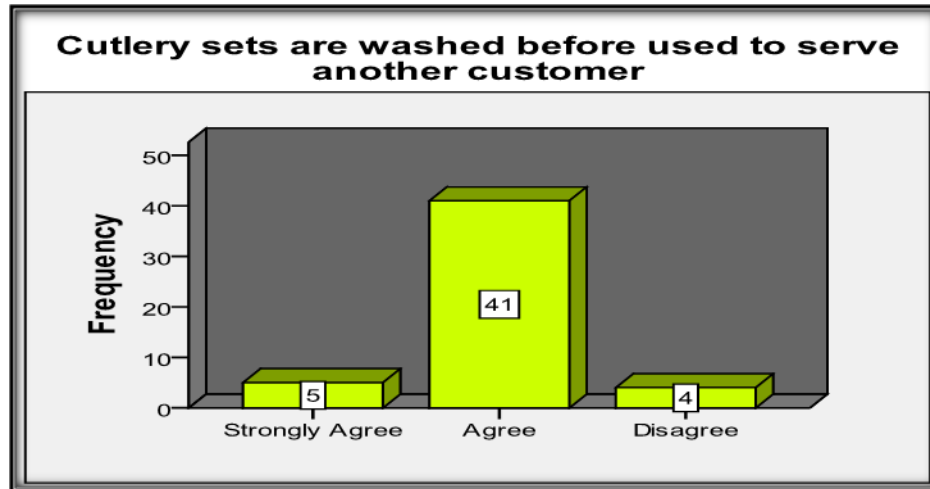
Table 6: Waste and Expired Products are Neatly Disposed

Responses	Frequency	Percent	Cumulative Percent
Strongly Agree	11	22.0	22.0
Agree	38	76.0	98.0
Disagree	1	2.0	100.0

Source: From Field Work, 2017

In Table 6 above, a number 38(76%) of the sampled respondents agreed that waste and expired products were neatly disposed of to prevent any infections. 11(22%) strongly agreed with only 1(2%) disagreeing to this fact.

This clearly revealed that waste and expired products were neatly and well-disposed to ensure good sanitation in the restaurant industry.



Source: From Field Work, 2017

Fig. 7: Cleaning of Cutlery Sets

Another important food safety and hygienic measure was observed in Fig. 7. The research disclosed clearly that majority of the sampled respondents, that is 41 (82%) agreed to the fact that the restaurant workers washed cutlery sets very well before using to serve other customers. This was followed by 5 (10%) who strongly agreed, with only 4 (8%) disagreeing to this fact.

their duties. The workers always wash their hands very well especially after using the washrooms.

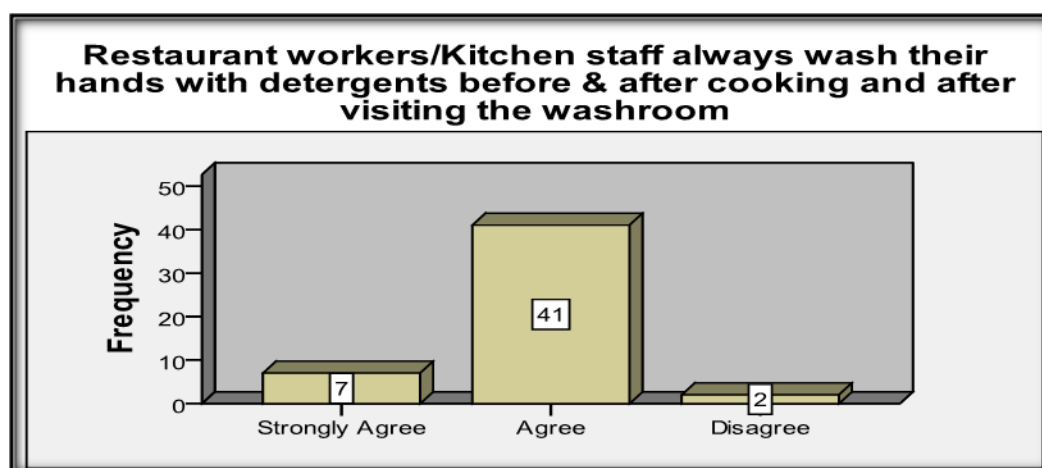
Registration by Regulatory Authorities

Table 7: Registration of Restaurant Businesses in the Kumasi Metropolis

Responses	Frequency	Percent	Cumulative Percent
Strongly Agree	13	26.0	26.0
Agree	35	70.0	96.0
Disagree	2	4.0	100.0
Total	50	100.0	

Source: From Field Work, 2017

In Fig. 8, it was observed clearly that 41 (82%) of the sampled respondents agreed that workers and kitchen staff of the restaurants always washed their hands with detergents before and after cooking and after visiting the washroom. This was followed by only 7 (14%) who strongly agreed. However there were some 2 (4%) of the sampled respondents who disagreed to this fact. It further disclosed that these facilities were highly used by the restaurant workers in discharging



Source: From Field Work, 2017

Fig. 8: Hand Washing

The research disclosed clearly in Table 7 that 35 (70%) of the sampled respondents agreed that the restaurant businesses in the Kumasi Metropolis were registered with the regulatory authorities such as Kumasi Metropolitan Assembly (KMA), Food and Drugs Board, Ghana Standard Board and the likes. This was followed by 13 (26%) of the responses who strongly agreed, with only 2 (4%) of the respondents disagreeing to this fact. This is because most the restaurant display their certificates registration on their premises

Training

Table 8: Training on Food Safety and Hygienic Practices

Responses	Frequency	Percent	Cumulative Percent
Strongly Agree	5	10.0	10.0
Agree	38	76.0	86.0
Disagree	7	14.0	100.0
Total	50	100.0	

Source: From Field Work, 2017

Policies

Table 9: There are Certain Policies on Food Safety and Hygienic Practices Set by the Regulatory Bodies to Govern the Restaurant Operations

Responses	Frequency	Percent	Cumulative Percent
Strongly Agree	7	14.0	14.0
Agree	34	68.0	82.0
Disagree	9	18.0	100.0
Total	50	100.0	

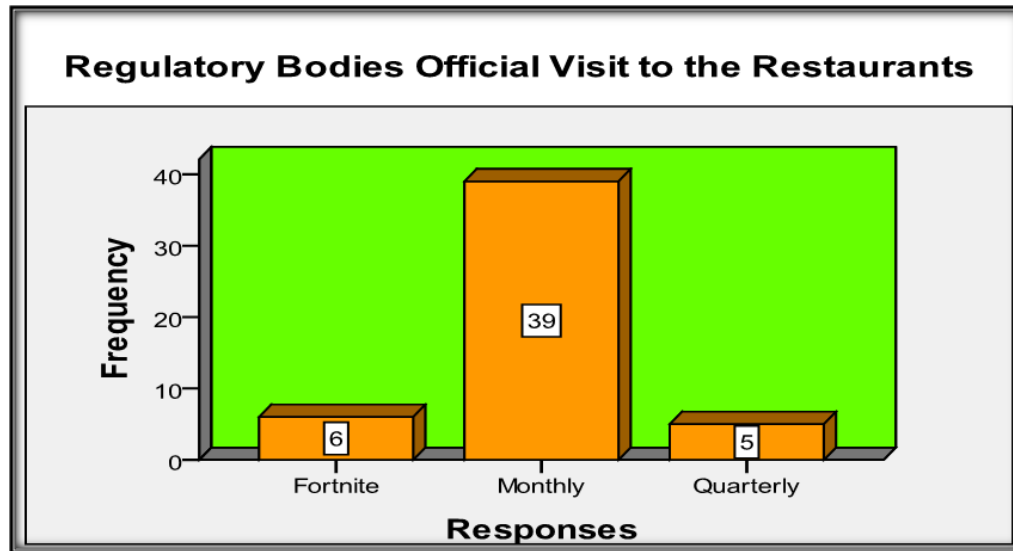
Source: From Field Work, 2017

Training of restaurant staff regularly was a significant measure of ensuring food safety and hygienic practices in the hospitality like restaurants operation. The research however clearly indicated that 38 (76%) of the respondents agreed that Training on Food Safety and Hygienic Practices were usually organized for managers and workers of the restaurants in the Kumasi Metropolis. This was done to ensure food safety & hygienic practices. This was then followed by 5 (10%) of the respondents who strongly agreed. Conversely, there were 7 (14%) of the respondents who disagreed that Training on Food Safety and Hygienic Practices were organized to the staff of the restaurants under the area of study. This shows clearly that the regulatory authorities usually organized training programs on food safety and Hygienic practices for the managers and workers of the restaurants in the Kumasi metropolis in order to ensure good food safety and hygienic practices.

The research disclosed that 34 (68%) of the sampled respondents were of the view that there were certain policies on food safety and hygienic practices set by the authorities to

govern the restaurant operations in the Kumasi Metropolis. This was indicated in Table 9, followed by 7 (14%) who strongly agreed and 9 (18%) however disagreed with this fact.

Regulatory Bodies Official Visit to the Restaurants

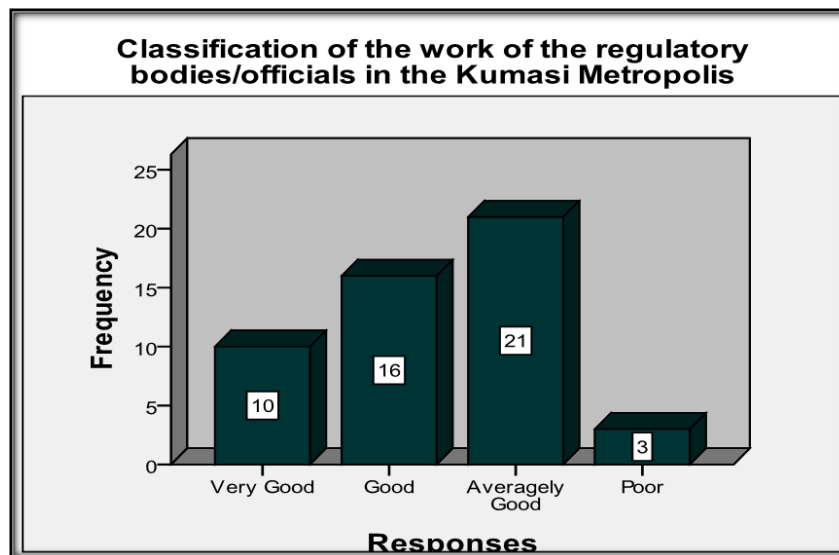


Source: Field work, 2017

Fig. 9: Official Visit

The research clearly showed that 39 (78%) of the respondents sampled were of the view that officials of the regulatory authorities visited the restaurants every month to ensure that the policies set were being observed and made sure that food safety and hygienic practices of these restaurants in the Kumasi Metropolis were of standard. This is indicated in Fig. 9, followed by 6 (12%) who believed that the officials visited the restaurants every fortnight and another 5 (10%)

believed the officials visited quarterly. The Fig. showed clearly that officials of the regulatory authorities visited the restaurants every month to ensure that the policies set were being observed and placed checks on the food safety and hygienic practices of these restaurants in the Kumasi metropolis. Generally, the works of these regulatory bodies mentioned above were recognized by the hospitality industry such as the restaurants in the area under study.



Source: Field work, 2017

Fig. 10: Conclusion

In conclusion, the sampled respondents were averagely satisfied with the work of the regulatory authorities in the Kumasi Metropolis to ensure that food safety and hygienic practices were at the peak in the hospitality industry such as the restaurants. This is clearly indicated in Fig. 10 with 21 (42%) of the sampled respondents. This was followed by 16 (32%) who were of the view that the work of the regulatory authorities was good. Only 10 (20%) thought the work of the authorities was very good. However, 3 (6%) of the sampled respondents thought the work of authorities was poor.

CONCLUSIONS

In analyzing the factors that measured food safety and hygienic practices in the industry, the research indicated that the regulatory authorities were doing a good job to make sure that food safety and hygienic practices were at their peak in the hospitality and tourism industry. The research also showed that most of the restaurant managers and workers had adequate knowledge about food safety and hygienic regulations. This was indicated that formal education and professionals had contributed to the compliance of the laws and regulations by food service providers in the industry.

Customers in the tourism industry were very much satisfied with the extent by which restaurants in the Kumasi Metropolis observed and applied the food safety and hygienic practices in food provision services offered daily as well as the performance of the regulatory authorities in ensuring that the various policies and laws governing food safety and hygienic were strictly observed.

The research further disclosed that the extent to which the restaurants operators were registered with the regulatory authorities made the authorities had access to adequate information on all the restaurants in the Kumasi Metropolis. These made their visitations and supervisions of the officials of the regulatory authorities very easy and effective.

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