



# PROCEEDING



The 2<sup>nd</sup> Muhammadiyah International  
Public Health and Medicine Conference  
“Stunting: The Impact of COVID-19  
on Food Security and Nutrition”

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**July 28th-29th 2022**  
**Faculty of Public Health**  
**University of Muhammadiyah Jakarta**





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## Vol. 2 No. 1 (2022): PROCEEDING MUHAMMADIYAH INTERNATIONAL PUBLIC HEALTH AND MEDICINE CONFERENCE - SECOND EDITION



Indonesia was a prime example of the “Triple burden of malnutrition” even before the COVID-19 pandemic. More than 7 million children under five were stunted. Indonesia is the fifth-highest globally for child stunting (UNICEF, 2020). Indonesia’s challenges due to this triple burden, significantly stunted, are complex and likely to be exacerbated by the COVID-19 Pandemic (UNICEF, 2020). The impact of pandemics on nutritional status is alarming. Reporting from the United Nations Indonesia in 2020, at the beginning of the pandemic, an estimated 2 million children under five in Indonesia experienced wasting (malnutrition), 7 million stunted children (stunted), and 2 million other children under five were overweight. In addition, 2.6 million pregnant women suffer from anemia. (United Nations Indonesia, 2020).

Stunted among children can result from many different causes; the three most common immediate causes are inadequate breastfeeding and poor diets, coupled with suboptimal care practices, insufficient nutrition and care for pregnant women and mothers, and high rates of infectious disease, due predominantly to unhealthy living environments and poor access to health services (UNICEF, 2020). These factors are further compounded by widespread poverty, unemployment and low levels of education.

Infants, toddlers, pregnant women, and nursing mothers face significant risks to their nutritional and health status resulting from restrictions on access to health services and access to get nutritious food. Despite the challenges associated with health facilities and restrictions on resource movement, maintaining care services for malnourished mothers and children should be a priority, along with protecting vulnerable children and population groups at risk of undernourishment (United Nations Indonesia, 2020).

Based on the explanation above, the Faculty of Public Health, Universitas Muhammadiyah Jakarta, collaborates with IAKMI DKI Jakarta and the Faculty of Medicine and Health, Universitas Muhammadiyah Jakarta, will hold The 2<sup>nd</sup> Muhammadiyah International Public Health and Medicine Conference (MIPHMC). MIPHMC is a grand event that brings together health experts and medical experts to discuss to find intelligent solutions for handling stunting cases due to the COVID-19 pandemic.

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## ***HYGIENE SANITATION AND FOOD SAFETY IN EMPLOYEE RESTAURANTS***

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### ***ABSTRACT***

*Restaurants is a food processing place that produces and sells various types of food and beverages for the wider community. With the development of restaurants, it is necessary to make food and beverage health efforts with the aim that people's ability to manage can be increased so that people avoid health problems or food poisoning. One of the efforts that can be done is to check the feasibility of the restaurant's hygiene and sanitation. The purpose of this study was for this examination to determine hygiene and sanitation in employee restaurants from 4 factors, employee, equipment, food, and place. The research method used is descriptive qualitative by evaluating employee restaurants in the mess area of industrial forest plantation companies by filling out a restaurant sanitation hygiene inspection form issued by the Directorate of Environmental Health of the Republic of Indonesia in 2017, informant from owner and canteen employee. The results show that the restaurant building is semi-permanent. Workers do not have uniforms and do not carry out routine health checks. Food storage cabinet equipment is not available properly for foodstuffs that require closed storage and room temperature. Clean water sources and hand washing facilities and toilets are well available. The food preparation provides a varied menu but the calories are not calculated for the nutritional value. It is recommended for companies and restaurant managers to manage menu calculations that are sufficient in calories and nutrition for employees, provide safer food storage places, and employees are also advised to use uniforms and health checks to keep food from contamination so that consumers can receive healthy food that is also safe for consumption.*

***Keywords:*** employees, food safety, hygiene, sanitation, restaurants

### **INTRODUCTION**

Food or food is a basic human need that is needed to continue to live a good life. This human right regarding food is guaranteed by the 1945 Indonesian Constitution (UDD 1945) article 27 paragraph 2 that all Indonesian citizens are guaranteed by the state to get enough food and can be consumed safely. (UUD, 1945). Article 4 of the Consumer Protection Law states that the community is protected from the dangers of unsafe food or causing poisoning and disease for those who consume it and so that the food consumed by the community is safe so that there is no disaster in food handling for the wider community (Undang- Undang Perlindungan Konsumen No.8, 1999). The production of food that is from harmful substances is one of the important factors in preparing food for consumers.

Food safety is something that needs to be considered in consuming daily food for the wider community. The large food needs and the large population in Indonesia are vulnerable to Extraordinary Events (KLB) due to food poisoning which we often see news on television that takes the lives of the people who consume it. What usually happens is that the food is cooked in large quantities for the party and the victims are also in large numbers. In the 2018 outbreak report from the Food and Drug

Supervisory Agency (BPOM) there were 56 outbreak cases and 56% were declared sick and required medical treatment. The percentage of these outbreaks mostly occurred in school children, namely: 37% in Elementary Schools (SD) and then 29% in Madrasah Ibtidaiyah (MI), and then 9% in offices and factories that have canteens (BPOM, 2019).

Food poisoning can also cause economic losses because it costs money to treat patients who are sick from food poisoning and also other costs besides treatment that require special attention so that this does not happen again. Losses caused by food poisoning in Indonesia in 2013 in a study conducted in 2016 stated that it was 78 million USD (W. P. Rahayu et al., 2016). The Ministry of Health of the Republic of Indonesia (Kemenkes RI) in the Occupational Safety and Health Law (K3) also states that this standard in offices regarding food safety needs to be considered because most employees are in the office 8-12 hours. Canteens or restaurants located in office environments that provide food regularly for employees need to carry out regular supervision to maintain the health of this food (RI, 2016).

The Indonesian Ministry of Health through the Directorate of Environmental Health, and the Directorate General of Public Health 2017 issued a Report of Self Assessment of Environmental Health for Food Management Places (TPP) for Restaurants/Restaurants that can be used to assess TPP Managers in environmental health knowledge so that they can apply the principles of food sanitation hygiene and control risk factors for foodborne illness. The report card is expected to be useful as monitoring and evaluation material for environmental health workers to realize TPP health requirements, and to prevent food poisoning incidents in TPP in restaurants or restaurants, employees, and other public. (Direktorat Kesehatan Lingkungan, 2017).

The purpose of this study was for this examination to determine hygiene and sanitation in the canteen located at the employee restaurant in the mess area of the industrial forest plantation company from 4 factors, namely: employees, equipment, food, and place. This is to ensure that company employees get healthy and safe food to work well and avoid food poisoning due to poor sanitation.

## **METHOD**

This research is a type of qualitative descriptive observation research conducted in December 2021 at the employee restaurant or canteen of PT. It Hutani Manunggal (IHM) IN East Kalimantan is one of the employee facilities that was established in 2010 by the company by making direct observations using the restaurant sanitation hygiene inspection form issued by the Directorate of Environmental Health of the Republic of Indonesia in 2017. Informan from owner dan canteen employee. Data analysis by grouping the assessment results into 4 parts, namely: employees, equipment, food, and a place to see the implementation of food sanitation and health that has been carried out by the employee canteen in providing food for employees.

## RESULTS AND DISCUSSION

Overview of this canteen is managed by a third party with three employees. Even though it has been established for almost 11 years, this restaurant does not have a proper restaurant sanitation hygiene certificate. The whole building construction is made of wooden planks.

**Table 1. Location and Building**

No	Variable/Component	Comply	Not Comply
1	Wall	0	2
2	Ventilation	1	3
3	Lighting/ Illumination	2	4
4	Roof	5	1
5	Palate	1	2
6	Door	3	0
Total	24	12	12
Percentage (%)	100%	50%	50%

The front building consists of a dining room for visitors, a room for placing ready-to-eat food and a cash register, while the back consists of a kitchen, a place to wash dishes, and a toilet. The percentage for locations and buildings that meet the requirements (comply) is 50% and some do not meet the requirements (not comply) so it still needs to be increased.

**Table 2. Equipment/Sanitation**

No	Variable/Component	Comply	Not Comply
1	Clean water	2	0
2	Wastewater disposal	2	2
3	Toilet,	2	3
4	Trash can, wash hands, wash utensils	3	1
5	Food Laundry	3	0
6	Employee Locker	2	2
7	Insect Entry Prevention Equipment and	3	0
8	Rat	0	4
9	Kitchen	3	3
10	Dining room	3	2
11	Grocery Store	0	4
Total	44	23	21
Percentage (5)	100%	52%	48%

The results of observations and assessments for sanitation and equipment for food processing and kitchens are located at the back of the building. The condition of the kitchen is not clean, the inner surface of the walls is uneven, there is no chimney and the air vent is not functioning. This situation can contaminate the food to be served. The place for serving food is located in a glass esterase at the front of the building. Even though the surface is clean, the window in the window is not always covered so that food is easily contaminated by pests, for example the flies. The results of the assessment of equipment and sanitation that meet the requirements (Comply) are 52% and some 48% do not meet the

requirements (Not Comply) so there is still a need for improvement to better ensure the sanitation of equipment.

**Table 3. Food / Food Safety**

No	Variable/Component	Comply	Not Comply
1	Foodstuffs	3	0
2	Ready Food	2	1
3	Processing	6	2
4	Finished Food Storage	1	1
Total	16	12	4
Percentage (%)	100%	75%	25%

The stages of food handling start from the processing of foodstuffs such as meat, vegetables, and fruit. All the ingredients are processed according to the menu that has been planned by the person in charge. All processed food is placed in uncovered basins before being transferred to food serving containers. Food menus such as rice and soup are stored in the heater to keep them warm when served, but for food, soup, it is only heated once. While the food that is not gravy is not reheated. If there are consumers, the food will be served by food handlers who specialize in handling ready-to-eat food. Research analysis of consumer assessment of the performance of college canteens in East Java states that the serving of food in the canteen is the dominant factor in food safety (Frida Shofia Rahman et al., 2018).

**Table 4. Employees/Handlers**

No	Variable/Component	Comply	Not Comply
1	Serving method	2	2
2	Equipment Terms	3	1
3	Food Sanitation Hygiene Knowledge/Certificate	0	4
4	Work Wear Personal Hygiene Health Check	2	3
Total	17	7	10
Percentage (%)	100%	41%	59%

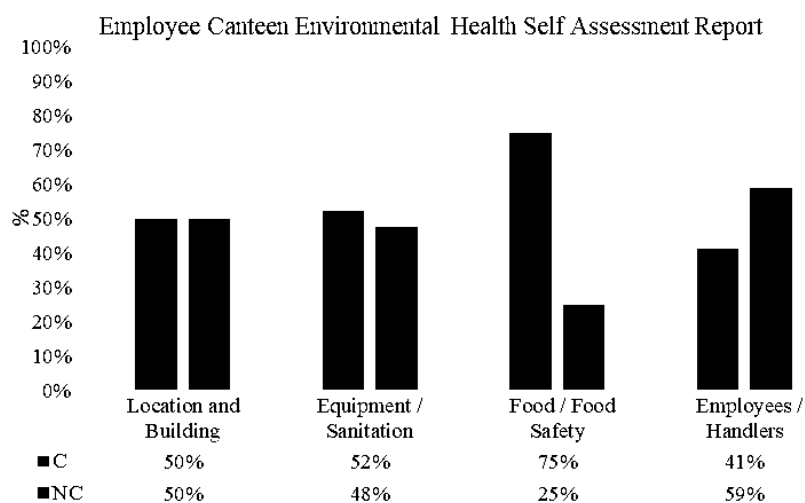
The handler of the food processing department is different from the one who handles ready-to-eat food. All food handlers, both in the food management section and the section that handles ready-to-eat food, are not provided uniformly. Each food handler wears personal clothes to work. All employees are not wearing masks. Even though they wash their hands before processing food, no one wears a head covering and gloves.

**Table 5. Conclusion of the Employee Canteen Environmental Health Self-Assessment Report**

No	Variable/Component	Comply	Not Comply
1	Location and Building	50%	50%
2	Equipment / Sanitation	52%	48%
3	Food / Food Safety	75%	25%

No	Variable/Component	Comply	Not Comply
4	Employees / Handlers	41%	59%
Average		55%	45%

Note: eligible if the average variable/component Eligible (Comply) = 80%



**Figure 1. Graph of the Employee Canteen Environmental Health Self Assessment Report**

Note for Figure: C=Comply; NC= Not Comply

From Table.5 and Graphic.1, it can be concluded that the results of the self-assessment of the environmental health of the canteen show results that are still below the 80% target, where on average only 55% are eligible. This is in line with research on the application of food management hygiene and sanitation to ensure food safety in the food court canteen, Andalas University Padang which states that the problems that need to be fixed in the canteen are: buildings and facilities, water supply and water supply facilities, hygiene and sanitation facilities and activities, and employee health and hygiene (Firdani F, et al, 2020). (Herniwanti, et al, 2021)

There are no written hygiene sanitation messages for food handlers. Also not available chimney in kitchen, promotion regarding. Research on food safety in restaurants in Jakarta states that lack of knowledge and awareness of this can cause food poisoning can which endangers the health and reduces employee productivity levels, it is also necessary to provide information that is considered quite effective for disseminating food safety information, namely social media, but its effectiveness still needs to be improved (Riandi et al., 2020). (Herniwanti, 2020).

The process of processing food ingredients into processed food is carried out on the floor. So that the kitchen floor during the processing is always dirty. The canteen does not have a food warehouse, for ingredients that can be stored at room temperature will be placed on an open shelf in front of the stove near the kitchen exit. Meanwhile, perishable materials such as meat and fruit are stored in the refrigerator and freezer. For raw food, the person in charge of the canteen will shop every two weeks at the Penajam district market, which is 4 hours away by car. But sometimes, some sell fishing products such as shrimp or fish to the person in charge of the canteen. The packaged food ingredients purchased



have been registered with BPOM. Food safety requires more attention in handling so that exposure to contamination can be avoided (Borchers et al., 2010), (H. Herniwanti, 2022).

There were no signs of rats, but there were insects like ants and cobwebs on the ceiling. No employees live in the restaurant. The division of the room consists of a dining room, a place for serving food and a kitchen for making drinks, a kitchen, and a toilet. Floors and walls do not meet the requirements: floors and walls are not waterproof and the wall surface is uneven. The airflow is good because it has wide windows but the door opens inward and never closes again (the door is always opened when the restaurant is operating). HACCP / Hazard Analysis and Critical Control Points is a science-based systematic method that identifies specific hazard risks and their control measures to ensure the safety of manufactured food products with a focus on prevention. The lack of physical condition of the facilities from the canteen or restaurant is one of the inhibiting factors for the program to be implemented. Training programs, both basic food safety are needed to support the implementation of prerequisite programs and HACCP in the food business including serving employees and canteens (Baş et al., 2007).

The source of clean water comes from existing wells, although the tap water flow is small, it is sufficient for the needs of restaurants. Clean water is accommodated in large drums that have lids. There is no grease trap, which is a place for catching Lemak in every washing, both food washing, and equipment washing. The utensil wash basin has no sink, utensils are washed on the floor. Wastewater flows smoothly into a large ditch in front of the restaurant. Place the toilet and laundry side by side. The cleanliness of the toilet is maintained and there is sufficient clean water. From research on clean water, clean raw water is very important for food safety in the canteen, a source of clean water free from microbial content is needed to maintain food safety. (Mohan Y et al, 2021), (Herniwanti, et al., 2021)

However, there is no soap, tissue, or drying cloth in the toilet. Trash cans are in every room such as in front of the entrance, dining room, food serving area, kitchen, and washing equipment. There is 1 sink for visitors' hand washing, the availability of the sink is not sufficient for all visitors so prefer to wash their hands with the water mug that is already on every table even though hand soap is available in the sink. Socialization for hand washing with soap (CTPS) is an activity that needs to be given continuously even to the elderly because personal hygiene is the basis of health. (H. Herniwanti, Dewi, et al., 2020), (Herniwanti, et al., 2020).

All food handlers/canteen employees do not have uniforms. When he arrived at the restaurant, the clothes he used were not replaced with new clothes. So there is a possibility that the clothes are not clean because they were exposed to dust at the time of the trip. All roads in the PT. IHM nothing is paved. Food handlers only use aprons when cooking but do not use masks, gloves, and head coverings. Food serving handlers also have a dual role. Not only serving food, but the food serving section also acts as a cashier so that often after handling money, handlers do not wash their hands again when they

want to serve food. Hand washing is the most important thing for food providers. This activity needs special attention and training for food service employees. These activities contribute to the improvement of employees' skills and knowledge and encourage changes in attitudes and behavior (Medeiros et al., 2011).

All canteen employees also did not carry out routine health checks. During the covid period, every month all canteen employees will be tested for antigen at the PT. IHM. All employees also do not know whether they have had the typhoid vaccine or not. Employees do not have health books. But when you have a complaint of illness, the person in charge of the canteen will take the employee for treatment to the company clinic. Cleanliness of handlers is important and is still difficult to obtain in TPP administration, including at drinking water depots which are a source of clean water for daily home food administration (Sarah Atyikah, 2021). Clean water is important in daily life and is included in the government's Community-Based Total Sanitation (STBM) program which is being intensively socialized during the Covid-19 pandemic. (H. Herniwanti, Dewi, et al., 2021).

Factors needed to maintain food safety by WHO recommendations are: proper sanitation, prevention of food contamination, safe temperatures for food storage, proper temperatures for heating food, and consuming and using clean water for all processing and drinking water. safety. Clean water is very necessary for food management, especially those who still use raw water and drinking water from drinking water depots for food management (E. P. R. Rahayu et al, 2022). This is in line with research on the implementation of food safety as an effort to protect the rights of the community as consumers, that good cooperation is needed between the production stage to the consumption stage. Both from the government, suppliers, producers, communities, managers, and consumers (Lestari, 2020).

Food is very important for humans so food security is a human right. Millions of people worldwide are at risk of unsafe food that causes illness while hundreds of thousands die every year. Food producers, distributors, handlers, and vendors bear primary responsibility while consumers must remain vigilant and literate. Government agencies must enforce food safety laws to safeguard public and individual health. Close collaboration between all stakeholders will ultimately ensure food security in the 21st century (Fung et al., 2018), especially during this Covid-19 era, the issue of food safety and sanitation is an important thing to pay attention to (Demmings et al., 2021).

## **CONCLUSIONS AND SUGGESTIONS**

The results of the self-assessment of the environmental health of the Karaywan canteen in East Kalimantan showed results that were still below the standard 80%, reaching 55% which met the requirements for 4 factors in the assessment, namely: Location and Building 50%, Equipment / Sanitation 52%, Food / Food Safety 75% and Employees/Handlers 41%. There is no promotion for food safety and socialization to employees as well as supervision of canteen and restaurant owners from the

health office. Water and Sanitation already exist but do not apply CPTS and HACCP food control management. Handlers do not carry out regular health checks to ensure cleanliness and avoid contamination during the production process to food presentation.

It is necessary to disseminate information about food safety to companies and owners of restaurants/canteens in the company environment so that employees are guaranteed to consume healthy and safe food free from contamination by hazardous materials. Good cooperation also needs to be carried out by the government, represented by the health office, the labor office as well as company owners and restaurant business owners as well as employees who work as well as supervised by consumers, namely employees who eat in the canteen every day to avoid diseases caused by poisoning food.

## **ACKNOWLEDGMENT**

Ucapan terimakasih kepada Pimpinan PT. IHM yang sudah memberikan izin untuk melakukan observasi di kantin karyawan untuk penilaian mandiri Inspeksi Higiene Sanitasi Rumah Makan/Restoran. Hasil ini semoga bermanfaat dan bisa ditingkatkan sesuai dengan rekomendasi yang diberikan.

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July 28<sup>th</sup> - 29<sup>th</sup>  
**2022**



## THE 2<sup>nd</sup> MUHAMMADIYAH INTERNATIONAL PUBLIC HEALTH AND MEDICINE CONFERENCE

# Oral Presenter Awarded To

## Herniwanti

For paper entitled :

Sanitation Hygiene in Employee Restaurants

The 2<sup>nd</sup> Muhammadiyah International Public Health and Medicine Conference  
"Stunting: The Impact of Covid-19 on Food Security and Nutrition"

on July 28<sup>th</sup> - 29<sup>th</sup>, 2022, Faculty of Public Health, University Muhammadiyah Jakarta

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