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Food Safety Regulation: Perspectives of food service operators in the Cape Coast Metropolis

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Abstract
Global reports since the 2000s suggest that food safety is an important public health concern that attracts the attention of governments, food producers and consumers. Governments all over the world try to prioritise the safety of their food because it is a major driver of food security. Nonetheless, foodborne illnesses continue to occur daily basis. Ghana has a legal framework, institutions and agencies at different levels of government for food safety management. Yet, Cape Coast in the Central Region grapples with foodborne related diseases, thus identified by UNICEF as a hotspot for foodborne related outbreaks. This study set out to explore the views and familiarity of food service operators on the regulation of their operations. Three hundred food service operators from the 16 communities were selected using purposive sampling method for the study. The findings showed that food service operators had functional knowledge of the rules and regulations, just about enough to guide their daily operations. Regulators were generally perceived to be friendly and accommodating but inadequate and irregular in their supervisory roles. It was recommended that regulators should have regular encounter with food service operators to enhance compliance and achieve the food safety goal.

Keywords: Food safety, foodborne illness, regulation, food safety regulators, food service operators.

INTRODUCTION

Food is one of the most vital and indispensable fundamental needs of humans required for nourishment and sustainability. Omari and Frempong, (2015) and Ko (2015) opine that safe food significantly improves public health, food security, and environmental protection. Safe food also reflects a positive image of a nation. World Health Organisation (2014) defines safe food as steps taken to ensure that every food is as safe as possible. Nonetheless, issues with food safety pose a serious threat to human existence. Consumers are exposed to

myriad of food safety challenges as a result of the material product (the food itself); the attitude and behaviour of food handlers (crucial in the food production continuum) and the environment in which the food is prepared and served (Goh, Garcia, Joung & Fowler, 2013).

The effects of unsafe food consumption can have a direct impact on a country's productivity. At the micro level, reduced productivity and direct medical cost to individuals who suffer from food-borne illness has been found (World Bank, 2018; Newman, Leon, Rebolledo & Scallan, 2015; WHO, 2014). Literature suggests that the food industry also suffers through reduced sales, high recall costs, and lower consumer confidence (Hussain & Dawson, 2013). At the macro level, national governments are confronted with increased medical expenses, outbreak investigations, and increased demand on the over-burdened and poorly funded healthcare systems (World Health Organization, 2019). Thus, an outbreak of foodborne illness affects all segments of society.

From the literature, about 70-80% of foodborne illnesses are linked to food prepared and served from the food service industry (Monney, Agyei & Owusu, 2013; Food and Drugs Authority, 2013; Chapman, Eversley, Fillion, Maclaurin & Powell, 2010). As Jones, Pavlin, LaFleur, Ingram and Schaffner (2004) succinctly put it: "the food industry cannot ignore the fact that they have been labelled as one of the most recurrent sources of foodborne disease outbreak" (pg. 96). Several studies suggest that the food service sector especially, the informal segment, is dominated by service operators with low or no formal education, relatively ignorant about basic food safety and hygiene practices, and are probable vectors for food contamination (Grace, 2017; FAO, 2016; Cortese, Veiros, Feldman & Covalli, 2016). This implies that the fate of individuals who consume meals outside the home is subject to the controls of the food service operator (FSO) whose attitude and behaviour towards food handling cannot be easily determined (Knight, Worosz, & Todd, 2007).

Although, FSOs are often held accountable for the offer of unsafe food to the consuming public, Khalid (2015) is of the opinion that FSOs are not to be solely held responsible. Food safety is a shared responsibility for all stakeholders; governments, food service operators, and consumers. The government has the duty of care towards its citizens and, thus is responsible for developing food safety policies, standards, rules, and regulations to provide an enabling institutional and

regulatory environment to support and guarantee the achievement of the national food safety goals. Food service operators are also duty and legally bound to provide safe food to the consuming public. They are required to demonstrate to regulatory authorities that their operations are in line with national laws, standards, guidelines, and codes of practice (Khalid, 2016). Consumers are also expected to ensure safe handling of the food they purchase (FAO, 2006). However, the governments take the overarching responsibility by monitoring compliance through inspection and enforcement.

In Ghana, compliance enforcement is done through regulatory bodies such as the Food and Drugs Authority (FDA), Ghana Tourism Authority (GTA), and the Environmental Health and Sanitation Units (EHSU) of the Metropolitan and Municipal Assemblies. Food and Drugs Authority and Ghana Tourism Authority form the main regulatory bodies and are supported by the Environmental Health and Sanitation Unit. Activities of these regulatory bodies are guided by the national laws such as the Public Health Act, 2012 (851), the Tourism Act, 2011 (817), and the Local Government Act, 2016 (462). These Acts define the roles and mandate regulators to conduct formal inspections; register and license; provide education and training; research and communicate risk to both food service providers and consumers. Thus, the food safety regulator is seen as the key functionary who has day-to-day contact with the food industry, trade, and the public.

Cape Coast, in the Central Region of Ghana, has recorded a relatively high incidence of foodborne-related illnesses (UNICEF, 2015). For instance, there were 2,182 reported cases with 60 deaths in 2014, 160 and 261 reported cases in 2015 and 2016 respectively. The statistics are worrying as these disease conditions are avoidable if food safety measures are effectively enforced and complied with. Several studies (Tappes et al. 2019; Iwu, Uwakwe, Duru, Diwe, Chineke, Merenu, & Ohale, 2017; Akabanda, Hlortsi, & Owusu-Kwarteng, 2017) have investigated food safety incidence and have found FSOs as the significant causative agents, yet, no major improvements have been realised. It is therefore prudent that the activities of the regulatory enforcers be investigated to ascertain their contribution toward the food safety goal.

Regulatory enforcement as a concept has rarely been explored in literature. Gaining an understanding of regulatory enforcement from

the perspectives of FSOs is necessary to understand the wider dynamics of regulatory enforcement. Consequently, this paper examines the views and familiarity of the FSOs on the regulatory enforcement regime in the Cape Coast Metropolis. The specific objectives of the study were to examine FSOs familiarity with the regulation; assess the impact of regulators' activities on food service operations and; evaluate FSOs level of satisfaction with regulatory activities. The findings of this study may be useful to regulatory authorities by drawing their attention to the views and concerns of FSOs and the limitations in food safety regulation and enforcement. Thus, help improve food safety and allay the increasing fears of street food consumers.

Theoretical framework

The Social Control Theory was adapted as the theoretical framework for the study. The Theory, propounded by Hirschi (1969) posits that when social constraints on antisocial behaviour are weakened or absent, nonconformity to social norms and regulations emerges. The Social Control Theory contends that because it is in the nature of humans to be deviant, society can regulate that behaviour through the use of laws, rules, and regulations. Social control may deter people from violating social norms and laws; punish those who are not deterred and rehabilitate and reform those who are punished. Thus, in the social context, individuals may conform to rules and regulations because an authority figure threatens sanctions when rules and regulations are not complied with.

There are two main components of the Social Control Theory: informal and formal controls. The informal control often referred to as the socialisation process typically involves an individual internalising certain norms and values of the society. The formal control on the other hand involves external sanctions enforced by the government to prevent chaos or violence in society. The controls (both informal and formal) regulate individual and group behaviour in an attempt to gain conformity and compliance to the rules of a given society, social group, or state.

However, there is evidence that some scholars have critiqued the Social Control Theory. For instance, Gibbson (1994) contends that the Theory explains minor offending but does not adequately account for more serious misconduct. Despite this limitation, the theory has been used successfully in many studies to investigate and explain

school misbehaviour; parental attachment and substance abuse, and regulation conformity.

The Social Control Theory has been adapted to guide this study because of its strengths. For instance, Fairman and Yapp (2004) applied the Social Control Theory in their study and found out that some Food Service Operators make decisions to comply with regulations because their activities are monitored and supervised. Through regular enforcement interventions such as inspection visits, training, seminars, workshops, media information, and phone calls, the FSO is made aware of the relevant regulations on food safety. Through the awareness creation, the FSO in turn, interprets the regulation and decides to comply. Non-compliant FSO are punished by revoking their licenses, named and shamed, or asked to correct the anomaly. The adoption of the Social Control Theory by Fairman and Yapp (2004) suggest that regular encounter with food safety regulators is important in shaping food service operators' attitude toward safe food handling.

MATERIAL AND METHODS

A cross-sectional descriptive survey was conducted to explore FSOs views and familiarity with the food safety regulatory operations in the Cape Coast Metropolis, Central Region, Ghana. For the purpose of this study, food service operation was defined as an informal food service business that provides ready-to-eat foods to the general public in the streets and other public space. A total of 1185 registered food service providers was obtained from the Cape Coast Metropolitan Assembly (Environmental Health and Sanitation Audit Report, 2017). Using Krejcie and Morgan (1970) sample size determination table gave a sample size of 276 to be used for the study. However, 300 participants, 18 years and older, were chosen by proportionate sampling technique on community basis to participate in the study as shown in Table 1.

Table 1: Distribution of study participants by sampled communities

Area/Cluster	Number of operators	Number selected
Abura	117	30
Adisadel	64	16
Akotokyir	18	5
Amamoma, UCC	66	17

Ankaful	42	11
Bakaanu	92	23
Brofoyedru	61	15
Duakor	19	5
Ebubonko	77	19
Efutu	113	29
Ekon	37	9
Kakumdo	45	11
Kotokuraba	242	61
Mpeasem	70	18
Nkanfoa	77	19
Ola	49	12
TOTAL	**1185**	**300**

Source: Environmental Health and Sanitation Unit, Cape Coast Metropolitan Assembly

This method ensured the representation of all the food service operators in the Metropolis. Food Service Operators from these communities were either mobile or stationary and operated either in the day or night time. Out of the 300 foodservice operators, 264 were stationary, 36 were mobile, and 204 and 96 sold in the day and night time respectively. Cooked foods sold included light soup/palm soup/groundnut soup with fufu, okro stew or grilled tilapia with banku, waakye, palava sauce or garden egg stew with boiled yam, fried rice, plain rice, beans and gari.

Data Collection Instrument

A self-developed questionnaire was used to collect data from FSOs in relation to their views and experiences of the regulation. The questionnaire was made up of both open and closed ended items. The open-ended items offered participants the opportunity to formulate their own responses. With the closed-ended items, participants chose the option they considered appropriate. The Data Collection Instrument was scrutinised by two expert professors and was further approved by the University of Cape Coast Institutional Review Board. The Instrument was pretested in Elmina, the next Municipal area with similar characteristics as Cape Coast. The pre-test offered a chance to ensure that the test items were clear and measured what it intended to measure.

Data Collection Procedure

Data was collected over six weeks, on all the days of the week and at different times of the day including the nights to ensure the inclusion of various categories of FSOs. To gain the cooperation and assistance from participants, the basis for the study as well as the procedure for answering the items in the questionnaire was explained to the participants. Participants were informed that the study was purely an academic exercise whose findings could be disseminated to relevant stakeholders to possibly influence policies and strategies. Participants were further assured of their confidentiality and anonymity, hence, no personal identification was required on the questionnaire. Consequently, participants gave their verbal consent and willingly participated by completing the questionnaires. The questionnaires were given to participants who could read and write to respond to the items while those who could neither read nor write were assisted by the researchers and the research assistants. Completed questionnaires were collected the same day. There was 100% return rate. However, two of the questionnaires were discarded because some of the items had either not been answered or were with "don't know" responses. Hence, 298 valid questionnaires with no missing values were used for data analyses.

Data Analysis

Data analysis was carried out after all the data had been collected. The data obtained from the survey was coded and tabulated. Further, the results were interpreted using descriptive statistics of MS-Excel statistical function. Descriptive analysis, such as, frequencies and percentages were used in the analyses.

RESULTS

Socio-demographic characteristics of respondents

From the data collected, 96% of the participants were females. Fifty-eight percent (58%) of the participants were in the age bracket of 30-50 years with less than 14% of them above 50 years. The participants were generally literate; 45% of them were Middle School/JSS/JHS leavers and about 19% of Secondary School Certificate holders. More than half of the participants had some formal education.

Food Service Operator's awareness of food safety regulations and regulators

Food Service Operators were asked specific questions about their awareness of the National Food Safety Acts and the Metropolitan bye-laws. Additionally, their knowledge of the food safety regulation was assessed. Ninety-one percent of the participants were aware of the existence of the National Food Safety Acts and Metropolitan Bye-Laws. However, they could not state precisely the stipulations of the Acts and Bye-Laws. Rather, participants were only able to state aspects of the regulations with which they were conversant. The details are presented in Table 2.

Table 2: FSOs food safety regulation knowledge

Food Laws known to Operators	Frequency	Percentage
Keeping surroundings clean	178	31.6
Observing Personal Hygiene	141	25.0
Covering Food	110	19.5
Keeping food warm	60	10.7
Keeping utensils clean	43	7.7
Undergo medical examination	16	2.8
Acquisition and renewal of license	7	1.2
No idea about rules and regulation	8	1.4

**Multiple responses were elicited N = 563*

As observed from Table 2, 31.6% of the participants knew the laws required them to keep their surroundings clean, 25% were aware of personal hygiene, 20% and 11% knew of covering food and about keeping food warm respectively. Acquisition and renewal of licenses were identified by approximately 1.2% of the participants.

Popularity of Food Service Regulators among foodservice operators

Approximately, 80% of the FSOs knew of EHSU officials, thus, they were the most popular state regulators in the Metropolis. This was the regulatory agency FSOs admitted to having had relatively regular contact with. Approximately, 14% and 4% of the participants knew of the existence of the FDA and GTA respectively. Two (0.6%) of the participants were however able to identify FDA and EHSU simultaneously. Most of the participants were not able to demonstrate multiple agency popularity. Table 3 presents the details.

Table 3: Popularity of Food Service Regulators among Food Service Operators

Agency	Frequency	Percentage
EHSU	238	79.9
FDA	42	14.1
GTA	13	4.4
FDA/EHSU	2	0.6
No idea	3	1.0
Total	**298**	**100**

Food Service Regulators Task Assessment

Participants were asked to indicate regulators' level of performance in three specific areas and specify their level of satisfaction towards the regulation. The areas were frequency of visit, regulators' activities, and feedback provision. Table 4 presents regulators' frequency of visits.

Table 4: Frequency of visit by Food Service Regulators

Number of times	Frequencies	Percentage
Yearly	109	36.6
Twice a year	30	10.1
Thrice a year	105	35.2

Everyday	3	1.0
Never	51	17.1
Total	**298**	**100**

Once and thrice a year were indicated by 36.6% and 35.2% respectively by the participants. Seventeen percent of the participants had never received any form of visit from any of the regulatory agency.

Food Service Regulators were found to focus much of their activities on environmental cleanliness as shown in Table 5. Fifty-three percent of the participants indicated that regulators conducted inspections on their immediate surroundings and dustbins. Only 11% of the participants were of the view that regulators observe the food preparation process and collect samples for lab analysis. Fourteen percent of the food service providers maintained that regulators checked on licenses and other documents while five percent of them had never received any form of inspection from any of the regulators.

Table 5: Food Service Regulators activities

Areas	**Frequency**	**%**
Inspect the surroundings and dustbins	234	53
Inspect the kitchen and cooking equipment	74	17
Observe the food preparation process and collect some for lab analysis	47	11
Inspect the license and other documents	64	14
Never been inspected	21	5.0
Total	**440**	**100**
Feedback Provision		
Yes	202	68
No	75	25
Don’t know	21	7
Total	**298**	**100**
Satisfaction with regulators performance		
Satisfied	185	62
Not satisfied	113	38
Total	**298**	**100**

**Multiple responses were provided for area of inspection*

More than half (68%) of the participants indicated that regulators provide feedback after inspection while a quarter (25%) were also of the view that feedback was not given after inspection. Sixty-two percent of the operators indicated their satisfaction while 38% of them maintained they were not satisfied with regulators' performance. Food Service Operators' reasons for their satisfaction or dissatisfaction are presented in Table 6.

Table 6: Reasons for Satisfaction and Non-Satisfaction with Food Service Regulators' Activities

Reasons	Frequency	%
Satisfied		
Good and friendly	86	28.9
Encourage us to follow the laws	39	13.1
Friendly but strict on the job	34	11.4
Warn or fine non-compliant behaviour	27	9.1
Not-Satisfied		
Concerned with license than the quality of food	49	16.4
Harassment and extortion of money from operators	32	10.7
Impolite and disrespectful	16	5.4
Less time to explain what they want from operators	15	5.0
Total	**298**	**100**

Based on FSO's interpretation of regulatory performance

From Table 6, almost 30% of the respondents attributed their satisfaction to regulators being good and friendly. Approximately 13% of the operators reported that they were satisfied because regulators encouraged them to follow the laws. Other operators, 11.4% and 9.1% were satisfied because regulators were friendly but strict on the job; issued warnings and fines for non-compliance respectively. About 38% of the respondents were not satisfied with regulators' activities due to various reasons. Sixteen percent of the operators indicated that

regulators were more concerned with license than the quality of the food. Approximately 11% of the respondents specified that they were often harassed and monies extorted illegally from them while 5% indicated that regulators did not have ample time to explain their expectations. About 5% of the operators recognised regulators as impolite and disrespectful.

DISCUSSION

In the realm of food safety regulation, the insights and viewpoints of food service operators play a crucial role in shaping policies, practices, and standards that ensure the well-being of consumers. This study delved into the multifaceted landscape of food safety regulation from the unique vantage point of FSOs, aiming to uncover their perspectives, experiences, and opinions.

The study's findings show a high female dominance amongst the participants studied. This dominance is typical of Africa (Samapundo, Climat, Xhaferi, & Devlieghere, 2015; Okojie, & Isah, 2014; FAO, 2012) where food service operation is often considered a female occupation. The study found 91% regulatory awareness among the respondents. Most of the FSOs were aware that there exist rules and regulations governing their operations. By having a high food safety regulatory awareness, FSOs can comply with the regulations, avoid penalties and fines, and prevent foodborne illnesses. In a similar study, FSOs awareness of the regulation enhanced customer loyalty, improved their competitive advantage and the overall food safety system (Huynh-Van et al., 2022). However, FSOs awareness of the regulation did not reflect their familiarity with the stipulations of the regulation. On one hand, most of the FSOs expressed a high level of awareness about the regulation and on the other hand, their knowledge about the specific provisions and requirements of the food safety laws was very low. Food service operators had fragmented views that related more to a functional or operational understanding and application of the rules and regulations. This seems to suggest that either the current food safety education and enforcement strategies are not effective enough or operators have not substantially internalised the regulations governing their business. It is therefore important that FSOs become conversant with the actual stipulations of the regulation to enhance compliance. This can be made possible through education during inspection visits, seminars, and media information.

Food service operators indicating EHSU officials as their main source for regulatory awareness as well as the most popular among the regulators suggest EHSU lead role in regulating the food service operation in the Metropolis. It gives the impression that enforcement inspection was often done by EHSU officials. This finding supports Forkuor's (2017) study finding that the informal food service operation is considered by FDA and GTA as "too small" to regulate. The finding further corroborates Alfer's (2011) claims that local government institutions currently have the mandate and capacity to improve conditions in the informal street vending sector in Africa. FAO and WHO (2013) further substantiate that several countries resort to the use of Environmental Health Officers as food safety inspectors as a result of human resource constraints. Nonetheless, this defeats the legal mandate of the FDA and GTA as the main regulatory agencies for food safety inspection and enforcement. The use of EHSU officers as food safety regulators is said to be appropriate only when the officers are properly trained for the regulation of street food (FAO and WHO, 2013). The finding further reveals some of the inconspicuous challenges associated with multi-agency regulatory system. While having multiple agencies with legal mandates to regulate various aspects of food may be beneficial, it could also lead to poor coordination, duplication of functions, and/or gaps in food safety regulation and enforcement (FAO, 2013; WHO, 2013).

The number of times regulators paid inspection visits to FSOs appeared insufficient to enable the detection of consistent compliance or non-compliance of the regulation. This in turn can subject the fate of the consumers to the controls of the FSOs whose attitude and behaviour towards food handling cannot be easily determined (Knight et al., 2007). The finding also buttress the social control theory which posits that because human behaviour is inherently not conforming, regular encounter with food safety regulators is important in shaping food service operators' attitude toward handling food safely. Consistent presence of regulators for enforcement could be one of the most visible signs of successful food safety management.

Regulators' emphasis on environmental cleanliness as intimated by FSOs is commendable. However, it is quite worrying that regulators did not seem to attach importance to the licensure status of the operators. A few of the participants reported that regulators checked their licenses during inspection. This finding suggests a contrast with

the stipulations of the Public Health Act, 2012 (Act 851); the Tourism Act, 2011 (Act 817), and; the Local Government Act, 2016 (Act 462). The Acts mandate regulators to ensure FSOs acquire licenses prior to business operation and an annual renewal. The non-enforcement of this regulation could be an indication of either a false assumption that all FSOs on the street have been cleared to operate or a lack of trust in the reliability of the license acquisition process and procedure. Food service operators with no or expired licenses could pass on communicable diseases they might have to consumers due to the uncertainty of their environmental and health status.

The results further revealed that FSOs were generally (62%) satisfied with regulators' activities. For instance, regulators were noted to be good and friendly. Perhaps, regulators appeared good and friendly because operators complied with the regulation and therefore had no problems with regulators. Regulators might have also viewed their job as one of enforcement which could be done without being hostile or regulators did not want to incur the wrath and assault (verbally or physically) from operators (Forkuor, 2017). Accordingly, being good and friendly can undermine regulators' performance while being unkind and unfriendly could as well induce hostile response from operators. It is therefore reasonable that regulators are fair and firm during regulatory enforcement.

Quite a significant number (38%) of FSOs also showed non-satisfaction towards regulators' activities. For instance, regulators' inspection of licenses was seen to be a bother to some FSOs. Such respondents were not satisfied because they probably preferred to operate with no checks on their environment and health status. Some operators also noted that regulators often harassed and extorted money illegally from them. This finding corresponds with the findings of Draper (1996) that "food service operators are often a target for harassment and extortion by government authorities and organized crime because they often occupy public space and lack any form of legal recognition". Regulators harassing and taking money illegally from FSOs could likely give the impression that FSOs can escape non-compliance punishment by offering money. This can trigger distrust between FSOs and regulators and encourage non-compliance to food safety rules and regulations. Similarly, issues of bribery and corruption were recorded to have hindered effective food safety regulation in the Kumasi Metropolis (Forkuor et al., 2017). Participants being satisfied

or dissatisfied with regulators' activities have implications for the enforcement and compliance of the food safety regulations. It is therefore important to ensure that FSOs are satisfied with regulators' activities for the right reasons.

CONCLUSIONS AND RECOMMENDATIONS

Food Service Operators had functional knowledge of the rules and regulations, just about enough to guide their daily operations despite the high regulatory awareness among operators. Specific national food safety regulations and Metropolitan Bye-Laws were generally unknown. Food Service Operators had a fair knowledge of and encountered the Environmental Health and Sanitation officials who are thought to be supporting officials often than FDA and GTA who are legally mandated to enforce food safety regulations. While this may be imperative, its major weakness is the fact that EHSU officials are not specifically the main agency to regulate the activities of food service operators and that they have several other responsibilities which make food safety regulation only one of the numerous responsibilities they have to fulfill.

While it was commendable that regulators ensured FSOs worked in a hygienic environment, Food Service Regulators, however, did not seem to attach importance to the licensure status of operators. Regulators were generally perceived to be friendly and accommodating but inadequate and irregular in their enforcement/supervisory roles. Food Service Operators were generally satisfied with regulators' activities because regulators appeared good and friendly and encouraged them to follow the regulations.

It is recommended that policymakers, regulators/enforcers increase the number of times for facility inspection and enforcement. Food Service Regulators should intensify education on food safety regulations during enforcement visits for FSOs to be abreast with the stipulations of the regulation. Finally, Food Service Regulators should establish their maximum interest in FSOs licensure status to prevent possible transmission of communicable diseases from operators to consumers.

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