



## SANITATION PROCEDURES IN FOOD SERVICE ESTABLISHMENT IN TAGBILARAN CITY, BOHOL

**Marigen E. Toraja, Ph. D**  
**Bohol Island State University**  
**Calape Campus,**  
**Calape, Bohol**  
**Email: marigen.toraja@bisu.edu.ph**

---

### ABSTRACT

The study's major goal was to evaluate the sanitation practices in food service establishments in Tagbilaran City, Bohol, in preparation for a suggested sanitation program. It sought to ascertain whether the food service facilities complied with the requirements regarding floor space, comfort rooms, and restrooms. Its goal was to identify the sanitation practices used in food service establishments in Tagbilaran City, Bohol, as witnessed by managers, patrons, and employees during various tasks and locations. It also learned about the sanitary inspectors' assessment of the status of the food service facilities and the issues that management and staff had with particular food service facilities' sanitary procedures.

The location of this study was Tagbilaran City. Only the city's four medium-sized food service facilities are chosen by the researcher. The study's respondents included food service managers, staff members, patrons, and sanitary inspectors assigned to Tagbilaran City. To learn more about the state of the sanitation procedures at the chosen food service establishments in Tagbilaran City, the researcher distributed a questionnaire.

Based on the findings, the researcher came to the conclusion that food service centers in Tagbilaran City did not entirely adhere to the requirements for floor area and restrooms. Their employees need training on food safety and sanitation, and they lacked the requisite equipment. The food service facilities did not fully adhere to the sanitary practices. It was also made clear that the food service facilities' issues were caused by a lack of thermometers and a lack of equipment for ensuring the safety of the food.

The researcher suggests doing food safety and sanitation training for the awareness of all food handlers or employees of food service organizations based on the findings. The policies of food safety sanitation must be strictly implemented, and local government entities must be involved. It is necessary to get the necessary tools and equipment for sanitation and food safety. Additional research should be done regarding food service facility sanitary practices.

### INTRODUCTION

An essential component of existence is health. To develop, generate, and retain excellent health, humans require food. Human bodies require food to maintain body temperature, grow or repair tissue, and beat the heart. Eating healthy foods can help people stay healthy and recover quickly from illnesses. It can also help avoid some diseases.

Many people now purchase their meals outside of the home, whether from fast food restaurants, street sellers, or vending machines. They occasionally bring other prepared meals from home and eat them somewhere else, whether it be at work, at school, or on a picnic. Whatever the circumstance, the same food safety regulation will apply.

In this regard, food safety has elevated to a special concern for the retail food sector. Food can actually get contaminated quite a bit between manufacture and consumption. Additionally, food is infected when being transported to food businesses and at food processing facilities.

Humans who do not practice good personal hygiene are a major contributor to outbreaks of foodborne illness. Employees run the risk of contaminating food by not often washing their hands, especially after handling potentially dangerous foods, and by not using protective gloves. In his mouth, throat, and nose, even a healthy individual may have bacteria like staphylococcus. Shigella, Clostridium perfringens, Salmonella, and Hepatitis A are further bacteria that humans transmit. Maintaining personal hygiene is the best approach to stop human outbreaks of foodborne illness. The misuse of time/temperature, cross-contamination, and inadequate personal hygiene are three major areas where there are some of the most frequent safety issues in the daily manufacturing of food.

According to Jose P. Sollano, thirty primary school students at the San Jose primary School in Mabini town, Bohol, died from food illness in March 2005 after consuming a local delicacy made from cassava flour. According to radio reporter George Evardo, a resident of Bohol, cassava, also known as balanghoy, should be prepared correctly, especially during the hot season, as the incorrect method can result in bacterial poisoning.

Another incident happened, One person passed away and 40 others, predominantly Grade 11 students, were hospitalized in November of 2022 in Iloilo City after a party was alleged to have had food poisoning. Nine patients are being treated at Gov. Niel D. Tupas Sr. and 21 at Sara District Hospital in Sara, according to Dr. Sarrie Masongsong, head of the Ajuy Rural Health Unit (RHU). Barotac Viejo District Hospital and 10 at the RHU. The majority of the injured students are in Grade 11, but they come from all sections, so it can be somewhat classified as food poisoning. Three professors and about 37 pupils attended Pili National High School. Other people also displayed minor symptoms,

In this instance, a food service establishment must abide by the relevant legislation in order to operate legally and to guarantee that the general public's health is safeguarded. The Philippine Constitution specifically states in Article XIII, Section 12 that "The State shall establish and maintain an effective food and drug regulatory system and undertake health manpower development and research responsive to the country's health needs and problems." This emphasizes the crucial role that food safety plays in society. This article supports the need for a food and medicine regulatory framework that may direct the manufacturing procedures used in food service establishments.

## **METHODOLOGY**

### **Design**

With the help of a questionnaire that was given to the respondents, the descriptive survey method was used to achieve the goal of the study. For the respondents who had trouble understanding the instrument, interviews in the local dialect were included.

### **Environment**

The location of this study was Tagbilaran City. The provincial capital of Bohol is Tagbilaran City. It serves as the hub of tertiary education, business, and commerce as a city. Due to its airport and seaport, a sizable influx of tourists from various locations visit it. Its 3,270 hectares of land are divided into an

elongated strip with ridges and undulating hills, as well as 13 kilometers of coastline. As a city, it offers a wide variety of hotels, pensions, entertainment, and other tourist-friendly amenities.

### Respondents

Regardless of age, sex, level of education, color, or religion, the participants were managers and staff from a few chosen food service establishments in Tagbilaran City. The managers and staff of particular food service facilities served as the study's respondents. There were 250 participants total, including 40 staff, 4 managers, 200 consumers, and 12 sanitary inspectors. They were the most qualified individuals to respond to the questions, thus the researcher chose them as the responders.

#### Distribution of the Respondents

Foodservice in Tagbilaran City	No. of Managers	No. of Employees	No. of Customers	No. of Sanitary Inspectors	Total	Retrieved Questionnaires	%
A	1	10	50	3	64	64	100%
B	1	10	50	3	64	64	100%
C	1	10	50	3	64	63	98%
D	1	10	50	3	64	64	100%
Total	4	40	200	12	256	255	99.50%

Table 1 presents that a total of two hundred fifty-six respondents were given a copy of questionnaires for them to answer. Four respondents were managers, forty employees, two hundred customers, and twelve Sanitary Inspectors. There were Two hundred fifty-six questionnaires and (99.50 percent) questionnaires were all retrieved.

### Instrument

The purpose of the questionnaires was to obtain information for analysis and evaluation of the hygienic procedures of particular food service establishments in Bohol, notably in Tagbilaran City. The reference book and a textbook on safe food serving and food safety and sanitation by McSwane D., 2006, served as the foundation for creating the questionnaire.

Three key sections made up the questionnaires. In the first section, the respondents were required to provide information about their age, sex, and level of education. The second portion focused on evaluating the various sanitary practices used in food service facilities, the third on identifying the challenges faced by managers when it came to sanitary practices, and the fourth on the management's sanitation program.

Before actually administering the questionnaire, a dry run was conducted to validate it. It was given to five managers, five workers, and five sanitary inspectors who weren't participants in the original study.

### Statistical Treatment

The data gathered were tallied and subjected to the following statistical treatment:

1. Weighted mean

To determine the status of the Sanitation Procedures and the problems met by the selected food service centers in Tagbilaran City as perceived by the employees and guests, the weighted mean was used.

$$\bar{x} = \frac{\sum fw}{N}$$

- Where:  $\bar{x}$  - the weighted mean
- $\sum fw$  - the sum of the products of f and w
- W - the weight equivalent
- f - the frequency
- N - the number of respondents

The status of the sanitary practices of the food service centers was described by using the scale below.

SCALE	DESCRIPTION
4.21 - 5.00	= Always
3.41 - 4.20	= Often
2.61 - 3.40	= Sometimes
1.81 - 2.60	= Rarely
1.00 - 1.80	= Never

This chapter covers the presentation, analysis, and interpretation of the data gathered. It represents the status of sanitary practices of the selected food service centers in Tagbilaran City.

Table 1 reflects the foodservice centers compliance with the standard in terms of floor area, comfort rooms and lavatory. Some areas of foodservice centers such as the dining room, kitchen and the floor area of the foodservice unit including the number lavatory did not meet the standard requirements. The comfort rooms for male and female are partly complied.

A standard area is an important feature of food establishments since the equipment used in a food establishment is subject to constant use. Area must be designed to function properly when used for their intended purposes and to prevent contamination. The work center should be large enough to do the job yet compact enough to reduce travel and conserve time and energy thus contamination is prevented

Table 1  
Foodservice Centers' Compliance with the Standard in terms of Floor Area, Comfort Rooms and Lavatory.

N= 204

Floor area	Standard requirements	A w/ 104 seating capacity		B w/ 80 seating capacity		C w/ 60 seating capacity		D w/ 200 seating capacity	
		Actual N=204	Remarks	N=204		N=204		N=204	
1. Dining Room Floor Area	12 sq. ft Per person	196.8 1.89/ person	Not complied	213.2 2.6/ person	Not complied	190.25 1.5/ person	Not complied	223.03 1/1 person	Not complied
2. Kitchen Floor Area	Not less than that 9.30 sq m	7 sq. m.	Not complied	15 sq. m.	Complied	10.5 sq. m.	Complied	17 sq. m.	Not complied

3. Floor Area of Food Service Unit	1.2 sq m. per person	0.65/ person	Not complied	0.85	Not complied	1: 08	Not complied	0425	Not complied
<u>Comfort rooms</u> # of comfort rooms for male	1:49	1:52	Partly complied	1:20	Complied	1: 30	Complied	1:50	Complied
# of comfort rooms for male	1:49	1:52	Partly complied	1:20	Complied	1:30	Complied	1:50	Complied
<u>Lavatory</u> No. of lavatory	1:29	1:34	Partly complied	1:20	Complied	1:60	Not complied	1:00	Not complied

Table 2 manifests the observations of the managers and the employees about the purchasing practices of the foodservice centers. It implies as evaluated and observed by the managers practicing at all times the so-called safety and sanitation. In like manner, choosing reliable suppliers who meet the health and sanitation standard as well as checking the expiration date of the products was fully practiced.

On the other hand, the employees agreed that the checking of expiration date is a must in food service centers because they are dealing with food. Through this simple activity the customer will be benefited and the food service as well. Most of the items included in purchasing were met and the necessities were last and were performed often. It implies that some of the activities to be considered were not given value or importance. Based on the responses of the respondents sometimes they failed to choose the reliable suppliers who met the health sanitation standard because the purchaser did not have the ample time to visit the suppliers' area.

Table 2  
Managers and Employees Observation about the Purchasing Practices of Foodservice Centers of Tagbilaran City  
N=204

Purchasing Practices	Managers		Employees		Ave. Wtd. Mean
	Wtd. Mean	Description	Wtd. Mean	Description	
1. Choosing reliable suppliers who meet the Health and sanitation standard	5. 00	Always	4. 8	Always	4. 9
2. Visiting and inspecting suppliers, facilities and procedures	4. 00	Always	4. 20	Often	4. 1
3. Working closely the supplier to set up proper procedures	4. 25	Always	3. 8	Often	4. 0
4. Checking the expiration date of the Products	5. 00	Always	4. 9	Always	5
<b>Average Wtd. Mean</b>	4. 6	Always	3. 6	Often	4. 5

Table 3 shows the observation of the managers about the sanitary practices of the foodservice centers in terms of receiving. The Foodservice Center inspected food right away before storing them.

They also checked the expiration date on the package; they inspected if there were insect infestation as well as the time, temperature indicator of each food delivered. It can be gleaned that all the products were received effectively and efficiently. They fully meet the standard requirements of food safety and sanitation in terms of receiving the items or products.

This table also reveals the observation of the employees about the receiving practices of the food service center. The employees agreed they were always implementing the sanitary way of receiving food in their establishment; they strictly followed the standard in receiving the food.

They checked and sanitized the product properly to ensure wholesome food. They believed that proper receiving will contribute to the safety of the customers good image of the foodservice centers. Preventing microorganisms can be done right in the receiving stage.

Table 3  
Managers and Employees' Observation about Receiving Practices Foodservice Centers of Tagbilaran City.  
N=204

Receiving Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd. Mean	Description	Rank	Wtd. Mean	Description	Rank		
1. Checking the expiration date on the Package	5.00	Always	4	5	Always	2	5.00	1.5
2. Checking any time-temperature indicator	3.5	Sometimes	8	3.7	Often	6	3.6	8
3. Checking for insect infestation	5.00	Always	4	4.9	Always	4	4.8	5
4. Never accepting any home-canned foods imported canned foods without the approval	5.00	Always	4	4.5	Always	5	5.00	7
5. Rejecting all cans with swollen sides or ends and the like	5.00	Always	4	4.9	Always	4	5.00	5
6. Rejecting a can or package without a label	5.00	Always	4	5.0	Always	2	5.00	15
7. Following Health Sanitation Standard	5.00	Always	4	4.9	Always		5.00	5
8. Inspecting all food right away before storing them	5.00	Always	4	5.0	Always	4	5.00	3
<b>Average Wtd Mean</b>	4.8	Always		4.7	Always	2	4.8	

Table 4 presents the storing practices of the Foodservice Center in Tagbilaran City as observed by the foodservice managers and Employees. The overall weighted mean of the foodservice centers is 4.8 which was described as “always”. It implies that storing of the items or products were performed perfectly. Monitoring food temperature, cleaning and sanitizing all utensils pest free, discarding meat that develops a sour odor, discoloration, slime and molds were practiced. Keeping food away from chemicals and the like were given importance. Storing should be given extra care and consideration, since it is very critical in the food establishment. Lots of people died because of the negligence in storing particularly in

labelling products and segregating them from the store room of chemicals. Employees noted that the establishments are always practicing food sanitation. It implies that the food service centers stored food and food items properly. They stored food only in the proper storage area; foods were away from the sewer and water lines and drains, and they provided enough slatted shelves for food, most especially they kept all foods away from chemicals. In other words they really conformed to the standard way of keeping food safe.

Table 4  
Managers, and Employees Observation about the Storing Practices of the Foodservice Centers in Tagbilaran City  
N=204

Storing Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd Mean	Description	Rank	Wtd Mean	Description	Rank		
1. Monitoring food temperatures	4.6	Always	13	4.7	Often	10	4.6	12.5
2. Labeling each food to be stored	4.5	Always	14	4.2	Often	14	4.4	14
3. Cleaning and sanitizing all utensils and equipment such as carts and dollies used in storing	5.00	Always	6.5	4.9	Always	5	5.00	3.5
4. Storing dry foods at least 6 inches off the floor out of the sunlight	5.00	Always	6.5	4.7	Always	10	4.9	8
5. Making dry storage areas well ventilated and pest free	5.00	Always	6.5	4.7	Always	10	4.8	10
6. Discarding meat that develops a sour odor, discoloration, slime and molds	5.00	Always	6.5	5.00	Always	2	5.00	3.5
7. Refrigerating most meat at an internal product temperature of 4.4 deg. Center grade ( 40 deg Fahrenheit ) or lower	4.8	Always	12	4.5	Always	12	4.6	12.5
8. Controlling the temperature in each of the storage area	5.00	Always	6.5	4.8	Always	7.5	4.9	8
9. Letting air circulate around food	5.00	Always	6.5	4.4	Always	13	4.7	11
10. Providing enough slatted shelves for Food	5.00	Always	6.5	4.8	Always	7.5	4.9	8
11. Storing foods only in proper storage area	5.00	Always	6.5	5.0	Always	2	5.0	3.5
12. Storing food in the original packaging as long as the packaging is clean, dry and intact	5.00	Always	6.5	4.9	Always	5	5.00	3.5
13. Keeping food away from sewer	5.00	Always	6.5	4.9	Always	5	5.00	3.5
14. Keeping all foods away from chemicals	5.00	Always	6.5	5.0		2	5.00	3.5
<b>Average Wtd Mean</b>	5.00	Always		4.5	Always		4.8	

Table 5 shows the assessment of the managers and employees about sanitary practices of foodservice centers in terms of preparing. One hundred percent of the respondents answered and rated the Foodservice centers in terms of preparation “always” meaning they passed the standard requirements of food safety in relation to the preparation of food.

Meanwhile, employees believed that cooking food thoroughly is the best way to kill the harmful microorganisms. Since the weighted mean of this foodservice center is 4.8 “always”, it signifies that the standard requirement in preparing was fully met. The rules pertaining to safe food preparation were followed by the employees. Preparation of foods in the food service centers is a very critical activity because food is prone to contamination.

Table 5  
Observation of Managers’ and Employees on the Preparing Practices of the Foodservices Centers in Tagbilaran City

N=204

Holding/ Serving Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd Mean	Description	Rank	Wtd Mean	Description	Rank		
1. Using covered holding pans and providing long-handled spoons and tongs so human hands do not touch the foods	5.0	Always	3.5	5.0	Always	1	5.00	1
2. Using properly cleaned and sanitized Utensils	5.0	Always	3.5	4.8	Often	4.5	4.9	3
3. Measuring temperature every two hours	5.00	Always	3.5	4.8	Always	4.5	4.9	3
4. Never touching the food-contact areas of glasses and tableware	4.8	Always	8	4.8	Always	4.5	4.8	8
5. Never stacking cups or bowls before serving them	4.8	Always	8	4.8	Always	4.5	4.8	8
6. Applying proper way of serving	4.8	Always	8	4.8	Always	4.5	54.8	8
7. Holding food at proper temperatures	5.0	Always	3.5	4.8	Always	4.5	4.9	3
8. Covering cuts, burns sores with tight, dry anti septic bandage	5.0	Always	3.5	4.8	Always	4.5	4.9	3
9. Keeping the hair clean and tied back	5.00	Always	3.5	4.8	Always	4.5	4.9	3
<b>Average Wtd Mean</b>	4.9	Always		4.8	Always		4.9	

Table 7 shows the observation of the managers and employees on the cooling practices of the food service centers. It can be gleaned that the foodservices center practiced keeping food or frozen foods



of the refrigerator for a short time as possible. Labeling cooked and stored foods with the necessary information and time they were prepared was also observed.

Table 7  
Observation of Managers and Employees on the Cooling Practices of the Foodservice Centers in Tagbilaran city.

N=204

Storing Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd Mean	Description	Rank	Wtd Mean	Description	Rank		
1. Labeling cooked and stored foods with the date and time they were prepared	5.0	A	2	4.9	A	1	5.00	1.5
2. Never using Storage refrigerators or freezers to cool foods	4.5	A	4	3.9	O	4	4.2	4
3. Cutting large items into smaller pieces	5.0	A	2	4.6	A	3	4.8	3
4. Using sanitized utensils	5.0	A	2	4.8	A	2	4.9	2
5. Keeping cold or frozen foods out of the refrigerator for a short time as possible	4.0	O	5	3.1	S	5	3.6	1.5
<b>Average Wtd Mean</b>	3.7	A		4.3	A		4.5	

Improper cooling is one of the leading contributors to food illness in food establishments. Food must not be in the temperature danger zone during cooling. However, if it cannot be avoided, it must be in the temperature danger zone as quickly as possible. Through this, food contamination can be prevented. The overall weighted mean of the cooling practices is 4.5 “always”. Foodservice centers applied the proper way of cooling. Table 8 manifests the observation of the managers and employees about the reheating practices of food service centers. As observed food service centers reheated food only once and discarded food which is not reheated in two hours. These results support the standard requirements in the sanitation code of the Philippines about proper reheating. Proper holding temperatures prevent the growth of microorganisms. The overall weighted mean in reheating is 4.29 which implies that the majority of the food service centers reheated leftover food.

Table 8  
Observation of Managers and Employees in the Reheating Practices of the Foodservice Centers in Tagbilaran City

N=204

Reheating Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd. Mean	Description	Rank	Wtd. Mean	Description	Rank		
1. Reheating Food Only Once	5.0	Always	1.5	4.7	Always	1	4.9	1
2. Reheating	5.0	Always	1.5	4.6	Always	2	4.8	2

food in small batches to reduce heating time								
3. Reheating cooked food at least 73.9 degree centigrade for fifteen seconds with in two hours.	4.7	Always	3.5	4.1	Often	3	4.4	3
4. Discarding food if it cannot be reheated in two hours.	4.7	Always	3.5	3.8	Often	4	4.3	4
Averaged Wtd. Mean	4.9	Always		4.3	Always		4.6	

Table 9 depicts the observation of the managers and employees in terms of waste disposal of the establishment. The overall weighted mean of waste disposal is 4.6. “always”. It means that all activities under proper waste disposal were always done. In this regard, the foodservice center contributed of the development of the city since it protects the health of the individual. Waste Disposal plays a vital role in keeping good health. Proper waste disposal can eliminate if not eradicate contamination of foods. It is the duty of the foodservice centers to have proper disposal to prevent illness or diseases. Besides the managers and employees revealed that food service centers emphasized removing the garbage as soon as possible, providing enough containers and dumpers for waste, and regularly cleaning the containers with the use of sanitizers. Moreover, they encourage burning of items because they believed that it can destroy the environment and is harmful to human. The foodservice centers encourage all the workers to recycle the items such as paper, cardboard and the like.

Table 9  
Observation of Managers and Employees on Waste Disposal Practices of the Foodservice Centers in Tagbilaran City

N=204

Reheating Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd. Mean	Description	Rank	Wtd. Mean	Description	Rank		
1. removing Garbage As Soon As Possible.	5.0	Always	2	4.9	Always	2	5.00	3
2. Putting garbage in the containers that are durable.	5.0	Always	2	4.9	Often	2	5.00	3
3. Providing enough containers and dumpers.	5.0	Always	2	4.9	Always	4	5.00	2
4. Regularly	4.8	Always	5	4.7	Always	4	4.8	4

cleaning and sanitizing containers.								
5. Recycling items such as paper, cardboards and the like.	3.0	Always	5	2.8	Sometimes	7	2.9	7
6. Storing the containers on or above smooth surfaces.	4.8	Always	7	4.5	Always	6	4.7	5.5
7. Discouraging open burning of items.	4.8	Always	5	4.6	Always	5	4.7	5.5
Averaged Wtd. Mean	4.6	Always		4.5	Often		4.6	

Table 10 reveals the observation of managers and employees about the foodservice centers' sanitation program. The weighted mean given by the managers is one hundred percent which means that all activities of the sanitation program were performed by the foodservice centers. Items two and three got the lowest ranking; it lacked the implementation of policies about food safety and sanitation and sending their employees to trainings and seminars. Several factors may have affected implementation. The management failed to strictly implement food safety policies. On the part of the employees, restricting of employees with infections got the highest rank. It implies that it strictly followed and implemented the sanitary practices in their establishment. All of the activities for sanitation programs were fully met by the management and the employees worked hand in hand to implement and realize their sanitation program. Sanitation program play a vital role in food establishment. Foodservice centers gave importance and value to different foodservice programs like proper handwashing every two hours to prevent food contamination, and sending workers or employees to trainings and seminars regarding sanitation.

Table 10  
Managers and Employees' Observation about the Sanitation Program Practices of the Foodservice Centers in Tagbilaran City

N=204

Reheating Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd. Mean	Description	Rank	Wtd. Mean	Description	Rank		
1. Proper handwashing every two hours.	5.0	Always	2	5.0	Always	1.5	5.00	1.5
2. Sending personnel to trainings and seminars on sanitation.	5.0	Always	2	4.3	Always	3.5	4.6	3.5
3. Linkaging	5.0	Always	2	4.3	Always	3.5	4.6	3.5

other organizations or individuals who can help solve problem on food safety and sanitation.								
4. Restricting personnel with infections	5.0	Always	2	5.0	Always	1.5	5.00	1.5
Averaged Wtd. Mean	5.0	Always		4.7	Always		4.8	

Table 11 reflects the observation of the managers and employees on the dining room sanitary practices or procedures of the foodservice centers. As revealed by the managers, the foodservice centers followed the standard requirements of the sanitation code of the dining room, since the weighted mean is 4.9 or “always” This area needs extra care from the establishment because this is the area where the customers are entertained and served.

Meanwhile the employees rated food service centers 4.7 “always” in the weighted mean. It implies that they practiced fully the necessary sanitary procedures and practices in the dining room. It also indicates that the employees were valuing cleanliness and sanitation of the dining room. They believed that cleanliness has the impact to the health status of the individual. Customers spend much time in the dining room, so it must be given priority in maintaining sanitation to promote safety of the customers.

Table 11

Managers and Employees’ Observation about the Dining Room Practices of the Foodservice Centers in Tagbilaran City

N=204

Reheating Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd. Mean	Description	Rank	Wtd. Mean	Description	Rank		
1. Observing proper floor space to prevent overcrowding.	4.8	Always	5.5	4.6	Always	4.5	4.7	5
2. Following the ratio of the number of the persons using the dining room.	5.0	Always	2	4.6	Always	4.5	4.8	4
3. Providing enough ventilation.	5.0	Always	2	4.7	Always	3	4.9	3
4. Keeping clean at all times.	5.0	Always	2	4.9	Always	1.5	5.00	1.5
5. Installing the tables properly and orderly.	5.0	Always	2	4.9	Always	1.5	5.00	1.5

6. Vacuuming daily and shampooing regularly.	4.8	Always	5.5	4.4	Always	6	4.6	6
Averaged Wtd. Mean	4.9	Always		4.7	Always		4.8	

It is very common for everybody to hear that the kitchen is the cleanest part of the foodservice centers. Since it is the place where food preparation is done. Everything that is brought in to the dining room comes from the kitchen.

Table 12 shows the observation of the managers and employees in terms of kitchen procedures and practices. Based on the result, the weighted mean of managers’ observation is 4.95 “always” which implies that foodservice centers value the cleanliness of the kitchen since all the foods are cooked in the kitchen. Unsanitary practices in the kitchen will result to fewer clients in the food service centers. They give lesser value in providing enough space for working.

For the employees and managers, observing the rules for preventing cross contamination were least practiced by the foodservice centers. Kitchen is part of the progress of the business. Workers ought to work hand in hand to attain their objectives of preparing wholesome and safe foods.

Table 12

Managers and Employees’ Observation about the Kitchen Practices of the Foodservice Centers in Tagbilaran City

N=204

Reheating Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd. Mean	Description	Rank	Wtd. Mean	Description	Rank		
1. Providing enough space for working.	5.0	Always	2	5.0	Always	1.5	5.0	2
2. Cleaning and Sanitizing the table daily.	5.0	Always	2	5.0	Always	1.5	5.0	2
3. Providing facilities and equipment to maintain safe food product temperature.	5.0	Always	2	5.0	Always	1.5	5.0	2
4. Observing the rules for preventing cross-contamination.	4.8	Always	4	4.8	Always	4	4.8	4
Averaged Wtd. Mean	4.95	Always		5	Always		4.95	

In terms of sanitary procedures and practices of the food service centers comfort room, managers rated “always” as reflected in the Table 13. As described in the results, most of the areas for comfort room practices were rated “always”. It signifies that comfort room facilities were provided by the

management. In fact, the food service centers provide comfort room for male and female and provide privacy of the users. They also used disinfectant to control and kill bacteria and microorganisms. As revealed by the respondents, the foodservice center failed to provide comfort room for disabled clients. Comfort room for the disabled clients and soap were not provided. The installation of lavatory was also lacking.

As regard, responses of the employees about comfort room sanitary practices of the establishment, the highest in rank is providing enough water supply and lighting always available. The overall weighted mean of the sanitary practices in the comfort room was 4.5 or “always” for managers and 4.2 for employees. Despite of the rating given by the respondents, still they are slow in providing separate comfort rooms for the disabled clients.

Table 13

Managers and Employees' Observation about the Comfort room Practices of the Foodservice Centers in Tagbilaran City

N=204

Reheating Practices	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd. Mean	Description	Rank	Wtd. Mean	Description	Rank		
1. Providing separate comfort room for males and females.	4.8	Always	6	4.7	Always	3.5	4.8	4
2. Providing enough water supoply.	5.0	Always	2	4.9	Always	1.5	5.00	1.5
3. Using disinfectant to control and kill bacteria and microorganisms.	4.8	Always	6	4.7	Always	3.5	4.8	4
4. Providing separate comfort room for disabled clients.	1.7	Never	8	2.0	Always	8	1.9	8
5. Supplying soap.	5.0	Always	2	4.3	Always	6	4.7	6
6. Installing Lavatory.	5.0	Always	2	4.6	Always	5	4.8	4
7. Making sure that lighting is available	5.0	Always	2	4.9	Always	1.5	5.00	1.5
8. Building comfort room with proper measurement from the dining room.	4.8	Always	6	4.0	Always	7	4.4	7
Averaged Wtd. Mean	4.5	Always		4.2	Always		4.4	

Table 14 shows the assessment of the managers and employee on the lavatory sanitary practices of the food service centers. Providing good water supply, fixing the materials tightly and properly and installing proper plumbing to prevent backflow were given less importance by the management. It also reveals the observation of the employees on lavatory sanitary practices of the establishments. It reveals that they have the same rating given by the managers of the food service centers. The overall rating in lavatory as graded by the respondents is 4.8 for the managers and 4.70 for the employees which means that the four foodservice centers “always” practice sanitation in the lavatory.

Table 14  
Managers and Employee’s Observation about the Lavatory Practices of Foodservice Centers of Tagbilaran City  
N=204

M. Lavatory	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd Mean	Derscription	Rank	Wtd Mean	Description	Rank		
1. Providing good water supply	5.0	Always	1.5	4.9	Always	1.5	5.00	1.5
2. Installing proper plumbing to prevent Backflow	4.5	Always	3	4.3	Always	3	4.4	3
3. Fixing the materials tightly and properly	5.0	Always	1.5	4.9	Always	1.5	5.00	1.5
Weighted Mean	4.8	Always		4.7	Always		4.8	

Proper hand washing is important to the individuals because this is one way of preventing the spread of food bone illness. The sanitary practices of the foodservice centers in terms of handwashing facilities as assessed by the managers were manifested in Table 15. Foodservice centers provided handwashing facilities that can accommodate the clients. They also provided hand towel. Supplying hand dryer and hand towel ranks lowest as observed by the managers. It means that they need more facilities to improve their handwashing facilities. Proper handwashing promotes security and safety to the establishment as well as to the customers, because it prevents the spread of pathogenic bacteria.

As observed by the employees, handwashing facilities are the primary concern of foodservice centers because foods are handled by the workers; these facilities will ensure that foods are handled by safe hands. The result implies that the foodservice centers need more handwashing facilities for safe handling of foods.

Table 15  
Managers and Employees’ Observation about the Handwashing  
Facilities Practices of the Foodservice Centers in Tagbilaran City  
N=204

N. Hand washing Facilities	Managers			Employees			Ave. Wtd. Mean	Rank
	Wtd Mean	Description	Rank	Wtd Mean	Description	Rank		
1. Installing hand washing sink that can Accommodate the clients	5.0	Always	2	4.9	Always	1.5	5.00	1.5
2. Providing soap for washing the hands	5.0	Always	2	4.5	Often	3	4.8	3
3. Providing good water supply	5.0	Always	2	4.9	Always	1.5	5.00	1.5
4. Supplying hand dryer and hand towel	2.7	Sometimes	5	2.3	Rarely	5	2.5	5
5. Furnishing air blow dryer	3.3	Sometimes	4	2.6	Sometimes	4	3.0	4
Weighted Mean	4.2	Always		3.8	Often		4.0	

Table 16 represents the observation of the costumers to the foodservice centers’ sanitary practices in holding and serving food. The average weighted mean is 3.5 “often”. It can be gleaned that foodservice center workers applied the proper and correct sanitary practices. Measuring temperature every two hours was given less importance by the establishment. This practice must be given priority to prevent microbial growth. Applying the proper way of serving the food invites lots of customers.

Table 16  
Customers’ observation on the holding & serving practices of  
the food service center of Tagbilaran City.  
N=204

Holding/ Serving	Wtd. Mean	Description	Rank
1. Using covered holding pans and providing long-handled spoons and tongs so human hands do not touch the foods	4.1	Often	1
2. Using properly cleaned and sanitized Utensils	3.8	Often	2
3. Measuring temperature every two hours	2.6	Sometimes	8
4. Never touching the food-contact areas of glasses and tableware	3.5	Often	5
5. Never stacking cups or bowls before serving them	3.4	Often	6
6. Applying proper way of serving	3.6	Often	3.5
7. Holding food at proper temperatures	3.3	Often	7
8. Keeping the hair clean and tying back	3.6	Often	3.5
Weighted Mean	3.5	Often	



Table 17 signifies the problem met by the managers and personnel in the foodservice centers. Based on the data gathered the absence of thermometer was always their problem. Thermometer is very important in the establishment because this can help monitor the temperature of food. Food should not be left in temperature danger zone which is 4 to 60° for a long period of time. Moreover, the laxity of the personnel was also a problem in the establishment because they must have the primary concern on exercising and applying food safety and sanitation. Others are not valuing it. Lack of equipment in food safety, lack of training of personnel and effective waste disposal were the problems which should be given solution to prevent food borne illness.

Table 17  
Problems Met by the Foodservice personnel on Sanitation  
N=204

Problems	Weighted Mean	Description	Rank
1. Ineffective waste disposal	2.97	Sometimes	5
2. Absence of thermometer	4.3	Always	1
3. Lack of training to Personnel in relation to Sanitation	3.28	Sometimes	4
4. Lack of equipment for food Safety	3.33	Sometimes	3
5. Laxity of personnel on Sanitation practices	4.2	Often	2
Average Weighted Mean	3.62	Often	

Table 18 gave the summary of the Status of the Foodservice centers in Tagbilaran City. Based on the result of the evaluation conducted by the sanitary inspectors in Tagbilaran City, the foodservice center B got the first in rank with a weighted mean 4.45 “Always”. Second is Foodservice center A with a weighted mean 4.35 which means always. Third is Foodservice center D with a weighted mean 3.45 which signifies often. Lastly, Foodservice center C with a weighted mean 2.65 is described as sometimes. As stated by the sanitary inspectors, through this result these four foodservice centers must improve their sanitary performances. The general rating of the Foodservice centers in Tagbilaran City was describe as often it implies that there is a need for them to enhance the practices in relation to sanitation issue.

Table 18  
Summary of the Status of Foodservice Centers in Tagbilaran City as evaluated by the Sanitary Inspectors.

Food service Centers	Weighted Mean	Description	Rank
A	4.35	Always	2
B	4.45	Always	1
C	2.65	Sometimes	4
D	3.45	Often	3
Average	3.73	Often	

## RESULTS AND DISCUSSIONS

Based on the analysis of the data the following findings merged:

- A. Selected food service centers in Tagbilaran City did not fully comply with the standard measurements of floor area lavatory, however, they have complied with the comfort room requirements.
- B. Based on the overall mean rating of the respondents of this area it implies that the sanitary purchasing practices were met. They performed activities to be considered in the area of purchasing.

The sanitary practices of food service centers in terms of receiving were also met. As a result of the responses, they want that the ways or methods of receiving in every food service center will be maintained or improved so that the customers will always patronize the products. As per rating by the respondents, it summed up to 4.72 (always). It means that the sanitary practices of the food service centers are attainable.

The overall rating of the food service personnel on storing is 4.72 (always). They agreed that they checked the expiration date of the package and rejected a can or package without a label to ensure food safety. Thus, it contributed to the benefits and welfare of the food service centers and the customers as well.

In preparing the overall mean rating given by the respondents is 4.73 (always). The managers and employees observed that the food service centers were using sanitized cutting boards and knives to avoid cross-contamination. They also applied proper handwashing and wore hairnets, aprons, or laboratory gowns in preparing the food.

It was found that the respondents gave a rating 4.57 (always) for holding and serving. It means that they were holding the food at proper temperatures. The respondents also explained that they never stacked cups or bowls before serving them. The sanitary practices in this activity were always implemented and applied.

The food service centers always exercised sanitary practices, particularly in cooling the food. It cannot be denied that there are some foods that need to be cooled. The respondents revealed that the food was properly cooled. Reheating was done only once and they discarded the food if it cannot be reheated in two hours. The food service centers were applying the proper waste disposal. Removing garbage disposal as soon as possible was always practiced.

Food service centers were implementing and applying sanitation practices such as proper handwashing every two hours, and restricting personnel with infections and the like so that illnesses and diseases can be prevented. The sanitation practices in the dining room were also practiced by the food service centers. The respondents agreed that the dining room must be kept clean at all times. The overall rating of this area was 4.69 (always).

The overall rating of the sanitary practices of the kitchen is 4.78 (always) It signifies that the four food service centers were always exercising the sanitary practices in their kitchen. The managers and employees observed that they provided facilities of equipment to maintain safe food product temperatures. Cleaning and sanitizing got the highest rating among the items of sanitary practices in the kitchen.

The food service centers provided separate comfort rooms for males and females. However, comfort rooms for disabled persons/clients were not made available. The lavatory has an overall rating of 4.70 (always) This indicates that sanitary practices were applied. A handwashing facility such as an air blow dryer is not available.

- C. The problems met by the food service centers are the absence of thermometers, the laxity of personnel, the lack of equipment in food safety, the lack of training of personnel, and effective waste disposal.
- D. Based on the result of the study, respondents' observation differs from others in terms of sanitary practices. Since the computed F is greater than the tabular F therefore the null hypothesis is rejected.

## **CONCLUSION**

After a thorough and careful analysis of the study, the researcher arrived at the following conclusions:

The floor space standards for food service centers were not entirely met by Tagbilaran City food service centers. They lacked the tools required for proper sanitation and food safety. The food service centers did not completely apply sanitary practices.

## **RECOMMENDATION**

1. All food handlers or employees of food service establishments may undergo training in food safety and sanitation.
2. The strict enforcement of the food safety and sanitation policies may be delegated to local government authorities.
3. It is possible to buy facilities, tools, and supplies for cleanliness and food safety.
4. There may be more research done on food service facility sanitation procedures.

## **BIBLIOGRAPHY**

- Brown, A. (2005). *Understanding food principles preparation*. USA: Thomson Learning Publishing.
- Crawford, B., Marsh, D. (2007). *Food in evolution and the evolution and the future*. Manila: Rex Bookstore.
- Estrada, M. (2007). *The national journal of better living*: Manila: Health and Home Publishing.
- Hayter, R. (2001). *Food preparation and cooking*. USA: Thomson Learning Publishers.
- McSwane, D., Rue, N., Ph.D., Linton, R. Ph.D. (2006) . *Food safety and sanitation (4th ed.)*. South Asia: Pearson Education, Inc., Prentice Hall.
- Perdigon, G. Claudio, V., Chavez L. (2006). *Food, water and environmental sanitation and safety for the hospitality, industry and institutions*. Manila Merriam and Webster Bookstores, Inc.
- Serraon,V., Dirrige, , O., Ruiz, A. (2004). *Basic nutrition filipinos (5th edition)*. Manila: Merriam and Webster Bookstore, Inc.
- Williams, P., Neeves, P., Bell, C. (2005). *Food microbiology and laboratory practice*. USA: Blackwell Publishing.
- Waker, and Lundberg, D. (2001). *The restaurant third edition*. Canada: Prentice Hall International Inc. Unpublished Materials
- Arce, S. 2000) . "Sanitation and Sanitation Practices" Masteral Thesis, Cebu State College of Science and Technology, M. J. Cuenco, Cebu.
- Cueva, D. (2001). "Safety and Health Management System" Unpublished Masteral Thesis, Cebu State College of Science and Technology, Cebu.
- Mansueto, G. (2004). "Solid Waste Management" Unpublished Masteral Thesis, Cebu State College of Technology,M.J. Cuenco, Cebu. Science and
- American Society for Healthcare Service Association - Retrieved January 17, 2006 from [www.ashfsa.org](http://www.ashfsa.org)
- Bagaipo. Food poisoning. Retrieved August 22,2010 from [www.BoholChronicle.com](http://www.BoholChronicle.com)
- Consumer Policy and Consumer Health Protection, European Union Retrieved 2006 from [http:// Europa.eu.int/comm./dgs/health consumer/index en. htm](http://Europa.eu.int/comm./dgs/health consumer/index en. htm)

Fuentes safety. Retrieved October 2006 from [http://www.extension.iastate.edu/food\\_safety/news\\_Fsnews.cfm?newsid=16031](http://www.extension.iastate.edu/food_safety/news_Fsnews.cfm?newsid=16031).

Food Safety Authority of Ireland - Retrieved March 2006 from [www.fsai.ie/](http://www.fsai.ie/)

Food Safety and Inspection Service USA. Retrieved July 18, 2006 from <http://vm.cfsan.fda.gov/list.html>

Obedencio. Food safety and sanitation. Retrieved January 27,2005 from [www.BoholChronicle.com](http://www.BoholChronicle.com)

Usapdin Food poisoning. Retrieved September 5, 2005 from <http://www.ifrc.org/docs/news/05/05031401>

World Health Organization (WHO). 2006 - Retrieved March 24,2006 from [www.who.int/en/](http://www.who.int/en/)

The BC Cook Articulation Committee. 2015- Food Safety, Sanitation, and Personal Hygiene