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**KNOWLEDGE AND PRACTICES OF SELLER AND BUYER ON FOOD  
SANITATION AND SAFETY: A PRELIMINARY STUDY**

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**ABSTRACT**

Many food sellers and buyers show less concern on food sanitation and safety in selling and buying food. The purpose of this research was to understand if there are gaps between knowledge and practices of sellers and buyers about food sanitation and safety. Questionnaire-based survey was applied in gathering data about their knowledge. Observation and questionnaire were respectively to explore the practices of sellers in selling the food and of buyers in buying food. Descriptive analysis resulted that the sellers and buyers have knowledge on food sanitation and safety. However, not all sellers showed behavior that did not comply with food sanitation and safety standards. The buyers behave in accordance with their knowledge. They considered taste and cleanliness in buying particular food from among available seller that offers affordable price.

**Keywords:** Food sanitation, food safety, hygiene, buying behavior

## INTRODUCTION

Eating out is increasingly becoming a trend. However, many food providers in Indonesia do not apply hygiene standard of quality on food (Kusuma, 2014). According to Indonesia National Agency of Drug and Food Control (*Badan Pengawas Obat dan Makanan, BPOM*), 51 per cent food stands (hotel, restaurant, and cafeteria) do not comply with food sanitation and safety standards (Yanti, 2013). This is possibly the reason for 30 per cent of poisonous on food cases relates to ready-for-serve food (Dewanti-Hariyadi, 2013).

Many cases in relation to food contamination indicate neglect on food safety by food retailers in Indonesia. Most of the cases (70 per cent) are caused by food borne pathogen, such as *Bacillus Cereus* (Dewanti-Hariyadi, 2013). Contamination by *Bacillus Cereus* is caused by the food provider that has less concern on food sanitation and hygiene (Mardiani, 2013). Such unsafe food can cause acute and lifelong diseases ranging from diarrheal to various forms of cancer.

Concern on food safety is important since many Indonesians rely on food providers to get their food. A barrier for erecting food safety standard is the fact that there has been no formal certification for food safety applied to a food provider

in Indonesia (Yanti, 2013). This study attempts to examine knowledge of food sellers and buyers on food sanitation and safety. By examining the knowledge, reasons for the lack of practices on food sanitation and safety may be uncovered and necessary actions can be undertaken for erecting food safety.

Considering that food sanitation and safety covers all processes from pre-preparation before producing food until food being ready for consumption, the study focuses only on in-store process of preparing food in which access to observe the practices in food preparation by food sellers is considerably available. Also, these practices are the facts that obviously can be seen by buyers and possibly make buyers decide to buy. In this scope, the study addresses the problems as follows:

1. Analyze knowledge of food sellers and buyers on food sanitation and safety
2. Analyze practices of food sellers on food sanitation and safety when selling the food and of buyers when deciding on buying food.
3. Evaluate gap between knowledge and practice in food sanitation and safety of food sellers and buyers

The results can be the basis for determining proposed actions that

systematically can support food sanitation and safety practices for the community.

## LITERATURE REVIEW

### FOOD SANITATION AND SAFETY

Food sanitation is prevention attempts to free food and beverage from any hazards that may endanger health (Prabu, 2008). Food sanitation should include pre-preparation before producing, during processing, storing, transporting and being ready for consumption. The purpose of food sanitation is to assure safety and pureness of food, to protect consumer from diseases, to prevent food selling that defeat buyers, and to reduce waste of food.

The prevention attempts relate closely to hygiene habits of food providers in preparing food. According to the National Department of Health, hygiene is healthy attempts by maintaining and keeping cleanliness of the subject individually, for example by washing hands and dishes to protect their cleanliness or by throwing away the damage part of the food to protect food as a whole (Prabu, 2008).

Food sanitation and safety have become the concerns of consumers since they have come to the awareness that food sanitation and safety are supposed not only be

assured by a test of final products in a laboratory but it must cover the whole process of food preparation from the usage of raw materials, materials handling, production process, until distribution. The process is to ensure that good food will be produced (Daulay, n.a). The Health Ministry Regulation No.715/Menkes/SK/V/2003 is the regulation to control catering industry in Indonesia to provide healthy and nutritious food and to assure the food is safe for consumption.

Many countries have adopted standard for food sanitation and safety. The standards cover the process from preparation and processing the food until the food is received by a consumer. One food sanitation and safety standard is Hazard Analysis Critical Control Point (HACCP). HACCP is a food safety management system that emphasizes on efforts of continuous prevention. It is a knowledge-based, rational, and systematic system for surveillance and control of food safety. The purpose of the system is for identifying, monitoring, and controlling the hazard on food beginning from the raw materials, production process or manufacturing to food handling so that the food is safe for consumption. Implementing HACCP is thus one effort to maintain food safety (Daulay, n.a).

The implementation of HACCP is not limited on modern food industry but also

food processing for patients in a hospital, caterers, hotels, restaurants, and even for small food manufacturers (Soeprapto & Adriyani, 2009). Many aspects must be considered in designing and implementing HACCP in the food industry. The aspects are those relates to raw materials/ingredients, additional materials, place for processing food, process of manufacturing, ways to prevent hazards, ways to consume the product, risks the consumers may have in consuming the product, epidemiology condition in term of food safety. According to Motarkemi, et al. (1996) and Stevenson (1990) as cited by Soeprapto and Adriyani (2009), the prerequisite for implementing HACCP are good manufacturing practices (GMP) and standard sanitation operating procedures (SSOP).

Sanitation is creation or maintenance the condition enabling prevention of food contamination or food-borne diseases (Yuliastri & Yulianto, 2013). It thus can be stated that sanitation focuses on actions in creating hygiene condition. The related actions can be cleaning, arranging, sterilizing, spraying disease, and so on. Since hygiene is the goal, sanitation is thus a real action. Both hygiene and sanitation must be the attitude of the persons engaged in food processing and must be implemented consistently for achieving assurance on food safety.

There are four aspects of hygiene that can be addressed for the purpose of creating hygiene condition (Yuliastri & Yulianto, 2013). They are (1) Personal hygiene that can be in the forms of cutting nails short, cutting hair tidy, wearing hat/cap, wearing proper clothes and apron; (2) Tool hygiene, such as keeping utensils clean and sanitized the tools as necessary; (3) Room hygiene; and (4) Food hygiene.

Accordingly food sanitation is preventive efforts to free food and beverage from any hazards that can endanger health. The efforts must start from the phase before, during, and after food is processed and distributed, stored and ready for consumption (Yuliastri & Yulianto, 2013). Food sanitation has the following requirements: (1) Ingredients must be clean, fresh and health, (2) Proper and good processing, (3) Proper and right ingredients and supplements, (4) Process food according to the standard of processing, (5) Clean and well-maintained kitchen, (6) Clean and sanitized utensils, dan (6) Hygiene person.

It can be seen that food sanitation is comprehensive in terms of things to be done to reach certain condition of sanitation. In general it can be stated that food sanitation follows particular principles, i.e. cleanliness of raw materials, way to store the tools and utensils, way to

process food, way to distribute food, way to store food.

Food sanitation and safety is important to prevent side effects caused by food contamination, improper usage of food, and poisonous food. This is crucial since food contamination and food borne disease are the significant influence on public health issues in Asia (Food Agriculture Organization of United Nations, 2014). Food providers must take prevention actions by preparing food in correct ways.

A prevention way relates to the heating process in cooking the food. Ready-for-serve food has usually been processed by heating it in high temperature and in quite a long time. This process enables to kill only food borne pathogen that does not create spore. The poisonous substance may arise from bacteria that can sustain in high temperature and can create spore during the cooking process. The spore is evolving during the cooling time and grows faster if the cooling time takes longer. This is why poisonous food happens on large scale ready-for-serve food in which cooling process on room temperature takes longer. Cooling is thus important issue in preventing the growth of spore.

## **BUYING DECISION**

There are factors affecting consumer in making decision to buy so

that each consumer has different choices on product. Engel (1995) stated the factors can be classified into two: environmental factor and individual factor. Environmental factor comprises those outside the consumer that affect the decision, such as culture, social class, personal influence, and family influence. Individual/personal factor refers to internal or personal condition of the consumer, such as resources, motivation, knowledge, life style, demographic characteristics, attitude, perception, and learning. Besides these two factors, situational factor such as time, facility, and the condition of the consumer also affect the decision making (Kotler & Amstron<sup>45</sup>g, 2008).

Buying decision is the selection of an option from two or more alternative choices (Schiffman, 2006). It involves selecting alternatives available for satisfying a need and it is thus a solution with the ultimate goal is to satisfy the needs (Peter, 2000). The process in making decision to buy comprises five steps (Kotler & Amstron<sup>45</sup>g, 2008).

The first step is to recognize a problem. In this step, a consumer recognizes a need to be satisfied. The stimuli for this need can come from inside the consumer such as hungry, thirsty or outside the consumer or the environment.

The second step is to find alternatives for solution. Consumer looks for

information relating to the need that is being satisfied. They may find information about several products or brands from many sources, such as advertising, sales persons, family, relatives, friends, or product package.

Evaluate the alternatives is the third step. From the information that has been gathered, the consumer now has alternatives. They then evaluate each alternative in terms of products or brands that offer the most benefits and provide highest satisfaction.

Make a buying is the fourth step. In this step, customer chooses an alternative and buys the product.

The final step is post purchase behavior. After buying and using the product, consumer experiences the benefits of the product. They can feel whether the product can satisfy their need. If the product cannot satisfy their need, the consumer will keep the information about the product in their mind and may reevaluate the alternative. Otherwise, they will repurchase the product.

There are four types of buying behavior in terms of level of involvement of buyer and level of difference between brands (Simamora, 2002). Complex buying behavior needs high involvement of buyer in purchasing by being aware of clear differences between available brands. This behavior is arise in purchasing

products that are expensive and are reflected the image of the buyer.

In dissonance reducing buying behavior, buyer is highly involved and they are aware of the facts that there are only slight differences among available brands.

Buyer with habitual buying behavior purchases a product based only on habit and not on loyalty to a brand. In other words, buyer repurchases the product just because they already know the product and not because of the brand.

Buyer purchases different brand for only seeking variety and not for getting satisfaction has variety seeking buying behavior. Such behavior requires low level of involvement of the buyer even though the buyer knows the differences in brands. Brand is not essential in this behavior.

## **METHODS**

### **Population and Sample**

The study addressed food sellers who sell food for final consumption in the forms of warungs, food stalls, and street vendors in and outside the campus of Soegijapranata Catholic University in Bendan Duwur, Semarang. The sellers fluctuate in numbers in a period of time because some may be closed or moved away and some new are coming; some have permanent location but others open

their stalls in mobile modes, such as on motor cycle, car, or cart. On average there were about 25 street vendors and warungs. Lack of sampling frame for the population of sellers exist and thus non-probability sampling is more appropriate (Blaxter, Hughes, & Tight, 2002). Quota sampling is applied and considering homogeneity in their conditions, fifty per cent of the available sellers (or 12) were selected as the sample.

The buyers are students of Soegijapranata Catholic University. They are an interesting object since they are the university students who are supposed to have sufficient knowledge on food sanitation and safety and thus will act accordingly in buying food for their consumption. The sample of students is determined for 60 people and the respondents were selected using purposive sampling approach that is those who had the experience in buying food for at least once from one of the sellers in the area.

### **Data Collection Method**

Questionnaire was applied for gathering data about knowledge on food sanitation and safety from sellers and students. Questionnaire was also used to collect data about practices in buying by students. The questions covered knowledge on personal, tool, room, and food hygienes for sellers

and buyers and buying behaviour for buyers. Five-scale Likert is applied to measure their agreement on the statements with <sup>22</sup> 1 = absolutely agree; 2 = agree; 3 = neither agree nor disagree; 4 = disagree and 5 = absolutely disagree.

Observation was used to collect data practices on hygiene behavior of the sellers. The observer recorded the activities of a seller during the preparation and serving food and took notes as necessary.

### **Data Analysis Method**

Descriptive statistics was used to analyse the knowledge of <sup>1</sup> sellers and buyers on food sanitation and safety as well as buyers' decision-making process in buying food. The analysis was presented in tables of frequency to see the tendency in the knowledge of the seller and buyer respondents. Mean score was calculated to show the tendency in respondents' knowledge. The score showed relative position of the average perspective between the scales.

Descriptive analysis was also used to describe buyers' decision-making in buying food. Data gathered from the observation were to describe practices of the sellers in preparing food that were focused on their compliances with the standards.



. Evaluation was conducted between the knowledge of sellers and buyers, the knowledge of sellers and compliance of the practices, and the knowledge of buyers and decision to buy food.

## RESULTS AND DISCUSSION

### Descriptions of the Respondents

The seller respondents comprise of 50% male and 50% female in which majority of each were dominated by those who were above 35 years old. Majority of them had low level of education: 41,7% graduated from junior high school and 33,3% senior high school. However, majority of male respondents have relatively higher level of education compared to female respondents. Most of them (66,7%) were originally from Semarang. Half of them (50%) sold snacks or light foods that can be consumed for refreshing. They were street vendors who sold the food on the side of the road using a small cart on a motorcycle or a wheeled cart. The others (33,3%) sold heavy foods in the form of *warung* that varied in size. Their length in the business varied. Even though majority have been operating less than a year (41,7%), there were 25% had been in the business for more than 9 years.

The buyer respondents were respectively 50% male and female and 98,3% were at the age of 18-23 years old.

Majority of them (78%) were originally from Semarang. Those who come from outside Semarang were from other cities in Central Java, West Java, East Java, DIY (Yogyakarta), and Aceh.

### Knowledge on Food Sanitation and Safety

Knowledge on food sanitation and safety is managed based on four aspects for the requirements of food sanitation and safety: personal hygiene, tool hygiene, room hygiene, and food hygiene. Knowledge of seller and buyer on each aspect is outlined based on table 1 presenting mean score of each item and aspect of food sanitation and safety.

#### a. Personal Hygiene

Generally, the sellers perceived that personal hygiene is important for food sanitation and safety. Among the four aspects of personal hygiene, washing hands was perceived as the most important things for a food seller to do. The sellers tended to strongly agree (mean = 4,5) that they must wash their hands. However, their perception on using masker to cover mouth was neutral (mean = 3,0). This implies that wearing or not wearing masker is considered as unnecessary by the sellers. In the other aspects, they tend to agree that they need to cut their nails (mean = 3,5) and to cover hair with hat (mean = 3,83).

Table 1. Mean Value of Hygiene Practices of Buyers and Sellers

	Buyer	Seller
<b>Personal hygiene</b>		
Wash hands	4,57	4,50
Cut nails	3,60	3,50
Cover hair	3,35	3,83
Use masker	3,18	3,00
<b>Tool hygiene</b>		
Store utensils	4,68	4,83
Clean utensils	4,55	4,08
Wash kitchen wares	4,50	4,08
Store kitchenware	4,32	4,50
<b>Room hygiene</b>		
Clean kitchen	4,53	4,00
Cover rubbish	4,25	3,67
<b>Food material hygiene</b>		
Use fresh ingredients	4,25	4,17
Use healthy ingredients	4,57	4,67
Wash ingredients	4,33	4,58
Store ingredients	4,50	4,58
<b>Food processing hygiene</b>		
Clean process & serving	4,68	4,58
Use thong	3,48	3,25
Cover food	4,18	4,75
Use safe wrap	4,12	3,92

Source: primary data, 2017

The buyers intend to agree that food seller must do personal hygiene related activity (mean values are above 3). Among four activities, they tend to strongly agree (mean = 4,57) that seller must wash their hands every time they have to cook or prepare food for the buyer. However, they relatively neutral toward the requirement for the seller to cover the mouth with masker (mean = 3,18) and to cover the hair with cap (mean = 3,35). Based on the mean score, it can be seen that wash hands is perceived as the most important hygiene

behavior for the seller to do. On the other side, use masker is perceived as least important behavior. It thus can be stated that the sellers and the buyers have similar perception on personal hygiene of food seller.

#### b. Tool Hygiene

Tool hygiene relates to the behavior to keep utensils clean and to sanitize the tools as necessary. The result shows that tool hygiene was perceived as important by the sellers. In all aspects of tool hygiene, they

tend to strongly agree that utensils must be stored well (4,08) and kept clean (4,83), and the kitchenware must be washed (4,08) and stored properly (4,50). This indicates that they have knowledge on food sanitation and safety in terms of tool hygiene.

The buyers tend to strongly agree that utensils must stored and kept clean (mean = 4,68 and 4,55 respectively). Buyers also perceived that the seller must keep the kitchenware clean by washing and storing them (mean = 4,5 and 4,32 respectively). This result implies that buyers care about hygiene of the tools and kitchenware. Comparing the perception of the sellers and the buyers, it can be stated that they have similar knowledge on tool hygiene.

### **c. Room Hygiene**

Room hygiene refers to place where food processing is conducted. In terms of a restaurant, the room can be the kitchen. Thus, room hygiene relates to clean kitchen and its environment. Here, room hygiene is evaluated in term of behavior to keep the kitchen clean and to cover the rubbish. By covering the rubbish, flies that are believed to bring disease will not come. The sellers agreed that kitchen must be kept clean (mean = 4) and rubbish must be covered (mean = 3,67). This implies that they were aware of the cleanliness of the place where the food is processed.

Even though the buyers have similar knowledge on room hygiene to the sellers, they have higher intention on each item. The buyers tend to strongly agree that kitchen must be kept clean (mean = 4,53) and rubbish must be covered (mean = 4,25).

### **d. Food Hygiene**

Food hygiene was viewed on two aspects, i.e. material hygiene and food processing hygiene. In terms of material hygiene, the sellers tend to strongly agree that the ingredients used for food must be fresh (mean = 4,17) and healthy (mean = 4,67). The ingredients must also be washed before used (mean = 4,58) and stored well when they were not used (mean = 4,58).

The buyers also have similar perception on materials hygiene. They perceived that materials for food must be hygiene. They tend to strongly agree that seller must use fresh and healthy ingredients for the food being sold (mean = 4,25 and 4,57 respectively). They also intently strongly agree that the ingredients must be washed before used (mean = 4,33) and stored well when they are not used (mean = 4,50).

In terms of food processing hygiene, the sellers acknowledged if they must process and serve the food in clean way and must cover the food being sold (mean = 4,75). They intently strongly agreed with

these two aspects (mean = 4,58 and 4,75 respectively). However they only tend to agree on the usage of safe wrap (mean = 3,92) and thong (mean = 3,25).

The buyer respondents have higher intention on how food is processed and served. They intently strongly agree that the seller must process and serve the food in clean way (mean = 4,67). However, they only intently agree that the seller covers the food being sold (mean = 4,18) and uses safe wrap for serving the food (mean = 4,12). Use thong to take food being served is relatively the least important aspect in processing food. Their agreement on this is only 3,48 which implies if thong may or may not be used in serving the food.

## **Practices on Food Sanitation and Safety**

### **a. Seller Practices in Processing and Serving Food**

Practices of the sellers were observed during processing an order from a buyer. Since majority of the sellers were street vendors, some hygiene aspects in food sanitation and safety were unobservable. For example, room hygiene addressing the kitchen and its environment were unobservable since the kitchen was in their own place. Tool hygiene was not fully observable because no utensils were provided for take away. The observable tool hygiene related only to the tools used

in preparing food, such as spatula, serving spoon, knife, and frying pan. The most observable aspect is food processing hygiene.

In personal hygiene, all sellers did not use masker. Even though they did not cover their hair in purpose, but the hijab wore by some female sellers or hat wore by male sellers could have the same function in protecting hair during processing food. They cut their nails short. They did not wash their hands everytime they processed the food. Some used towel or tissue to clean their hands even though they did not always clean their hands with it.

In general, the sellers' practices in keeping the hygiene of foods and drinks they were selling varied. Even though they perceived that washing hands is the most important aspect in personal hygiene, most of them did not wash their hands. This could happen because there was no water available for them (especially for the street vendors) to do so. Among the street vendors, only one prepared tissue for them to clean their hand. Those sell the food in a *warung* provided tea towel for everything, such as wiping the utensils and their hands. The hygiene may be questionable regarding to this practice.

In terms of tool hygiene, some were not yet aware fully on the hygiene of the tools they were using. They put thong (such as

in *bakso* and waffle), scoop/spoon (such as in *seblak*, *torabika*) on the serving table with no cover that can protect them from dust. The sellers who sold the food in *warung* used tea towel to wipe utensils before they were used. The seller of *seblak* left the cooking pans uncovered when they were not in use. The pans might be contaminated by dust or other bacteria from the wind and thus the food cooked in the pan would also be contaminated.

The observable aspect in food hygiene is how the sellers store the ingredients. In this aspect, some sellers stored the ingredients in closed containers while some others left the containers open. The sellers in *warung* tended to do the latter. They might think that leaving the ingredients open in the showcase could possibly keep the ingredients clean even though the showcase did not have door or cover. The risk for food to be contaminated is higher on street vendors than on *warung* since street vendors are highly exposed to dust. Thus covering food is more important for street vendors to keep the food clean. Even though majority the street vendors in this research covered their food but they were not aware that they left open the ingredients while preparing the food.

Food can also be contaminated through the sellers themselves. *Chokles* put the measuring glass in the ice box after used it.

The glass had been held by the seller and was exposed to the dust while it was being used. By putting it into the ice box, it may contaminate the ice. Similar thing can happen in *terang bulan*. The seller put the bottle of sugar powder in between the *terang bulan* base with nothing separate them. The bottle held by the seller while preparing an order and may contaminate the base with bacteria.

The seller of *leker* processed the food in relatively less clean in a way that he left the cooked food in an open space. The food that was cooked earlier was exposed to dust while waiting for others to be processed. The seller might not realize if his way was not totally hygiene.

Plastic is the dominant material for packing or wrapping. Even the seller of *bakso* and *seblak* used plastic to wrap their hot food. When plastic interfered with the hot food, the plastic might produce dangerous element. Besides plastic, the seller of *seblak* also used foam to wrap the food. Foam is known as material that is not good for hot food. Some sellers used paper-based material for wrapping the food (*leker*, *terang bulan*, and waffle) but they still used plastic bag to wrap.

### **Buying Behavior**

This section describes behavior of the buyer respondents in buying food. The description is outlined according to the

process in making decision to buy a product.

In problem recognition, a consumer recognizes need for food to be satisfied. The stimuli for this need can be hungry or thirsty. The result shows that the respondents were stimulated by more than one condition in buying food (table 2).

Majority of them bought food because they were hungry or thirsty (51%). The other stimuli related to the unplanned behavior. Some bought food because they were treated by a friend (20%), were interested in the food (18%), and attracted to buy when accompanying friend (10%).

Table 2. Condition to Buy Food

Condition	Freq	Percent
When I am hungry or thirsty	51	51
I am interested in particular food/drink even though I am not hungry/thirsty	18	18
I buy impulsively when I am accompanying friend	10	10
I am treated by a friend	20	20
Others	1	1
Total	100	100

Source: primary data, 2017

In the second step (find alternatives for solution), consumer looks for information relating to the need being satisfied. They may find information from many sources, such as advertising, sales persons, family, relatives, or friends. Majority of the respondents were seemingly loyal customers. They bought at the same place as before (39,3%). Thus, they might not need to find information about other places and could make decision relatively quickly. Asking friend (30,3%) or looking around by themselves (30,3%) were the ways to find information about different places.

In evaluating the alternatives, consumer chooses one that gives most benefits and provides highest satisfaction. The respondents chose the alternatives based on particular considerations (table 3). Taste was the major consideration for the respondents to buy particular food or drinks (22,1%). Affordable price and cleanliness in serving food were the other considerations (respectively 20,6%). Only 9,6% of them considered friend's choice and 12,5% chose the place available surround the campus.

In making a buying, customer chooses an alternative and buys the product. The respondents bought not only main meal

but also drinks. Because hunger or thirst was the major stimuli, main dish (39,3%) and regular drink (22,3%) were the majority type of food bought by the

respondents (table 4). The respondents bought either main meal or drink or both.

Table 3. Considerations in Buying Particular Food and Drink

Considerations in buying	Freq	Percent
Choose among available surround the campus	17	12,5
According to friend's choice	13	9,6
Price is affordable	28	20,6
The place is clean	20	14,7
Food is tasteful	30	22,1
Food is served clean	28	20,6
<b>Total</b>	136	100,0

Source: primary data, 2017

Table 4. Type of Food Bought

Type of Food	Freq	Percent
Snacks	24	21,4
Main meal	44	39,3
Bottled drink	19	17,0
Regular drink	25	22,3
<b>Total</b>	112	100,0

Source: primary data, 2017

Majority of the respondents (88,3%) bought only one portion of the food and the rest (11,7%) bought two portions. Most of those who bought drinks (82%) only bought one portion of drink. Only 6% who bought more than two portions of drinks.

The respondents spent more on food than on drink. Majority (46,7%) spent between Rp10.000 and Rp15.000 on average for food, while majority of those who bought drink (58%) only spent between Rp5.000 and Rp10.000 on average. Very few spent more than

Rp15.000 for food and Rp10.000 on drink. This implies that price range affordable for the respondents are as much as Rp15.000.

After buying the food, consumer experiences the benefits of the food and can feel whether the food satisfies their need. They will repurchase the food if the food satisfies their need, otherwise they will reevaluate the alternatives. Confirmed if the buyer respondents will buy food and drink at the same place as they bought before, majority (93,3%) stated that they will repurchase at the same place. The

main reason for doing this was the taste of the food. The other reasons relate to cleanliness of the food and the place. Even though price was only the third reason for repurchasing at the same place, but price was the main reason for those who would not repurchase at the same place. In other words, taste and cleanliness are main reasons for choosing the place and on the other side price is the main reason for leaving.

## **Discussion**

In general, it can be said that both the <sup>1</sup> sellers and the buyers have knowledge on food sanitation and safety even though they may have different emphasis on aspects perceived as important. Their perceptions on the aspects of food hygiene as the indicators of food sanitation and safety show that they tend to agree or strongly agree to each item is important in keeping food sanitation and safety. The minimum score for the sellers' and buyers' perspective are respectively 3.0 and 3.18.

The practices of the sellers in processing and serving food that comply with the knowledge were still varied. They did not wash their hand before preparing an order or did not provide either tea towel or tissue as the alternative for the unavailability of water. Many of them left the ingredients uncovered. Some did not store the ingredients and tools properly.

As the main purpose for buying food is to have food when hungry or to have drinks when thirsty, majority of buyer respondents bought main dish and regular drink. Even though the major reason in choosing particular food or drink is taste, they also considered cleanliness in serving the food and price that is affordable among those available surround the campus. These reasons made the buyers preferred to buy at the same place as before.

It can be concluded that practices of the sellers and the buyers relates to cleanliness in interpreting food sanitation and safety. However, the interpretation of cleanliness still varies.

## **CONCLUSIONS**

The sellers were identified as having knowledge on food sanitation and safety. However, their practices in processing and serving food did not always comply with the knowledge. Some disregards the hygiene practices.

The buyers were also identified as having knowledge on food sanitation and safety. They perceived that cleanliness in utensils and processing and serving the food as the most important aspect in food hygiene. Therefore, cleanliness was one of the reasons in selecting food and seller when they need to buy food. Event though taste was the primary reason for choosing



food and seller but ability to pay limited their choice.

## Recommendations

The sellers have responsibility in creating food sanitation and safety since the buyers could only choose among those that are available in a location. Limitations in proper facility for providing food with hygiene way are possibly the reason for the street vendors to behave in a way that may deviate from good practicing in providing hygiene food. Thus, creating a healthy cart for street vendors can possibly increase hygiene of the food being sold. The cart must not only carry the food and ingredients around but it must be able to protect the food and ingredients from dust and bacteria.

Increasing awareness of food sellers on food sanitation and safety can be done formally and informally by either the government body or private entity (such as organizations having concern with consumer protection or education institutions).

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