Food Sanitation Practices in a Private Education Institution: Insights from Home Economics Students

John Bornea
Marineal Samar
Melanie Cabriadas
Daniel Pagunsan
Jhaboy Basalo
Samboy Naungayan
Christian Munsad
Angelo Malunes
Ardee Manacap

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Correspondence:

Meanie Cabriadas
Team Leader
University of Immaculate Conception
Annex Campus
Bonifacio St., Davao City 8000
Davao del Sur, Philippines
(082) 227 1573
(082) 227 3794

Abstract

This study assesses how the home economic students in the University of the Immaculate Conception practices food sanitation while they are in their workplace and to evaluate if they have enough knowledge about proper food handling of the food. In this study, also show how widen and alarming a food disease across the world. The participants were chosen wisely based on their performance on their said field and the researchers pick five (5) participants to participate. The researchers' implied semi-structured interviews and thematic analysis to gather and interpret data. They were able to form 6 themes that are divided into 3 categories by answering the research question of this study. It shows that lack of knowledge about food sanitation and poor personal hygiene causes the problem. Thus, the study finds out that having enough knowledge and complete personal hygiene is must.

Keywords: Food Sanitation Practices, Knowledge of Food Handlers, Personal Hygiene

INTRODUCTION

Background of the Study

For all countries, food safety is a major public health issue. The World Health Organization (WHO) shows that every year 350,000 people in the world die from food poisoning. During manufacture, distribution, and preparation, food may be contaminated at any point. Consequently, Foodborne diseases are widespread and represent a serious health threat, affecting the most severe children, pregnant women and the elderly, in both developed and developing countries.

A lot of foodborne disease outbreak occurs in the Philippines. For this reason, on August 23, 2014, President Benigno S. Aquino III signed into law Republic Act (RA) No. 10611 otherwise known as the "Food Safety Act of 2013". Republic Act 10611 works by the principles of food safety to protect human life and health and in the production and consumption of food and protect the interests of consumers through fair food trade practices.

In Davao City, the Davao City councilor expanded the food safety order due to several food poisoning incidents. Before the seller can sell in the Roxas Night Market, they must first meet a particular requirement to be passed explicitly in the Davao Environmental Sanitation Office in the City Government. These requirements are necessary to ensure the safety and cleanliness not only of the food and products they sell but also of the credibility of the sellers themselves, as well as to assure the food safety and proper sanitation of Roxas Night Market to loyal buyers and consumers. (Bual, 2017). This proposed law will adopt the provisions of the Republic Act 10611, also known as "an act to strengthen the food safety regulatory system in the country to protect consumer health and facilitate market access of local foods and food products" (Colina IV, 2015). We researchers are encouraged to carry out this type of study because we want to know how they use the knowledge they have gained about food safety effectively and efficiently.

Lee et al. (2017). The purpose of the existing study is to asses or criticize

the learning of the food handler. as it is stated that food handlers play a vital role in ensuring the safeness' of the food so that the consumer of the food will not put into a severe illness.

Based on the previous study, it shows that the education level, working experience, and safe food handling course had different degrees of impact on food safety knowledge and attitudes of food handlers.

This qualitative approach enables us to find sufficient knowledge of Home Economics Students regarding food safety. The question that has not yet been answered or research in this type of field will somehow be answered because we will be going to extricate rich information in our study.

In summary, we are evaluate the sufficient knowledge among UIC Home Economic Students regarding food safety and how do they apply it in reality and would it help them to improve their skills based on their acquired knowledge.

Purpose of the Study

The purpose of this study was to determine the knowledge of the Home Economics students of the University of Immaculate Conception, specifically the cookery students of Technical Vocational strand, in performing the process of proper food sanitation. The researchers aimed in observing the student's ability in preparing the cooking area, the materials they are going to use, and the ingredients. Their understanding of personal hygiene would also be examined as it is considered a part of the proper sanitation process.

Research Questions

Food safety is a global concern covering a different variety area of everyday life.

So, we are going to inquire our participants regarding their food safety knowledge and other matters. The researchers will be going to conduct an interview using In-depth Interview (IDI) Techniques. These following questions will serve as a query to the participants throughout the interviewing session:

- What are the food sanitation practices of Home Economics students in UIC?
- Why is it important to know about food sanitation?

Theoretical Lens

The Theory of Planned Behavior is the Ajzen's theory which is in order to better understand how an individual's attitudes, subjective norms and perceived behavioral control may impact their disposition to perform a proper food sanitation practices. The TPB has been utilized extensively in an effort to understand what factors motivate behavior.

There are three major constructs that predict someone's intention. They are attitude, subjective, and perceived behavioral control.

Attitude. Attitude is a person's overall evaluation of what it would be like to perform a particular behavior. In other words, attitude represents the degree to which a behavior or action is positively or negatively valued. They are influenced by what I think will happen as a result of performing behavioral beliefs and how much they value that thing happening that's outcome evaluation. In general, if a person has an unfavorable attitude toward a particular behavior, the less likely it is that the person will engage in that behavior.

Subjective Norm. The degree to which the person feels social pressure to perform the behavior. What this suggests is that people consider the perceptions of significant others when deciding whether to engage or not to engage in a certain behavior.

We expect that the more unsupportive an individual's subjective norms are of intentional food contamination, the less likely will be an individual's intention to contaminate food.

Perceived Behavioral Control. It is the person's perception of the extent to which performing a behavior is under his/her control and typically is measured by ratings of the ease versus difficulty of performing the behavior. Basically, perceived

behavioral control should be associated with intentions because a person is less likely to perform a behavior that is perceived to be outside of their control. In the current study, it is expected that a lack of perceived behavioral control will dissuade individuals from intending to engage in food contamination

REVIEW OF RELATED LITERATURE

Food Safety

In the study of Fung, Wang, Menon (2018). Food is essential to life. Hence, food safety is a human right. Billions of people are at risk of unsafe food. Millions of people become sick while hundreds and thousands of people die yearly. In the 21st century, food safety issues have not decreased. Local outbreaks can turn into international emergencies due to the speed of and range of product distribution. The severe foodborne disease incidences occurred in every continent. Food safety depends on science and equitable law enforcement. Periodically, new laws and regulations must be an act to further project a continuing supply of food products that are secure and wholesome for the health and wellness of the people.

Rahman et al. (2012). Food safety may be a key public health concern. Food handlers play a vital role in guaranteeing food safety throughout the chain of storage, process production, preparation, and selling.

Food Handlers

In the study of Bas, Ersun, & Kivanc (2006). The researchers evaluated the hygiene, attitude, and practices of food handlers' in food Business in turkey. It shows that some food handlers in Turkish food business most likely have lack of knowledge in terms of food hygiene and possibly in their own personal cleanliness, as well that may result of food contamination that can cause illness to the consumer.

As well as stated by Ismael et al., (2015) that in spite handlers may be aware of the need for personal hygiene, some instances they do not understand critical aspects of personal hygiene such like cleaning work surface and control food temperature value while cooking and so as to prevent foodborne illnesses, their mentors need to access and improve student's knowledge, personal hygiene and the hygiene practices on food safety to consumers.

Personal Hygiene

According to Zeru (2007) & Genete (2002), Poor personal hygiene often gives to foodborne illness which states that food handlers' knowledge and handling practices need to be improve. Studies on the conditions of food and drink establishments have been minimal in Ethiopia.

Food Handling

Hlortsi & Owusu-Kwarteng (2017). Since food is handled by many individuals, thereby increasing the chances of food contamination due to improper handling. Deliberate or accidental contamination of food during large scale production might endanger the health of consumers and have very high impact in a country. The researchers concluded that the institutional food-handlers have eligible knowledge in food safety but this does not mean into strict hygienic practices during processing and handling food products.

Food Establishments

As reported by Arendt et al. (2013) In terms of securing the safeness of the food, the food service manager is also the person in charge for making sure employees follow safe food handling practice so consumers do not become sick from unsafe food and what would make managers more effective in their role. Most major thematic categories identified by the managers in this study included role identification, food safety training, manager effectiveness, and understanding why safe food practices are not followed can help operators delegate accordingly.

Making sure that the food served to customers is safe for consumption is a precedence for retail service operators such as the hospital, schools, catering, and also should aim on developing manager effectiveness, role understanding, and training to promote a safe food climate.

Food Handlers

Abera et al. (1995 & 1996). A study conducted among food handlers in Bahir Dar town stated that most of them are infected with enteric bacteria and parasites. Good personal hygiene and food handling implementation are the basis for blocking the transmission of pathogens from food handlers to the consumers.

Owusu-Kwarteng, Akabanda, Hlortsi (2017). In massive scale cookery, food is handled by several people, thereby increasing the possibilities of food contamination thanks to improper handling. Deliberate or accidental contamination of food throughout massive scale production may endanger the health of customers and have awfully value repercussions on a rustic.

Food-borne diseases

Al-Nasraween (2018). Food-borne diseases will occur in any step of the long organic phenomenon cycle and consumers can get sick. Food handlers are thought of one in every of the foremost vital factors within the phenomenon since they are the one who is in contact with food throughout its transportation, storage, preparation, and commercialism. Food-borne diseases can produce a great burden on the economy, as well as medical, legal, and different expenses.

Food Handlers

In 2010, the World Health Organization printed a comprehensive assessment of food safety, that analysis enclosed substantial issues concerning the health implications of inferior data and practices in food handling, restrained human resources with food safety data, inadequate client awareness and lack of regulation of street foods and food handlers. Food handlers who received previous

food safety coaching had better total food safety data score than people who didn't receive training.

The study found that food handlers within the military hospitals expressed a high level of data, positive attitudes and sensible practices in food safety.

Food Service Establishments

According to (Patton D. 2004). Food safety is of maximum distress in the twenty-first century. Food service establishments are sources of food borne illnesses and food handlers contribute to food borne illness outbreaks (Olson SL, MacKinon L, Goulding J, Bean N, Slutsker L, 1993–1997). According to WHO (1989), food handling personnel play an important role in ensuring food safety throughout the chain of food production and storage. Mishandling and ignoring of hygienic weigh on the part of the food handlers can cause pathogenic bacteria to meet food and, in some cases, survive and it can cause multiple numbers of illness to cause in the consumer.

According to Gomes et al (2014). The food handler education in hotels should have a compulsory of instructive material (booklet) to develop further training knowledge in the hotel sector. Microbial indicators, such as mesophilic aerobic bacteria, coliforms at 35 and 45C were examined in utensils, adornments, food handler hands and ready for consumption foods should be having various or adverse conditions and routine task in an industrial kitchen environment. The microbiological analysis clearly should be demonstrated to obtain safe food beside for providing some examples to be inserted for any teaching materials such as a guidebook, focusing on food handlers who work on hotels would provide them enough knowledge.

Food Contaminations

Subsequently, In Mandal et al. (2011). Foodborne pathogens are substances such as parasites or bacteria in food that cause illness and others are toxins that can cause food poisoning, and in severe cases, it can cause death. The growing case in this matter increases the demands of safe food preparation and supply.

In the study of Bosque (2018). There are different types of food contaminations and food can be contaminated due to the improper sanitation or handling of the food. These are the Biological Contaminants, Chemical Contaminants, Physical Contaminants, and Cross Contaminations. The cleanliness, cooling temperature, and food storage are also considered as part of it also.

Moreover, in Wolfram T. (2017). The sources of many food poisoning are bacteria, viruses, and parasite, usually due to improper handling of the food. Most common foodborne pathogens that are discovered in food are Salmonella, Clostridium Perfringens, Campylobacter, Staphylococcus Aureus, E.coli, Listeria Monocytogenes, Norovirus, Toxoplasma gondii.

Here are some examples of the possibilities that might contaminate the food:

According to most of the studies, common microbiological contamination of food appeared in food and drink institutions due to contaminated food contact surfaces, weak personal hygiene practices, and improper storage temperature. Schlegelová (2010).

Moreover, In Ravishankar et al. (2010). Cross-contamination of foodborne pathogens from raw meats like ready to eat food has caused major outbreaks of foodborne diseases to prevent it we must first wash the knife and cutting board separately with running water after cutting raw food.

In the study of Fung, Wang, Menon (2018). The food chains start from farm to pork/plate while challenges include microbial, chemical personal and

environmental hygiene.

According to (Patton D., 2004). Food safety is of maximum distress in the twenty-first century. Food service establishments are sources of food borne illnesses and food handlers contribute to food borne illness outbreaks.

Food Handlers Responsibilities

According to WHO (1989), food handling personnel play vital role in ensuring food safety throughout the chain of food production and storage. Mishandling and ignoring of hygienic weigh on the part of the food handlers can cause pathogenic bacteria to meet food and, in some cases, survive and it can cause multiple numbers of illness to cause in the consumer.

also, in the study of Kibret & Abera (2012). The lack of basic infrastructure, lack of information of hygiene, an absence of potable water, lack of correct storage facility and unsuitable environments for food operations (such as proximity to sewers and garbage dumps) will contribute to a bad microbic quality of foods. Inadequate facilities for disposal expose any hazards additionally poor sanitary practices in food storage, handling, and preparation will produce a setting within which microorganism and different infectious agents are a lot of merely transmitted. Moreover, inadequate time and temperature management and cross-contamination are liable for sickness outbreaks. Foodservice institutions are sources of foodborne diseases and food handlers contribute to foodborne malady outbreaks. Mishandling and disrespect of hygienical measures on the part of the food handlers might alter unhealthful microorganism to return into contact with food and in some cases survive and multiply in sufficient numbers to cause malady within the shopper. Poor personal hygiene often contributes to a foodborne ailment that indicates that food handlers' information and handling practices must be improved. The hands of food service workers will be vectors within the unfold of foodborne diseases due to poor personal hygiene or cross-contamination.

Therefore, Educated Government offices must implement sustenance Medical supplier to stay energetic to anticipate foodborne ailments and consider treating illness with safe eating routine. With the new technological advances, new regulations must be enacted to protect a continuing supply of food products that are safe and healthy for the health and wellness of people.

The nourishment makers, wholesalers, handlers and sellers bear essential duty while customers must stay careful what's more, educated. Government offices must implement sustenance wellbeing laws to defend open and singular wellbeing. Medicinal suppliers must stay energetic to anticipate foodborne ailments and may consider treating illnesses with safe eating routine treatment under legitimate therapeutic. Fung, Wang, Menon (2018).

Therefore, to lessen foodborne illnesses, it is critical to gain assimilation of the knowledge and practices of food handlers (WHO 2000).

METHODOLOGY

Research Design

The qualitative research which the respondent only on the participants' interviews to gather data such as understanding the life of the participants and their everyday living in a society (De Vos, 1988). The qualitative approach focuses only on the qualities of human behavior. (Ferreira, Mouton, Puth, Schurink and Schurink,1988). It aims the people action and their every action throughout their own daily living to gather data, to evaluate, not to generalize them rather than to understand and to interact the meanings and intentions that underlie only in the humans everyday living (Bailey,1987, Bogdan and Taylor,1975, De Vos 1998, Taylor,1975, Ferreira et al. 1918).

Qualitative design deals with data primarily focus on the use of verbal languages and derive meaning from its participants point of view and also understand and to give a intention of participants life (Bless & Higson -son,1995, De Vos 1998). This study aims through the objective experiences of the participants on the process of interviewing in collecting facts, information, and their everyday living. (Marshall & Rossman,1995). Furthermore, the outline that the qualitative approach is to research its respondents uniquely suited for the information about their self and finding facts cannot give more explanation or farther more knowledge.

Sampling Method

The researchers will be going to utilized the Purposive Sampling Technique in terms of collecting data. Purposive sampling is also known as judgment, selective or subjective sampling. It is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study. (Dudovskiy, 2018).

The researchers purposively selected participants who are in line in our study which is the Cookery Students in Home Economics specifically, Gr. 11 St. Martha.

Participants

The researchers approached and invited prospective participants to participate in the study after they had been selected. The information sheet was given to them so that they can have the knowledge of their right to refuse participation and that participation was voluntary. They were also made aware of their right to withdraw from participating in the interview when they declined to participate.

The researchers will choose 5 participants which is the UIC cookery students Technical Vocational (TechVoc) strand specifically the Gr. 11 St. Martha aged 16 – 19 years old who will spontaneously give their approval to take in an In-Depth Interview (IDI).

Research Instrument

In this Phenomenological study, the questions were well presented by the researchers. The question will go through first with the assessment and affirmation process conducted by the researcher's validator Mr. Joseph Dave Pregoner. After the affirmation, it will be place into a small-scale trial or preliminary study. The instruments that the researchers will be utilized in this qualitative research is interview questions and it will be recorded for legit purposes. The questions will be composed in English form but, they can use any language where they are more comfortable to speak so that, they can express freely without hesitation.

Data Collection Method

In this research, the data was collected through Face-to-face individual interview. As stated by Ferreira at al. (1988), interviewing is that the most vital information assortment instrument. The interviews were semi-structured, that is a

listing of queries and problems to be mentioned was ready before the interview. The semi-structured interview gave an area for longing for clarification and additional discussion of vital and relevant problems that arose throughout the interviews. Wherever necessary, questions were detailed to suit a specific participant. Face-to-face interview changes the analysis to scan the non-verbal communication and reactions, that proven to be useful within the analysis of knowledge. The interviews were audiotaped and later transcribed. This was proven to a valuable facet in rapport building between the investigator and therefore the participants because it was evident that a number of the participants appeared inspired by the researcher's non-judgment perspective towards them. At the identical time, the researchers were cautious of the emotional involvement that might "have an effect on the validity and therefore the responsibility of the info" (Ferreira, et al., 1988:147). Bogdan & Taylor (1975) add that it's the interviews responsibility to make an environment within which participants can feel comfortable enough to speak freely and brazenly. This was achieved by permitting participants to require part in selecting an acceptable and contributory venue for the interviews.

Data Analysis Method

Base on Douglas Ezzy Professor of Sociology at the University of Tasmania (2000). That the results were analyzed by describing the method of data analysis, it's a way of analyzing the data by organizing it into categories on the basis of themes, it can also have similar features. The procedures of the researcher are primarily designed and reduce by categorizing the large quantities of data into more meaningful interpretation (Singleton,1997). The steps that are used by the researcher was developing themes were it well informed. Marshall & Rossman (1989) in De Vos (1998) it also includes the following procedures:

Organizing Data:

The transcribed data was repetitively browse through for the researcher to be acquainted with the information.

Generating Categories, Themes, and Patterns:

This is a phase, where creativity and analytical thinking skills are essential. The researchers took note of several recurring ideas and patterns of belief from the research participants, which could be a great help in understanding the results as a whole. These were set as the themes and patterns. Next, the said ideas and patterns were grouped according to what clearly identifies one as distinct to another. The groups formed were then called categories.

Testing Emergent Hypotheses:

The patterns and categories that were consistently visible to the data were the results to determine its credibility and usefulness.

Also, the amount of information that each hypothesis provides was evaluated.

Searching for alternative explanations:

When the data collected materialized the categories and patterns between them, the researcher enwrapped in challenging the pattern that seemed evident. Alternative explanations were looked and described until the most analytical of all expectations are reached by the researcher.

Report the results:

By presenting the outcome report, the researchers bestow shape, interpretation, and significance to the massive amounts of raw data.

Trustworthiness of the Study

The researchers provided letters to the five participants as this qualitative case study was conducted. These letters contain the agreement that every information collected will only be used for the study and will be expected to be

treated as confidential as possible. The research should have credibility, transferability, reliability, and confirmability to assert trustworthiness. In terms of validity, the researchers were confident that this research was valid, as they were able to identify appropriate operational measures for the concepts being examined. (Pandey and Patnaik, 2014) since the interview is very beneficial for attaining the participants ' background and providing in - depth information on the topic. (McNamara, 1999).

As the five participants have enough knowledge about our food safety study, the researchers have confidence that the result of this study is credible. Without interruption from the researchers, participants can speak and express themselves. Lincoln and Guba (1985), it affirm that it is the responsibility of researchers to provide substantial background and contextual information about the study that is carried out to lend transferability. The researchers provide a thick description to strengthen transferability, a term created by Greetz (1973), which indicates that research must not only have accurate information yet also rich commentary and interpretations. Based on the experience filed, the researcher will provide specific and enriched information. Given the filed experiences, the researcher will provide specified and nourished details. A researcher should conduct an interview audit to establish dependability according to Lincoln and Guba (1985). In our research we will have an outsider who doesn't belong to our research group, it will just study and examine both the process and also the outcome of the study (Lincoln and Guba, 1985). The outsider will describe in full detail how the data have been collected, how categories were obtained and how decisions have been taken in the course of the research or survey. The goal in doing this is to assess the accuracy and evaluate whether the data collected to support the interpretations, conclusions, and results. The researchers were confident to confirm that every form of plagiarism is not tolerated and carried out during the whole study. The way questions were asked toward with the participants was dealt with great respect. The researchers ensure that any data obtained in this research is not manufactured and falsified. After transcribing their answers, the

respondents evaluated and checked it and were asked to sign on the bottom right if everything was credible as a sign of legitimacy.

Ethical Consideration

The participants were given an informed consent and agreed during the close up with them. This was achieved by both reading the informed consent of participation and tape-recording with each party and by subscribing to arrange and grant their consent. Privacy infers the dignity of the other party should be respected, and they were already informed about it. Therefore, it was important that they should have no doubts if any related information provided would be observed with confidentiality (Feirra et al., 1988). The participants are already informed that their privacy and other confidential information will be accessed only by the researchers and the supervisor. They did not require to provide any identifying details, transcripts and the final report would not reflect the other party's identifying details such as names, though other parties were comfortable with their personal details being published. The informations that is being used has been put in a safe and confidential place after transcribing and if the report is written and the study is finish the paraphernalia would be shattered.

Role of the Researchers

The researcher will be the one to accumulate the information and lead the meeting to have an accurate and top and bottom data about the participants experience besides, the researcher will be the person who will put and discover the answer of the issue in this study. Also, they will locate the central idea of phenomenological study. They will give a test question to dig deeper with the research questions. And they will record and transcribe the answer of the respondents and will fine the central theme of the phenomenological study.

RESULTS AND DISCUSSION

This chapter has been formulated to answer the research question keeping the literature review and research findings from the interviews in consideration.

Research Question 1: *What are the food sanitation practices of Home Economics students in the University of the Immaculate Conception?*

The participants clearly explicated that food safety is becoming increasingly important in one's life, especially in the context of food handlers. They were aware that foodborne illness, a result of not following the basic food safety practices, constitutes a significant burden both economically and socially on the society and their health systems. When asked by different food sanitation practices, the participants were straightforward with their answers. Presented in the following are the key themes formulated after the interview extracts. The sub-themes were also shown as well as the quotations. Related studies were also provided to support the findings of the study.

Personal cleanliness

All of the participants mentioned that food safety starts from the food handlers. They believed good *personal hygiene* is vital for both health and social reasons. First, they urged that it entails keeping the hands, head and body clean so as to stop the spread of germs and illness to the foods they are handling. Second, good personal hygiene was believed to benefit their own health and impact the lives of those around them.

"I think good personal hygiene could prevent food poisoning. Imagine the bacteria that cause poisoning of food ... these are still the bacteria that can be passed and further contaminate everyone – even the healthy ones." (Participant A)

When asked about food sanitation practices, one of the participants was explicit and uttered the techniques to achieve good proper hygiene.

“I always make sure that I wash and dry my hands thoroughly before handling food, and wash and dry them again regularly during cooking. Aside from that ... when I get sick, I see to it that I never cough or sneeze over the food I prepared ... or where the food is being prepared or stored.” (Participant C)

Another participant associated good personal hygiene to good business sense.

“If I were a customer, I love to see food-handling staff who take hygiene extremely and practice safe food handling. This in turn would greatly affect the income of the food business.” (Participant D)

As examined in the abovementioned interview extracts, it is clearly stated that personal hygiene plays a significant role in food sanitation. This concurs to the findings of Ismail, Chik, Muhammad, and Yusoff (2016), concerning the importance of hygienic practices to food safety in Shah Alam Selangor, Malaysia. The study recommended that in order to prevent food borne illnesses, food owners need to improve and access food handler's knowledge, personal hygiene and the hygiene practices on food safety to customer. Another study also recommended the management to select healthy and clean food handlers and ensure that they conduct enough hygienic trainings (Akabanda, Hlortsi, & Owusu-Kwarteng, 2017). Furthermore, the study revealed that food handlers must be held responsible for personal hygiene so that the food that they handle remains wholesome.

Aside from acquiring proper hygienic practices, proper *handwashing* was thought to be one of the most significant steps in achieving personal cleanliness, thereby, preventing cross-contamination from handler's hands to foods. The participants were cognizant that harmful bacteria present on the hands can be removed by proper hand washing techniques.

They mentioned that handwashing becomes a part in everyday activities as this is strictly imposed since time immemorial.

“Of course, handwashing is the most basic step. I know it already since I was a lad.” (Participant B). *“The first time you cook, your reflex should be handwashing. It’s a rule that does not need to be imposed.”* (Participant E)

Handwashing and food safety have been associated in many studies. For instance, Brown et al. (2018) found out that the spread of germs from the hands of food workers to food caused 89% of outbreaks in which food was contaminated by food workers. Moreover, the study suggested the need for proper handwashing to reduce germs on workers’ hands as well as to reduce the spread of germs from hands to food and from food to other people. Handwashing was also found out to preserve the food to three times its spoilage time (Strohbehn, Sneed, Paez, & Meyer, 2018). Increasing the frequency of handwashing has a direct impact on food safety in terms of preservation time and quality of food according to the same study. This study implies the significance of handwashing in the part of food handler and in the part of the foods being served.

Another noteworthy finding is the *eating and drinking practices* of food handlers at work. They mentioned that it is not good to eat and drink in food preparation and service areas. They believed that they should eat and drink in designated areas only, never in the work area. Eating was not allowed in the production and service areas.

“When the quality of food we prepare is poor, it will reflect on the food handler. If we drink beverages for example accidental spilling of these drinks to the food would degrade the food quality.” (Participant B)

“I am afraid the customer will scold me because of my mistakes. If they see

me eating the foods I serve, they will just say that I am eating the food I am serving to them.” (Participant A)

This finding agrees with those of Kibret and Abera (2012), concerning the rules governing the designated areas for drinking and eating of employees of food establishments. According to the study, customers often perceived employees eating foods inside the establishment as somewhat eating their own ordered food and that the level of trust of the customer decreases as the frequency of this happening increases. This finding implies that eating and drinking practices of food handlers, not just affect their image on the part of customer, but also the food they are handling. Proper management and designation of eating and drinking areas should be strictly observed.

Cooking, holding and serving procedures

All of the participants mentioned ways to preserve quality of foods. These were thought to be useful when serving customers for immediate service. One of the prominent ways was *reheating* of foods. They agreed that reheating can be an alternative way of keeping foods fresh.

“I usually reheat the foods from the refrigerator and serve them ... there’s really nothing wrong with it as long as the smell is good.” (Participant E)

One participant mentioned that the best way to preserve excess food was through reheating. He did not know what parameters must be operated while reheating but he believed that the temperature does not matter as long as the food is heated, then the food is safe and more bacteria are being killed.

“Heating the food ... for example, from yesterday ... I set the hot plate to either low to medium ... I believe it will kill bacteria.” (Participant A)

Reheating of foods is one way of preserving leftovers. As stated by the participants, no set parameter was used in reheating the foods. According to Hanes (2012), reheating of foods involves heating factors to kill any bacteria which may have grown on the food in the fridge. These factors include setting the heat to steam hot until it reaches to 165° F. Furthermore, to retain moisture and ensures that food will heat all the way through, she added that the leftover should be covered to reheat. She noted that sensual observation such as smelling or looking the foods can be helpful but reheating is the most important way of preserving leftover foods. This finding clearly implies that there is a need to revisit the practices of the students in terms of reheating the foods. Further lectures should be done to increase the level of knowledge of food handlers about preserving of foods, especially reheating the leftovers.

Some of the participants spoke that *segregation of foods* was vital to food sanitation. They were knowledgeable about the possible effects of mixing fruits that ripen fast and those that are slow.

“When we mix these foods, all of them would rot and cause unwanted smell in the whole place.” (Participant B)

A study found out that hygienic separation design is the key for integrated food safety (Lubos, 2014). According to this study, segregation can increase the shelf life of foods being served in the fast-food services as well as in street vending systems. Furthermore, the study revealed that one way of preventing unwanted harm to other foods is segregating them according to the expiration date and manufacturing date.

Equipment and other contamination

Materials, as well as the machines used in cooking and preparing foods are potential sources of contamination. The participants spoke the importance of cleaning these to promote sanitation not just in the work area but also in the foods

prepared. They believed that *maintaining the facility and equipment clean* would ensure the safety of foods served to customers.

“The materials that we are using are cleaned before and after use to ensure sterility and to avoid contamination.” (Participant E)

One of the participants clearly expressed his way of cleaning the materials:

“All flatware, serving dishes, and utensils are washed, rinsed, and sanitized after each use. That is my job. I do this not just it’s my job but also to avoid unhealthy conditions.” (Participant D)

The significance of cleaning the equipment used in food delivery must obviously be evident in all aspects. Jin-Park and Hee-Kim (2016) contended that sanitation of equipment and instrument used for cooking has significant impact on the number of contaminations generated by the food establishments in South Korea. Accordingly, bacterial growth is less likely to happen if equipment and instruments are monitored, evaluated, and cleaned in daily basis.

Presented in table 1 are the themes and sub-themes after the analysis of findings of the study. Personal hygiene, handwashing and eating and drinking practices unite to form a theme of personal cleanliness while reheating and segregation of foods unite to form a theme of cooking, holding and serving procedures. The sub-theme, maintaining the facility and equipment clean, forms the main theme of equipment and other contamination.

Table 1. Thematic analysis

Themes	Sub-themes
Personal cleanliness	Personal hygiene
	Handwashing
	Eating and drinking practices

Cooking, holding and serving procedures	Reheating
	Segregation of foods
Equipment and other contamination	Maintaining the facility and equipment clean

Research Question 2: *Why is it important to know about food sanitation?*

As discussed previously, food safety and sanitation are important parts of the food industry. Accordingly, food sanitation is a discipline describing handling, preparation, and storage of food in ways that prevent foodborne illness. This includes a number of routines that are outlined in the previous research question. While there are a lot of practices of sanitation, the reasons behind those sanitation techniques should not be overlooked. All of the participants spoke about how food sanitation practices learned from school reshaped their thinking. They provided ingenious reasons why food sanitation is vital to learn to avoid potential hazards.

In the context of the participants, the importance of knowing food sanitation was related to foods served, food handler and customer. Themes were arranged according to this category. Themes were given as headlines in bold and the subthemes are marked in italics within the text.

Related to food

Many participants reported that in order to maintain the quality of food, it should be *preserved*. Hence, knowing the proper food sanitation techniques would ultimately increase the shelf life of food.

“All of my learnings would be useless if I let the foods spoil. I am here in school to learn ... to know how to preserve food ... that’s the biggest contribution I can give to my teacher and customer.” (Participant B)

“Knowing how to properly wash the raw foods ... and all other food safety

practices ... I am confident that I would prepare foods that taste good and do not easily rot.” (Participant C)

Participants were also aware about the possible accumulation of bacteria if they do not know the basic hygienic practices.

“It is taught that when you forgot to clean what you used, there is a big chance that it will be contaminated with bacteria ... these are just gross ... it would just degrade the entire place.” (Participant E)

A totally different perspective was uttered by one of the participants concerning his reason of knowing the food sanitation. The way the food looks on the plate or the *presentation of food* is tantamount to the level of hygienic practices being implemented.

“If you are meticulously doing proper hygiene and sanitation on the foods you prepare, then, you have a good food plating. How you treat the food reflects your food presentation.” (Participant A)

According to Prokopov and Tanchev (2007), preservation and presentation of foods are mirrored by the entire diligent food processes applied by the food staff to ensure sterility and safety. Presentation of food or food plating is a result of accurately designing the food, from proper handling and cooking to proper serving to the customers.

Related to food handler

The participants perceived themselves as the primary carrier of food contaminants. They viewed themselves as potential source of bacteria that can harbor diseases from the environment and pass to the foods they are handling. With this, they believed that they have the greatest responsibility of preventing contamination among any others. They mentioned that acquiring enough

knowledge about the sanitation practices would mean considering the *safety of the* customers involved.

“I know that if contamination would happen, we, the food handlers are the first to be blamed ... I strive hard to learn from my teacher to avoid this happening ... to ensure safety of the customers.” (Participant A)

Participants identified themselves as the end-user of the foods they served. They took up some leftovers and consumed them at the house. They were conscious that whatever they prepare would pose significant *health* hazards against them.

“Of course, the practices are important to me, especially on my health. I heard a lot of food contamination victims from other establishments and I don’t want it to happen to me and my family.” (Participant B)

“The total accumulated bills in the hospital [contamination victims] can be prevented by knowing all of the food sanitation practices ... I am such grateful I am here in school to learn a lot of those practices.” (Participant D)

Another significant reason of the participants was *enhancement of skill*. They believed that acquiring the necessary information about food sanitation would develop their growth professionally and help them accord to the international standards.

“If you know these basic protocols ... you know it to yourself that you have gain something others have not.” (Participant E)

“You are confident enough to prepare and serve foods because you believe you know what are the things to do. It’s like a trademark of Home Economics student.” (Participant B)

Related to customer

Noteworthy finding of this research question was the involvement of customer in the reason of the participants in knowing the food sanitation practices. It was observed that most of the participants realized that the foods they prepared, cooked and served are all for the customers who want to be satisfied with their hunger and thirst. They mentioned that what the customers see on the food handler would mark an embarking impression not only on the foods and the establishment, but most importantly on the food handlers.

“I don’t want to be judged from my mistakes ... for example, serving foods with dirty hands. It could affect me, the establishment and the foods served.”
(Participant B)

“To gain respect from your boss [the customers], you have to be clean ... you have to know the basic hygienic practices. It starts from yourself.” (Participant C)

These *attitudes of customer towards food handler* had greatly impacted the willingness of the participants to know the food sanitation practices. Aside from that, it is their utmost fear to inflict *health hazards to their customer* by way of food they serve.

“I am afraid my customer would be contaminated with the food I served or prepared. That is why I am cautious.” (Respondent E)

“You don’t want to be scolded by your teacher or supervisor ... you need to pay attention on the safety of customers ... a single mistake would change your life.” (Respondent D)

Presented in table 2 are the themes and sub-themes after the analysis of findings of the study. As shown in the table, preservation and presentation are the

sub-themes related to food while safety of customer, health and enhancement of skill are the sub-themes related to food handler. Attitudes of customer towards food handler and health are the sub-themes related to customer.

Table 2. Thematic analysis

Themes	Sub-themes
Related to food	Preservation
	Presentation
Related to food handler	Safety of customer
	Health
	Enhancement of skill
Related to customer	Attitudes of customer towards food handler
	Health

Conclusion

The researchers evaluated their practices regarding in maintaining the cleanliness of the food. After analyzing of the data that we've gathered we found out that the knowledge of some home economics is not that enhanced. The food handler must be cautious about their practices and their mentors still need to teach them more about the food sanitation because if their knowledge is not that accurate that may lead their consumers at risk.

Recommendation

For the better of the researcher study, and the incoming generations planning for its development, the following recommendation by the researchers:

The researcher must be cooperative on the task given to them in conducting the research paper.

- Do not only choose 3-5 participants, choose more in order to gather enriched informations.
- The researcher must help one another for better studies.

- The researchers must properly do their task and be helpful to others.
- The researchers must use their brain and must not depend to others.
- The researchers must say good bye to others.
- The researchers must need patients.

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