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Implementation Sanitation Standard Operational Procedure in Online Food During Covid-19 Pandemic in East Jakarta

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Abstract

The COVID-19 pandemic has caused people to immobilize to eat out, many industries are closed, the community's economy is down, and many online food small and medium enterprises (SMEs) have sprung up. One of the areas affected by the COVID-19 pandemic is East Jakarta. The implementation of Sanitation Standard Operational Procedure (SSOP) in online food SMEs requires special attention during the COVID-19 pandemic. This study aims to evaluate food production facilities in online food SMEs. Direct observation using instrument from Indonesian National Agency of Drug and Food Control (BPOM) Number HK.03.1.23.04.12.2207 2012 was conducted. The survey was conducted from May to June 2021 in five sub-districts in East Jakarta, namely Duren Sawit, Matraman, Pulo Gadung, Kampung Makassar, and Cipayung. Of the 32 SMEs observed, 50% had been established in less than one year. Most of the SMEs owners have secondary and higher education education and sell popular Street food or food. The survey covers non-compliance in 14 elements of food production facilities. The results show minor disobedience 18.8%, major disobedience 33.3%, serious defiance 25.8%, and critical disobedience 29.9%. In conclusion, major disobedience had the highest percentage, followed by critical, serious, and minor disobedience. Further education in the application of SSOP for online food SMEs should be carried out.

Keywords: SSOP, SMEs, pandemic covid-19, implementation.

1. Introduction

In today's digital era street food entrepreneurs grow rapidly (Matzembacher et al., 2019). Many of them selling their products using the online platform without any offline store and don't own any business permit yet. Nowadays, that kind of seller could easily be found through online platforms (Aditantri et al., 2021; Silalahi, 2020). They could be categorized into small and medium enterprises (SMEs) (Andriyani et al., 2021). The rapid development of this sector is mainly due to the increase in market demand. This is also supported by the increasing trend of consuming street food habits which lately become a part of our lifestyle regardless of age, social class, or occupation. a shift in lifestyle, especially in the way of purchasing street food. Street food is considered to have several advantages such as practical, easy to acquire, quite inexpensive, has a lot of variety, delicious, fast serving, and can be easily adjusted (Malasan, 2017). Market demands for Street food are rising steadily. Buying Street food frequently through online platforms has been an increasing trend especially during the COVID-19 pandemic (Novika and Meliyani, 2021). In this regard, consumers tend to feel safer buying Street food through online platforms. Buying through the online platform is deemed more practical and comfortable because consumers do not have to go out of the house. Food safety of this Street food must be observed by the consumer when choosing and buying the food. When buying food in an offline store, consumers could directly observe the process of making and serving the food. Meanwhile, during online purchasing consumers got the products without seeing the food processing step. Thus, consumers have a bigger probability of having low-quality food (Yeo et al., 2017).

The food production and serving process which do not pay enough attention to food safety aspects comply with sanitation and hygiene requirements will increase the probability of having food poisoning (Cempaka et al., 2019). WHO has stated that food-borne and water-borne diseases mortality rate were 2 million death per year. These diseases were related to environmental health (physical, biological, and chemical environment) and the cleanliness of the food processors and handlers (Etter et al., 2017).

The poisoning incident from consuming food is reported by the National Agency of Drug and Food Control (BPOM) every year. In 2019, food poisoning incidents in Indonesia were 6,205 cases, of which 2,185 cases were adolescents. There were 943 cases of food poisoning in DKI Jakarta Province during 2019. Poisoning cases usually

occurred because of homemade food. There were many factors that could affect the increase of poisoning cases from processed food, but the main cause of these poisoning was contamination of food.

Some of the street food that were sold did not meet the production standards, the serving and storing process were off standards, the equipment used was not hygienic, and the facilities did not meet the minimum requirements. The latest research reported food poisoning cases because of microbial contamination from homemade food (49.15%), Street food (20.34%), catering food (15.25%), and processed food (15.25%) (Sucipto et al., 2020).

The importance of food safety is set out in Regulation of the Head of the Food and Drug Supervisory Agency about food safety. Food safety is related to the implementation of sanitation and hygiene, food additives usage, genetically engineered products, food irradiation, packaging usage, food safety, and quality assurance, and halal products assurance. Implementation of Sanitation Standard Operational Procedure (SSOP) by food merchant and handler need to be paid attention to, for the products that are processed and served to consumers will fulfill food safety aspects and consumers will be protected from diseases or poisoning caused by unsafety food.

The development of particular food SMEs needs to be followed by the development of the knowledge of the related food products. As stated by BPOM, culinary entrepreneurs need to know and understand the concept of Safe Food Handling (SFH) to provide safe food for their consumers. On top of that, entrepreneurs need to implement the concepts of SFH upon doing their business, such as personal, equipment, facilities, and environmental hygiene. Therefore, food sold by these SMEs through online platforms is expected to be healthy and safe for consumption.

DKI Jakarta is the capital city of Indonesia with fast-growing SMEs. The dense and concentrated population in Jakarta is a big opportunity and a big market target for the online food business. One of the regions with a quite fast development of online food is East Jakarta. Culinary business in East Jakarta is dynamic and volatile.

This study was done to know the implementation of SFH by online culinary entrepreneurs in East Jakarta and to map the implementation of SFH by online food SME owners. The data were acquired through surveys using a Quantitative approach. The purpose of this study is to get the data of SSOP implementation by food SME owners in East Jakarta.

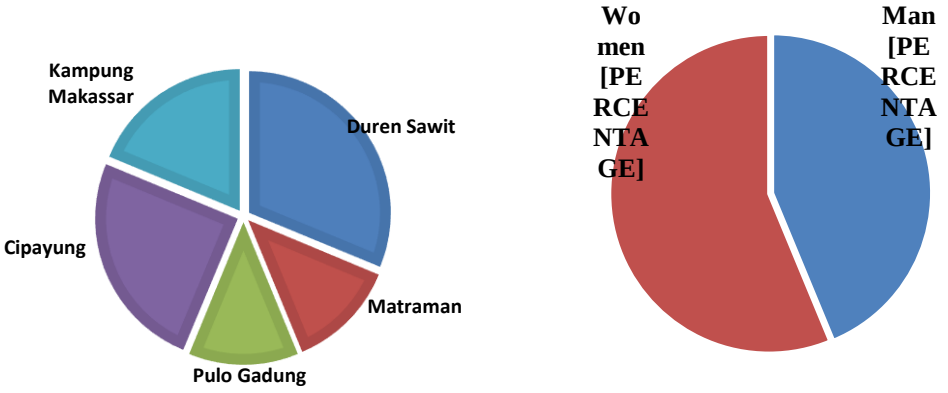
2. Methodology

This study is a cross-sectional study through a survey during May to June 2021 period in Duren Sawit, Matraman, Pulogadung, Kampung Makassar, and Cipayung district, East Jakarta. Survey and observation are done toward 32 online food SME owners during the COVID-19 pandemic. Samples were acquired through random sampling. Survey and observation of SSOP implementation were done using SFH form Regulation of the Head of the Food and Drug Supervisory Agency (*BPOM*) Number HK. 03.1.23.04.12.2206 concerning Good Food Production Practices for Domestic 2012. Definition of disobedience and deviation category from the founding of production facility was done according to this regulation. Assessment of SSOP implementation toward production facilities including 14 aspects. This study is a descriptive study through observation and interview. The data obtained will be analyzed qualitatively.

3. Results and Discussion

3.1. SME Owners Characteristics

Surveys were done on 32 online food SME owners in East Jakarta. 50% of the business was started during the pandemic or less than one year. Observation of SSOP implementation of these business owners was done in 5 districts in East Jakarta. Figure 1.a. shows the distribution of SME owners' characteristics used as samples in this study. There were 31.3% sample from Duren Sawit, 12.5% from Matraman, 12.5% from Pulogadung, 25% from Cipayung, and 18.8% from Kampung Makassar. Gender ratio of the SME owners were 56% for female and 44% for male. Overall online food businesses were done by all kinds of people (Figure 1.b).



(a) Area (b) Gender

Figure 1. (a) Area and (b) Gender

In terms of education level, online food SME owners in East Jakarta have senior high school background (62.5%), undergraduate background (25%), and junior high school background (12.5%) (Figure 2.a). The age range of SME owners was dominated by the population of 20-30 years (68.75%), followed by people from 31-50 years (Figure 2.b). This shows that business owners are mostly from the productive age population.

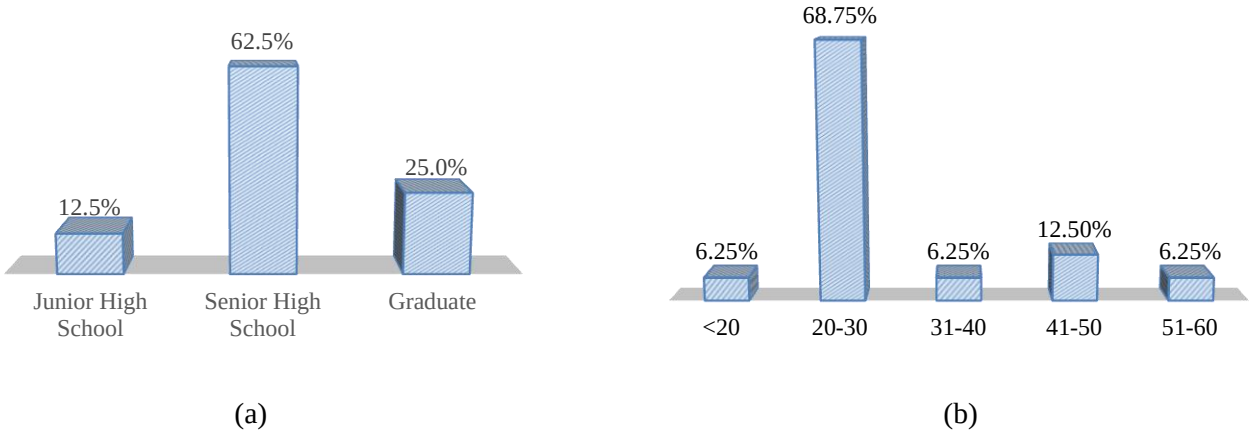


Figure 2. Education Level (a) and Age (b) of online Food SME owners.

Various food products were sold through the online platform by these SME owners. The products were dominated by popular Street food (37.5%), followed by donuts (12.5%), rice and noodle (12.5%), burger and pizza (12.5%), dessert (12.5%), Takoyaki (6.25%), and macaroni (6.25%) (Figure 3). The popular food is the product of tight competition between businesses which makes many variations of prices, ingredients, production technique, and type. One of the examples of popular food is churros with varying tastes. Varying production techniques such as baked churros can also be done to increase quality (Fadhliani et al., 2021).

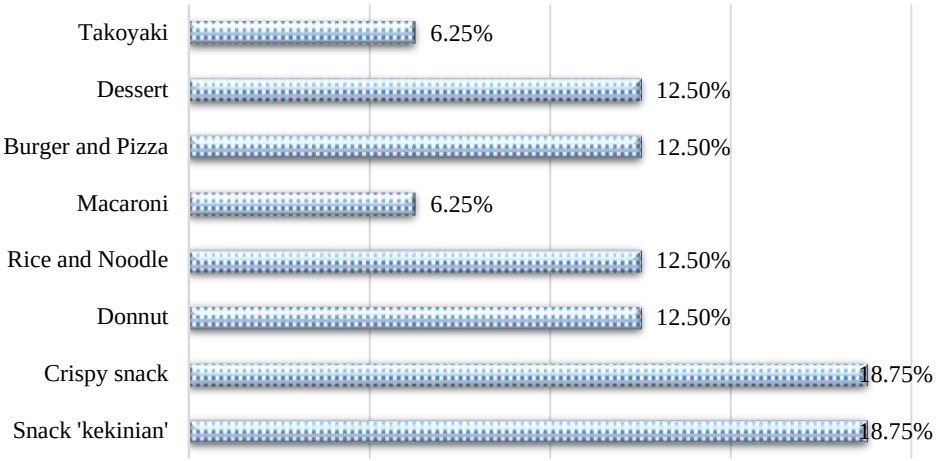


Figure 3. Type of online food SME products in East Jakarta.

Street foods sold through online platforms were packaged in plastic boxes (50%), plastic bags (31%), aluminum foil (13%), and paper bags (6%) (Figure 4). The usage of plastic as snack packaging still dominated the online snack market. Plastic characteristic of waterproof, airproof, and elastic is suitable for dry and wet Street food. Food dryness and crispiness could be retained by using plastic.

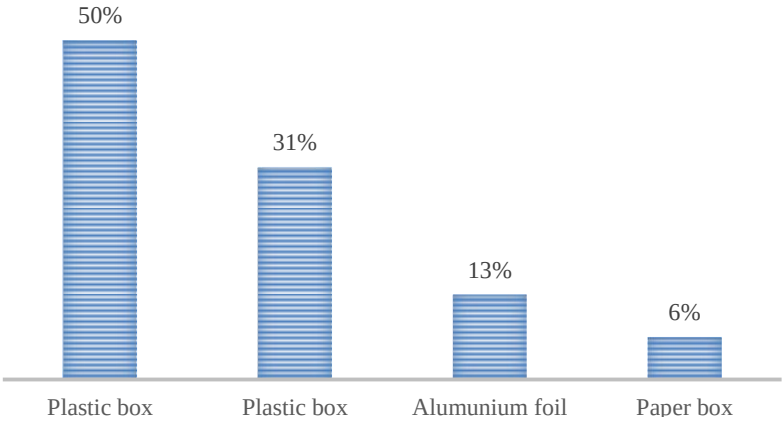


Figure 4. The packaging material used in online food SMEs in East Jakarta.

3.2. Assessment of SSOP implementation

Assessment of SSOP implementation toward production facilities including location and environment production, building and facilities, production equipment, water supply and facilities, hygiene and sanitation programs and facilities, employees' hygiene and health, maintenance of sanitation and hygiene programs, supervision of storage, control, and labeling process, product withdrawal, recording, and documentation. This assessment had used an instrument in a good food production for the Household Industry, hereinafter abbreviated *CPPB-IRT*. In this instrument, there is 4 group of disobediences, minor (MI), major (MA), serious (SE), and critical (KR). A disobediance is a deviation from the set of requirements in CPPB-IRT. The minor disobedience is a non copmliance from the "can" requirement in CBPP-IRT which has the potency to affect the wholesomeness of food products. The major disobedience is a deviation from the "ought" requirements in CPPB-IRT which has the potential to affect food safety controlling efficiency. The serious disobedience is a deviation from the "should" requirements in CPPB-IRT which shows potentially affected food safety. The critical disobedience is the deviation from the "must" requirements in CPPB-IRT which will affect the safety of the products. In other words, these "must" requirements must be fulfilled.

3.2.1. Production area and environments

The statement of location and environment of production "not maintained and dusty" is included in serious disobedience. Observations showed that 25% of SMEs carry out the production process in dirty and poorly maintained rooms (Figure 5).

3.2.2.Buildings and Facilities

As many as 43.8% of the observed samples have buildings with narrow areas that are narrow and difficult to clean. Production areas such as unmaintained kitchen area, dirty, or slimy floors, walls and ceilings (25%), unkempt and dusty ventilation, doors and windows (18.8%) (Figure 5). These aspects are major and serious disobeydiences.

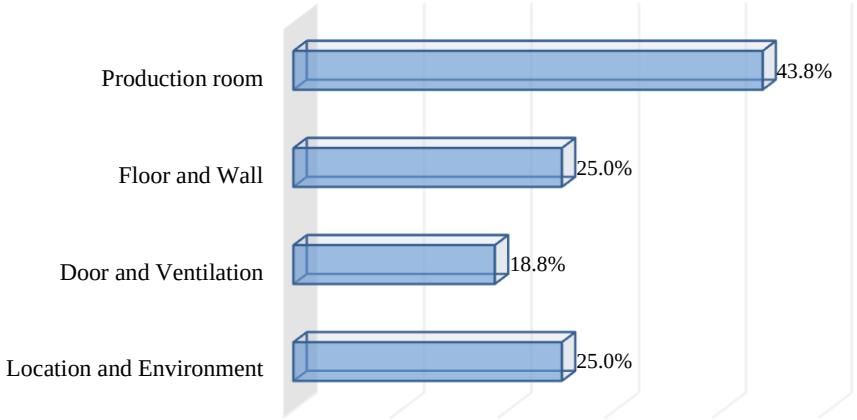


Figure 5. Disobediences toward observed locations, environments, buildings, and facilities.

3.2.3. Production Equipment

Related to the production equipment, there were observed critical and serious disobediences. 12.5% of SMEs used dirty and rusty equipment, not maintained equipment, and there is no sanitation effectivity assurance. There are 31.3% of SMEs that did not provide measurement/weighing equipment (Figure 6).

3.2.4. Water Supply and Water Supply Facilities

From the observed SMEs, there were SMEs without ample clean water supply required for production (18.8%), and the water source is not clean (12.5%). Some of the SME owners still used water from buckets that the amount of water is inadequate for the production and serving of food (Figure 6).

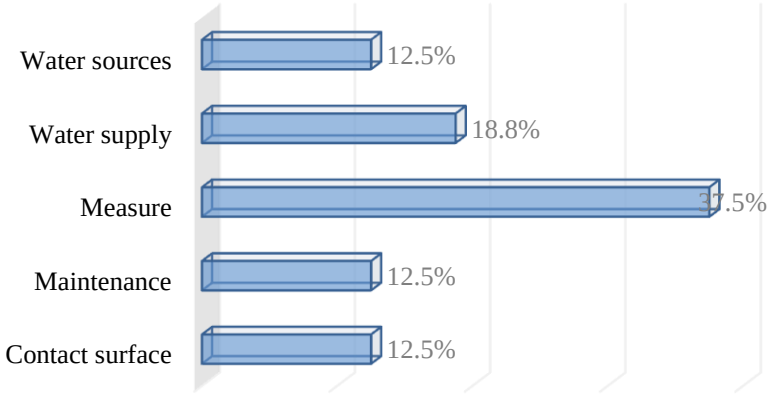


Figure 6. Disobedience toward production equipment and water supplies.

3.2.5. Hygiene and Sanitation Activities and Facilities

Hygiene and sanitation activities and facilities have four aspects observed, of which one is a major disobedience, two serious disobediences, and one critical disobedience. The result of observation is 18.8% have no facilities or not maintained facilities to clean and washed food products, equipment, and buildings, 37.5% have no standard handwashing facilities, soap, and hand dryer, 12.5% have dirty and unkempt toilets, and 31.3% have no garbage dump (Figure 7).

3.2.6. Employees' Health and Hygiene

In general, business owners and employees in food production were not sick, have bad personal hygiene, and do not wash their hands before or after handling food, and after going from the toilet. On the other hand, 37.5% of employees did not use work clothing, 25% of employees ate and drank in the production area, and 68.8% did not have responsible personal for employee hygiene (Figure 7).

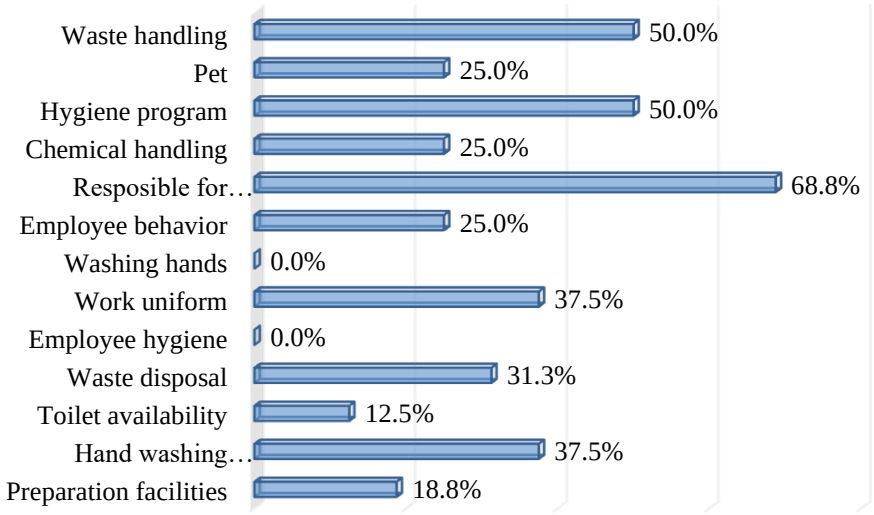


Figure 7. Disobediences in hygiene sanitation maintenances and facilities.

3.2.7. Hygiene Sanitation Program and Maintenance

Washing chemicals were not treated and used as standards, stored in a container without label were a major disobedience and 25% still have not done it. This is in line with not doing hygiene and sanitation programs periodically (50%). Pets were seen roaming around and inside the production room (25%) and waste in the environment were not immediately disposed of (50%) (Figure 7).

3.2.8. Storage

Only 12.5% of samples stores raw material, packaging material, and end product in dirty, damp, and dark place, on the floor or close to the wall, some also placed clean equipment in dirty place (Figure 8). Generally, almost every subject has stored material and product in the appropriate place. Inappropriate storage will affect the amount of product wasted.

3.2.9. Process controlling

Five samples were observed having process controlling related to recording, spoiled material usage, dangerous products, and inappropriate additives usage. Food production flow chart, packaging usage, and marking of material have been done well by business owners. Only 12.5% of samples have not implemented it well. Usage of measurement equipment for controlling processes has not been done by 31.3% of business owners (Figure 8).

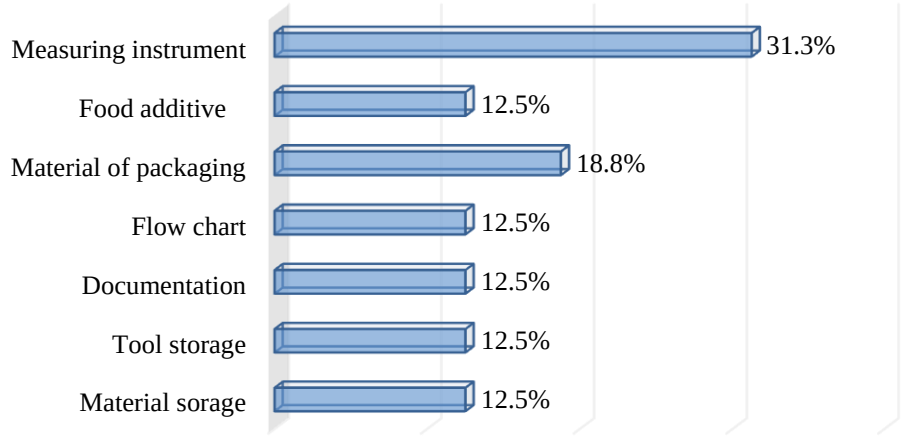


Figure 8. The disobedience in storage and process control.

3.10. Food Labeling

Food products sold by SMEs overall have food labels, but the food labels do not have the name of products, ingredients used, net weight, name and address of producers, expired date, production code (81.3%), and put health and dietary claim (62.5%) (Figure 9).

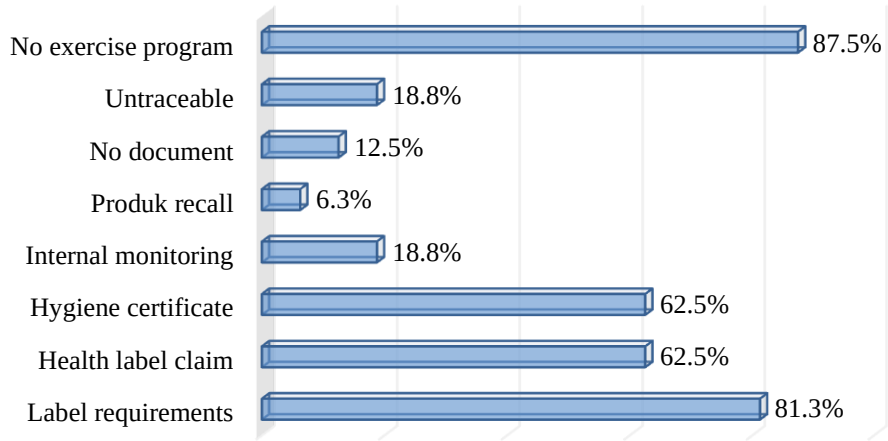


Figure 9. The disobedience in labelling, responsibility, withdrawal, recording, and training.

The percentage of disobediences found in SMEs in East Jakarta was 18.8% minor, 33.3% major, 25.8% serious, and 29.9% critical. The high percentage of disobediences showed that the SMEs were level 4 and needed internal supervision every day and additional training. Many reports showed that implementation of SSOP in food industries such as livestock product industries and fish product industries were important in products safety assurance (Veissier et al., 2008). SSOP is an important procedure in maintaining quality (Insana and Johan, 2020). GMP and SSOP cannot be separated as reported on roasted Nile tilapia fish industry, as well as home industries (Priambodo, 2011). SSOP cannot be separated from the CPPB-IRT form that has been regulated by the government.

The development of online food SMEs has increased fast. This increment does not occur only due to the limitation of people's mobility but also caused by the development of technology and changes in lifestyle. As reported in increasing snack potential in Jakarta which is being promoted through social media (Kurniawati and Yuliando, 2015). This rapid development has not been followed with adequate training for business owners, thus the implementation of SSOP is still not optimal even though many business owners have high education. Business owners must have a certificate of permit (Food Production-Household Industry Certificate (CPPB-IRT)) which is a written assurance given by the local government, through the public health office, for household industries that have fulfilled the requirements in productions and food product distribution. From the data, no SMEs in East Jakarta have this certificate.

The observed results showed that supervision on location, equipment, and production place cleanliness need to be paid on. Cleanliness improvement of SMEs in Jakarta can be done by promoting a healthy business environment. SME owners not only need training, but also assistance in the implementation of SSOP and CPPB-IRT. This is in line with the review of required evaluation techniques after hygiene and sanitation training (Abdou and Shehata, 2021).

4. Conclusions

Disobediences found in online food SMEs in East Jakarta during the COVID-19 pandemic were minor disobediences 18.8% which were potential in affecting quality, major disobediences 33.3% which have affecting product safety control, serious disobediences 25.8% which were potential in affecting product safety, and critical disobediences 29.9% which will affect food safety based on CPPB-IRT form.

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