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Implementation of Hygiene Sanitation Principles for Fried Snacks in Tamalanrea, Makassar City

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ABSTRAK

Snack foods are food and drinks that are processed by food producers at the point of sale and/or served as food ready for sale to the general public. Contaminated food can be caused by food sanitation hygiene that does not meet health requirements. Fried foods are one of the snack foods sold by street vendors. This research aims to determine the implementation of the health principles of sanitation for fried snack foods. The impact of consuming fried food continuously and excessively can have bad effects on the body, including obesity, increasing the risk of coronary heart disease and cancer due to carcinogenic substances produced from the frying process. The type of research used in this research is descriptive observational with a cross sectional approach. The population in this study were all fried food sellers in Tamalanrea, totaling 29 people. The sample in this research was all fried food sellers in Tamalanrea, namely 29 people, with a sampling technique using exhaustive sampling. The research results showed that of the 29 respondents, 27 respondents met the food selection requirements, 22 respondents met the food storage requirements, 26 respondents (89.7%) met the food processing requirements, 24 respondents (82.8%) met the food storage requirements, 27 respondents (93.1%) met the requirements for transporting food, and 23 respondents (79.3%) met the requirements for serving food.

Keywords: Implementation, Hygiene, Sanitation, Snacks, Fried Foods, Tamalanrea

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1. Introduction

Snack food is food and drink that is processed by food craftsmen at the point of sale and/or served as ready-to-eat food for sale to the public other than those served in catering services, restaurants/restaurants and hotels (Kepmenkes RI, 2003).

According to the Regulation of the Minister of Health of the Republic of Indonesia Number 1096/MENKES/PER/VI/2011 concerning Jasaboga Sanitation Hygiene, food hygiene and sanitation is an effort to control the risk factors for contamination of food, whether originating from food ingredients, people, places and food-making equipment. safe to eat. Contaminated food can be caused by food hygiene that does not meet health requirements. Food and drinks that meet health requirements must be subject to hygiene and sanitation supervision.

The Word Health Organization explains that foods rich in carbohydrates or flour that have been fried or cooked at high temperatures can stimulate the formation of carcinogenic compounds that trigger cancer, namely acrymalides. Fried snacks that are high in trans fats will also make a person prone to coughing and slow down gastric emptying.

Urban communities are currently very fond of instant food. Fried foods, which are a type of instant food, are currently very easy to get because they are often sold on the roadside. Fried food served on the street is usually not placed in a closed container. So that dust, vehicle fumes and dirt easily stick to it. Fried foods that are tightly wrapped and sold in places where there are not many motorized vehicles will be safer to consume (Ardalina, 2012).

Fried foods are one of the snack foods sold by street vendors. Fried food is a type of food that is fried using oil. Fried food has a crunchy, savory and delicious taste, at a very affordable price. In Indonesia, fried food is a popular snack. Fried food sellers can be found on the side of the road or walking around with poles or carts. Ingredients coated in flour batter and fried include; fried banana, tempeh, tofu, sweet potato, cassava, namely fried cassava flour, breadfruit, and bakwan, namely flour dough mixed with chopped cabbage and carrots. One type of popular fried food is tofu, corn fritters and

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potato fritters are also included in the fried food category. Fried foods are usually eaten with chili sauce and chili peppers. However, the impact of consuming fried foods continuously and excessively can have bad effects on the body, including obesity, increasing the risk of coronary heart disease and cancer due to carcinogenic substances produced from the frying process.

In the food and beverage production process, sanitary hygiene measures, which are part of environmental health, as well as hazard analysis and critical control points (HACCP: Hazard Analysis Critical Control Point) are important efforts to avoid contamination of production results. There are six principles of hygiene and sanitation that need to be considered in the food and beverage processing process, namely selecting food ingredients, storing food ingredients, food processing, storing cooked food, transporting food, and serving food (Ministry of Health, 2004).

There are many types of snack foods and they vary greatly, in form, necessity and price. Generally, snack foods can be divided into 4 groups, namely:

a. Main foods such as: rames rice, rawon rice, pecel rice. And others;
b. Food or snacks for example: cakes, onde-onde, Barongko, Taripang fried bananas, and so on.
c. Beverage categories, iced drinks, fruit ice, tea, coffee, dawet and so on;
d. Fresh fruits such as mango, durian and others (Asan, 2015).

2. Research Method

This research is a descriptive observational study with a cross sectional approach, namely knowing the description of the hygiene and sanitation of fried snack foods in Tamalanrea. Population is the entire data source needed in a study (Notoatmodjo, 2010). The population in this study were all fried food sellers in Tamalanrea, totaling 29 people. The sample is part of the population selected in a certain way so that it can represent the population (Notoatmodjo, 2010). The sampling technique in this research was exhaustive sampling. According to Murti (2006), exhaustive sampling is a technique for selecting samples using a survey of the entire existing population or taking all

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members of the population as samples, so the sample used is all fried food sellers in Tamalanrea, namely 29 people.

3. Results And Discussions

a. Result

Karakteristik Responden

1. Age

Age is a unit of time that measures the time a creature has existed, whether alive or measured from birth until that age is calculated (Notoatmodjo, 2003). The distribution of respondents by age group is presented in table 4.1 below:

Table 4.1
Distribution of Respondents by Age Group
Fried Seller in Tamalanrea

No	Age Group	Amount	
		N	%
1	21-30	8	27,6
2	31-40	11	37.9
3	41-50	10	34,5
Total		29	100

Table 4.1 shows that of the 29 respondents (100%) the most respondents were in the 31-40 year age group with 11 respondents (37.9%) and the fewest were in the 21-30 year age group with 8 respondents (27 .6%).

2. Gender

Calamine is a type of analytical concept used to identify differences between men and women from a non-biological perspective, namely from social, cultural and psychological aspects ((Notoadmodjo, 2012).

The distribution of respondents based on gender is presented in table 4.2 below:

Table 4.2
Distribution of Respondents Based on Gender
Fried Seller in Tamalanrea

No	Gender	Amount	
		n	%

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1	Man	16	55,2
2	Woman	13	44,8
Total		29	100

Source: Primary Data March 2020

The distribution of respondents based on gender among fried food traders in Tamalanrea can be seen that there were 16 male respondents or (55.2%) and 13 female respondents or (44.8%).

3. Level of education

Education level is a continuous stage of education, which is determined based on the level of development of students. School education levels consist of primary education, secondary education, and secondary higher education (Notoatmodjo, 2003).

The distribution of respondents based on gender is presented in table 4.2 below

Table 4.3
Distribution of Respondents Based on Education Level
At a fried food seller in Tamalanrea

No	Level of education	Amount	
		N	%
1	Finished elementary school	3	10,3
2	Completed junior high school/secondary degree	8	27,6
3	Completed high school/secondary degree	17	58,6
4	S1	1	3,4
Total		29	100

Source: Primary Data March 2020

Table 4.3 shows that of the 29 respondents (100%) of fried food sellers in Tamalanrea, there were 3 respondents or (10.3%) with an education level of more than elementary school, as many as 8 respondents or (27.6%) had completed junior high school, 17 respondents or (58.6%) graduated from high school/secondary degree, and as many as 1 respondent or (3.4%) had a bachelor's degree.

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❖ Analisis Univariat

Univariate analysis was carried out to explain the characteristics of each variable studied, both the independent variable and the dependent variable. The dependent variable in this research is the application of the principles of food sanitation hygiene and the independent variables in this research are the selection of food ingredients, storage of food ingredients, food processing, food storage, food transportation and food serving.

a. Selection of Food Ingredients

Selection of food ingredients is the selection of all ingredients, both processed and unprocessed, as well as food additives (Permenkes RI, 2011).

Table 4.4
List of Fried Snacks and Fried Snack Ingredients
Available in Tamalanrea

No	Type of Fried	Manufacturing Materials
1	Know the content	Tofu, wheat flour, laksa, bean sprouts, flavoring water, cooking oil
2	Kandoang	Wheat flour, water, cabbage, flavorings, bean sprouts, cooking oil
3	Fried bananas	Wheat flour, banana, water, flavoring
4	Fried tempe	Tempeh, wheat flour, water, flavorings, cooking oil
5	Fried sweet potatoes	Sweet potatoes, wheat flour, water, flavorings, cooking oil
6	Banana Molen	Bananas, flour, sugar, water, flavorings, cooking oil

Table 4.5
Distribution of Respondents Based on Material Selection
Food at a fried food seller in Tamalanrea

No	Assessment criteria	Amount	
		N	%
1	Qualify	27	93,1
2	Not eligible	2	6,9

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Total	29	100

Source: Primary Data March 2020

Table 4.5 shows that of the 29 respondents or (100%) there were 27 respondents or (93.1%) who met the requirements for selecting food ingredients, while 2 respondents or (6.9%) did not meet the requirements for selecting food ingredients. This happens because there are still fried food sellers who use food ingredients that are in poor physical condition.

Table 4.6
Distribution of Respondents Based on Material Selection
Food at a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	N	%
1	Do you use good quality food ingredients?	25	83,2	4	13,8
2	Is the physical condition of the food ingredients in good condition?	23	79,3	6	20,7
3	Do you use packaged food ingredients?	22	75,9	7	24,1
4	Are packaged food ingredients registered with the Ministry of Health?	21	72,4	8	27,6
5	Do the food ingredients you use do not contain dangerous ingredients (borax preservative, formaldehyde, textile dyes)?	14	48,3	15	51,7
6	Are the food ingredients obtained from sales places supervised by the government?	22	75,9	7	24,1

Source: Peimer Data March 2020

Table 4.6 shows that 29 respondents (100%), 25 respondents or (83.2%) used good quality food ingredients, 23 respondents or (79.3%) used food ingredients in good condition, 22 respondents (75.9%) use packaged food ingredients, 21 respondents (72.4%) use packaged food ingredients that are registered with the health department, 14 respondents or (48.3%) do not use dangerous food ingredients (borax

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preservatives, formalin, and textile dyes), and 22 or (75.9%) respondents used food ingredients that came from sales places supervised by the government.

Table 4.7
Distribution of Respondents Based on Material Selection
Food at a fried food seller in Tamalanrea

No	Question	Yes		No	
		n	%	n	%
1	The physical condition of food ingredients is in good condition	22	75,9	7	24,1
2	Food ingredients from official sources	27	93,1	2	6,9

Source: Primary Data March 2020

Table 4.7 shows that 29 or (100%) respondents, 22 or (75.9%) respondents used food ingredients in good condition while 7 respondents (24.1%) did not use food ingredients in good condition and 27 respondents (93 .1%) use food ingredients from official sources while 2 respondents or (6.9%) do not use food ingredients from official sources.

b. Food Storage

Food storage is the storage of food ingredients separately from other food raw materials, clean, closed and stored in similar conditions and on shelves (Permenkes RI, 2011).

Table 4.8
Distribution of Respondents Based on Material Storage
Food at a fried food seller in Tamalanrea

No	Research criteria Qualify	Amount	
		N	%
1	Not eligible	22	75,9
2	Research criteria	7	24,1
Total		29	100

Source: Primary Data March 2020

Table 4.8 shows that 29 or (100%) respondents, 22 respondents (75.9%) met the requirements for selecting food ingredients and 7 respondents (24.1%) did not

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meet the requirements for selecting food ingredients. This happens because food ingredients are not stored in the same way and on shelves, there are still fried food sellers who do not have a special place to store food ingredients and cooked food, and there are still fried food sellers who store food ingredients in temperature and humidity conditions. which is not appropriate.

Table 4.9
Distribution of Respondents Based on Material Storage
Food at a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	n	%
1	Do you have a special place for storing food?	16	55,2	13	44,8
2	Is the raw material storage area clean and watertight?	20	69,0	9	31,0
3	Are the storage temperatures and humidity appropriate for the type of food?	16	55,2	13	44,8
4	Are food ingredients placed separately from cooked food?	27	93,1	2	6,9
5	Does the food storage area not become a nest and hiding place for insects, mice and other pests?	21	72,4	8	27,6
6	Are foodstuffs stored in the same way and on shelves?	13	44,8	16	55,2
7	Do you store food that spoils quickly in the refrigerator and dry food in a dry, non-humid place?	22	75,9	7	24,1

Source: Primary Data March 2020

Table 4.9 shows that 29 respondents (100%), there are 16 respondents (55.2%) who have a special place to store food ingredients, 20 respondents (69.0%) have a place to store food ingredients that is clean and watertight, 16 respondents (55.2%) have a place to store food ingredients that is appropriate to the temperature and humidity of the type of food, 27 respondents (93.1%) separate storage places between food ingredients and food, 21 or (72.4%) respondents have a place storage of

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foodstuffs that do not become nests and hiding places for insects and rats, and other pests, 13 or (44.8%) respondents stored foodstuffs in the same way and on shelves, and 22 respondents (75.9%) stored Food items that spoil quickly are refrigerated and dry foodstuffs are stored in dry, non-humid places.

Table 4.10
Distribution of Respondents Based on Material Storage
Food at a fried food seller in Tamalanrea

No	Question	Yes		No	
		n	%	n	%
1	Storage temperature and humidity according to the requirements of the food type	12	41,4	17	58,6
2	Food storage areas are protected from contamination by bacteria, insects, mice and other animals	19	65,5	10	34,5
3	Separate placement from finished food	27	93,1	2	6,9
4	The place is clean and well maintained	15	51,7	14	48,3
5	Stored in similar rules and arranged on shelves	14	48,3	15	51,7
6	Food ingredients do not stick to floors, walls and ceilings	11	37,9	18	62,1

Source: Primary Data March 2020

Table 4.10 shows that 29 respondents (100%), there are 12 respondents (41.4%) store food ingredients at a temperature and humidity that is in accordance with the requirements for the type of food ingredients, 19 respondents (65.5%) have safe storage places for food ingredients. from contamination by bacteria, insects, mice and other animals, 27 respondents or (93.1%) separate the storage of food ingredients and cooked food, 15 respondents (51.7%) have a clean and well-maintained food storage area, 14 respondents (48.3%) stored food ingredients in similar arrangements

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and on shelves, and 11 respondents (37.9%) did not store food ingredients on the floor, walls and ceiling.

c. Food Processing

Food processing is all activities carried out to process food starting from preparing ingredients, washing, mixing and cooking (Permenkes RI, 2011).

Table 4.11
Distribution of Respondents Based on Food Processing
At the fried food seller in Tamalanrea

No	Assessment criteria	Amount	
		N	%
1	Qualify	26	89,7
2	Not eligible	3	10,3
Total		29	100

Source: Primary Data March 2020

Table 4.11 shows that 29 respondents (100%), 26 respondents (89.7%) met the food processing requirements, while 3 respondents (10.3%) did not meet the food processing requirements. This happens because of the lack of awareness of food handlers to wear work clothes and aprons when processing food and the lack of awareness to always replace cooking oil that is no longer suitable for use and there are still food processing or kitchens that meet food sanitation hygiene requirements.

Table 4.12
Distribution of Respondents Based on Food Processing
At a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	N	%
1	Do you wash your hands using running water and soap before processing food?	19	65,5	10	34,5
2	Do you wash food ingredients in running water before processing?	22	75,9	7	24,1
3	Do you wear work clothes and apron	10	34,5	19	65,5

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	when preparing food?				
4	Do you wash equipment before and after processing food?	28	96,6	1	3,4
5	Do you always change cooking oil?	11	37,9	18	62,1
6	Does the food processing area or kitchen meet the technical requirements for food sanitation hygiene?	13	44,8	16	55,2

Source: Primary Data March 2020

Table 4.12 shows that 29 respondents (100%), there are 19 respondents (65.5%) wash their hands using running water before processing food, 22 respondents (75.9%) always wash food ingredients in running water before processing, 10 respondents (34.5%) use work clothes and apron when processing food, 28 respondents (96.6%) wash equipment before and after processing food, 11 respondents (37.9%) always change cooking oil, and 13 respondents (44%) .8%) have a food processing place or kitchen that meets the technical requirements for food hygiene and sanitation.

Table 4.13
Distribution of Respondents Based on Food Processing
At a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	n	%
1	Wash hands with soap and running water before handling food	13	44,2	16	55,2
2	Wear work clothes and apron	10	34,5	19	65,5
3	Smoking while preparing food	17	58,6	12	41,4
4	Using jewelry when preparing food	11	37,9	18	62,1
5	Use tools when processing food	21	72,4	8	27,6
6	Keep your hands, hair, nails and clothes clean every time you prepare food	21	72,4	8	27,6
7	Food processing areas are easy to clean	27	93,1	2	6,9
8	Use oil that is still clear	9	31,0	20	69,0
9	There is a place to wash hands and equipment using clean running water	7	24,1	22	75,9

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10	The equipment used is clean	26	89,7	3	10,3
11	The cooking utensils used are rust-proof, not deformed, do not emit dangerous toxic heavy metals, and are easy to clean	26	89,7	3	10,3

Source: Primary Data March 2020

Table 4.13 shows that 29 respondents (100%), 13 respondents (44.2%) washed their hands using soap and running water before processing food, 10 respondents (34.5%) used work clothes and apron when processing food, 17 respondents (58.6%) smoked when processing food, 11 respondents (37.9%) used jewelry when processing food, 21 respondents (72.4%) used tools when processing food, 21 respondents (72.4%) %) keep hands, hair, nails and clothes clean every time you process food, 27 respondents (93.1%) use tools that are easy to clean when processing food, 9 respondents (31.0%) use cooking oil that is still clear, 7 respondents (24.1%) provided a place to wash their hands with running water and soap, 26 respondents (89.7%) used food processing equipment that was clean, and 26 respondents (89.7%) used equipment that was stainless, not defects, easy to clean and does not emit toxic heavy metals.

d. Food Storage

Food storage is storage that is stored in clean containers, free from vectors and the storage area is covered with a bottom (Permenkes RI, 2011)

Table 4.14
Distribution of Respondents Based on Food Storage\
At a fried food seller in Tamalanrea

No	Assessment criteria	Amount	
		N	%
1	Meet the conditions	24	82,8
2	Not eligible	5	17,2
Total		29	100

Source: Primary Data March 2020

Table 4.14 shows that 29 respondents (100%), 24 respondents (82.8%) met the requirements for food storage principles, and 4 respondents (17.2%) did not meet the requirements for food storage. This occurs due to a lack of awareness among food

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handlers to place food in closed storage areas that are protected from dust and pollution, and there are still fried food sellers who store food at temperatures that are not suitable for the type of food.

Table 4.15
Distribution of Respondents Based on Food Storage
At a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	n	%
1	Is there a special place to store fried chili sauce?	29	100	0	0
2	Do you always clean the storage area before using it?	25	86,2	4	13,8
3	Is the place you use to store food (fried food) closed?	10	34,5	19	65,5
4	Don't you mix cooked food with raw food?	22	75,9	7	24,1
5	Do you pay attention to the temperature where finished food is stored?	15	51,7	14	48,3
6	Is the fried food storage area closed (protected from dust and pollution)?	10	34,5	19	65,5

Source: Primary Data March 2020

Table 4.15 shows that 29 respondents or (100%), there are 29 respondents (100%) provide a special place to store fried chili sauce, 25 respondents (86.3%) always clean the food storage place before use, 10 respondents (34.5%) %) use a closed place to store food (fried food), 22 respondents (75.9%) do not mix the storage of food ingredients and cooked food, 15 respondents (51.7%) always pay attention to the temperature and humidity of the food storage place.

Table 4.16
Distribution of Respondents Based on Food Storage
At a fried food seller in Tamalanrea

No	Question	Yes	No

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		n	%	n	%
1	The storage area is clean and in good condition	24	82,8	4	7,2
2	The storage area is well closed	4	13,8	25	86,2
3	Food is protected from dust	3	10,3	27	89,7
4	Food is protected from harmful chemicals	20	69,0	9	31

Source: Primary Data March 2020

Table 4.16 shows that 29 respondents (100%), 24 respondents (82.8%) have food storage places that are clean and in good condition, 4 respondents (13.8%) have food storage places that are well closed, 3 respondents (10.3%) have a closed food storage area so that the food is protected from dust, and 20 respondents (69.0%) have a food storage area protected from dangerous chemicals.

e. Snack Food Transportation

Transporting snack foods is moving food from a storage area to a serving area by paying attention to the use of transport equipment and cleanliness (Permenkes RI, 2011).

Table 4.17
Distribution of Respondents Based on Transportation
Food at a fried food seller in Tamalanrea

No	Assessment criteria	Amount	
		n	%
1	Qualify	27	93,1
2	Not eligible	2	6,9
Total		29	100

Source: Primary Data March 2020

Table 4.17 shows that 29 respondents (100%), 27 respondents (93.1%) met the requirements for transporting food, and 2 respondents (6.9%) did not meet the requirements for transporting food. This is because there are still fried food traders who do not use special vehicles when transporting food.

Table 4.18

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Distribution of Respondents Based on Transportation
Food at a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	n	%
1	Does each food (fried food) have its own container/place?	22	75,9	7	24,1
2	Are the carts used to transport food always cleaned before use?	26	89,7	3	10,3
3	Do you use special vehicles to transport groceries and cooked food?	13	44,8	16	55,2
4	Are cooked food and ingredients not mixed with dangerous and toxic substances?	24	82,8	5	17,2
5	Do you use containers that are intact, strong, rust free and of adequate size for the amount of food to be placed?	25	86,2	4	13,8

Source: Primary Data March 2020

Table 4.18 shows that 29 respondents (100%), 22 respondents (75.9%) have their own container/place to store fried food, 26 respondents (89.7%) clean the cart before using it to transport food (fried food), 13 respondents (44.8%) use special vehicles to transport food ingredients and cooked food, 24 respondents (82.8%) do not mix food ingredients and cooked food with dangerous and toxic chemicals, and 25 respondents (86 .2%) use containers that are intact, strong, not rusty and the size is appropriate to the amount of food to be placed.

Table 4.19
Distribution of Respondents Based on Transportation
Food at a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	n	%
1	The container used for fried chili sauce is intact, rust-proof, leak-proof, and the size fits the ingredients it is placed in	28	96,6	1	3,4
2	Each food has its own container	20	69,0	9	31,0

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3	Fried foods and chili sauce are placed in a clean and closed container	21	72,4	8	27,6
4	Not mixed with dangerous and toxic materials	27	93,1	2	6,9
5	Using special vehicles to transport groceries and cooked food	5	17,2	24	82,8

Source: Primary Data March 2020

Table 4.19 shows that 29 respondents (100%), there are 28 respondents (96.6%) who use containers to store fried chili sauce that are intact, rust-proof, leak-proof, and the size is appropriate to the material in which they are placed, 20 respondents (69, 0%) placed food in their respective places, 21 respondents (72.4%) placed fried food and chili sauce in a clean and closed place, 27 respondents (93.1%) food was not mixed with dangerous and toxic ingredients, 5 respondents (17, 2%) use special vehicles to transport groceries and cooked food.

f. Food Serving

Serving snack food is serving snack food to consumers using clean containers, and serving time < 6 hours after the food is finished cooking (Permenkes RI, 2011).

Table 4.20
Distribution of Respondents Based on Food Serving
At a fried food seller in Tamalanrea

No	Assessment criteria	Amount	
		N	%
1	Qualify	23	79,3
2	Not eligible	6	20,7
Total		29	100

Source: Primary Data March 2020

Table 4.20 shows that 29 respondents (100%), 23 respondents or (79.3%) met the requirements for serving snacks, and 6 respondents (20.7%) did not meet the requirements for serving food. This can happen because there are still fried food sellers who still serve food when they suffer from coughs, colds and diarrhea, there are still fried food sellers who don't use gloves and tools when serving food.

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Table 4.21
Distribution of Respondents Based on Food Serving
At a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	n	%
1	Do you still serve food when you suffer from coughs, colds and diarrhea?	14	48,3	15	51,7
2	Do you use gloves and tools when serving food?	18	62,1	11	37,9
3	Is the equipment used to collect fried food clean, intact and undamaged?	26	89,7	3	10,3
4	Do you always check food before serving?	19	65,5	10	34,5
5	Do you separate fried foods, chili sauce and chilli seeds?	20	69,0	9	31

Source: Primary Data March 2020

Table 4.21 shows that 29 respondents (100%), there were 14 respondents or (48.3%) who when suffering from coughs, colds and diarrhea still served food, 18 respondents (62.1%) used gloves and tools when serving food. , 26 respondents (89.7%) use equipment that is clean, intact and undamaged when serving food, 19 respondents (65.5%) always check the food before serving, and 20 respondents (69.0%) separate the serving place between fried foods, chili sauce and chili seeds.

Table 4.22
Distribution of Respondents Based on Food Serving
At a fried food seller in Tamalanrea

No	Question	Yes		No	
		N	%	n	%
1	Wear work clothes and apron when serving food	11	37,9	18	62,1
2	If yes, the seller wears clean work clothes and apron when serving food	8	27,6	21	73,3
3	Smoking when serving food	16	55,2	13	44,8
4	Wear jewelry when serving food	12	41,4	17	58,6
5	Eating or chewing when serving food	12	41,4	17	58,6

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6	Keep your hands, hair and nails clean when serving food	14	48,3	15	51,7
7	Use gloves and tools when serving food	15	51,7	14	48,3
8	Food serving places or containers are free from dust	22	75,9	7	24,1
9	Use clean plastic to wrap fried foods	23	79,3	6	20,7

Source: Primary Data March 2020

Table 4.22 shows that 29 respondents (100%), there were 11 respondents or (37.9%) used work clothes and aprons when serving food, 8 respondents (27.7%) wore clean work clothes and aprons when serving food , 16 respondents (55.2%) smoked when serving food, 12 respondents (41.4%) wore jewelry when serving food, 12 respondents (41.4%) ate or chewed when serving food, 14 respondents (48 .3%) keep hands, hair and nails clean when serving food, 15 respondents (51.7%) use gloves and tools when serving food, 22 respondents (75.9%) use free places or containers from dust to serve food, and 23 respondents (79.3%) used clean plastic to wrap fried foods.

b. Discussion

a) Overview of Food Ingredient Selection for Fried Food Sellers in Tamalanrea in 2020.

Selecting good food ingredients can be seen through their physical characteristics and quality. The qualities of good food ingredients are food ingredients that are free from chemical contamination such as pesticides and damage (Kusmayadi, 2008). Good food ingredients are ingredients that are protected from pollution, including chemical pollution caused by pesticides and also damage. Good food ingredients are food ingredients that are protected from contamination and damage.

The results of Univariate Analysis showed that of the 29 respondents (100%), there were 2 (6.9%) respondents who did not meet the requirements for selecting food ingredients. Based on the results of field observations, there are fried food traders who still use food ingredients that contain preservatives, there are food

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ingredients obtained from sales places that are not supervised by the government, there are food ingredients that are not in good condition. The use of damaged or poor quality food ingredients can affect the quality of the food produced. The use of food ingredients that are not in good condition if they continue to be consumed can cause health problems such as diarrhea and other digestive disorders.

Based on the results of observations, it shows that there is still use of food ingredients in poor condition, this can certainly affect the quality and hygiene of the food itself and the impact that can result from the use of damaged food ingredients can result in diarrhea and other digestive disorders. Traders are expected to use food ingredients of good quality, traders still use food ingredients that contain preservatives and colorings, there are still food ingredients that are of poor quality, and there are still food ingredients obtained from unofficial sources.

b) Description of food storage at fried food sellers in Tamalanrea in 2020.

Storing food ingredients is a process so that food ingredients are not easily damaged and do not lose their nutritional content (Kusmayadi, 2008). Before storing food, it must be cleaned first. One way to clean food is to wash the food, then dry it first so that there is no water in the food, and then store it in a clean place and at a low temperature. Food storage areas must be protected from possible contamination by bacteria, insects, mice and other animals, as well as dangerous chemicals.

The results of the Univariate Analysis showed that of the 29 respondents (100%) there were 22 respondents (75.9%), who met the requirements for storing foodstuffs, which was because 27 respondents separated the storage area between foodstuffs and food. Separating the storage of food ingredients and food aims to avoid contamination of pathogenic bacteria from food ingredients to finished or cooked food. Store wet food ingredients in the refrigerator to keep the food ingredients from getting damaged and stay fresh, and dry food ingredients are stored in a clean, non-humid place.

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Based on observations made at fried food sellers, there are still fried food sellers who store food ingredients that do not match the temperature and humidity of the type of food ingredients. Storage of perishable foodstuffs should be at a temperature of 70 to 100 C, while dry foods should be at a temperature of 250 C to 300 C.

There are respondents whose food storage areas are not protected from contamination from bacteria, insects, mice and other animals, the majority of respondents do not store food ingredients in the same way and on shelves, there are respondents whose food ingredients stick to the floor, walls.

c) Overview of food processing at fried food sellers in Tamalanrea in 2020

Based on the results of Univaiat's analysis, it shows that 26 respondents (89.7%) meet the requirements for food processing, where the majority of food handlers wash their hands using running water and soap before processing food, wash food ingredients in running water before processing, wash equipment before and after processing food. This is in line with research conducted by Evi Naria (2015), where more traders fulfill the requirements for the principles of food processing, namely the variables of equipment used, the processing place is watertight and easy to clean, lighting in the processing place meets the requirements, clothing used in clean conditions and no smoking when processing food.

Based on observations, it shows that most food handlers do not wash their hands using soap and running water before processing food, which can result in contamination of food with bacteria, transfer of disease and transfer of germs due to contamination between humans and food.

There are traders who do not wear work clothes and aprons. The function of an apron is to protect clothing from exposure to stains and prevent bacterial contamination from clothing to the food being processed. The cleanliness of work clothes used to handle food must always be considered, food handlers' work clothes must always be clean, this is done to maintain food hygiene and also

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prevent contamination of pathogenic bacteria from the clothes used. Work clothes should be differentiated from daily clothes. It is recommended to change and wash clothes periodically, this is done to reduce the risk of contamination by pathogenic bacteria.

The results of the observations also found that oil had been used repeatedly, if this continues to be done it could be harmful to consumers' health. Continuous use of cooking oil without replacing it can produce free fatty acids. Apart from that, it will also produce carbonyl compounds and peroxides which can cause chronic poisoning in humans. Repeated use of cooking oil can cause carcinogenic substances which are risk factors for cancer, obesity and coronary heart disease.

4. Conclusion

The results of the research and discussion carried out regarding the Description of the Implementation of the Principles of Hygiene Sanitation for Snack Foods (Fried Foods) in Kambu District in 2020, several conclusions can be drawn as follows:

1) Characteristics of selecting food ingredients: 27 respondents (93.1%) met the requirements for selecting food ingredients, while 2 respondents (6.9%) did not meet the requirements for selecting food ingredients. This happens because there are still fried food traders who use good quality food ingredients.
2) Characteristics of food storage: 22 respondents (75.9%) met the requirements for selecting foodstuffs, while 7 respondents (24.1%) did not meet the requirements for selecting foodstuffs, this happened because foodstuffs were not stored according to similar rules and were still There were respondents who did not store food at the appropriate temperature and humidity.
3) Characteristics of food processing: 26 respondents or (89.7%) met food processing requirements, while 3 respondents (10.3%) did not meet food processing requirements, this happened because of the lack of awareness of food handlers to wear work clothes and aprons. when processing food.
4) Characteristics of food storage: 24 respondents (82.8%) met food storage requirements, while 5 respondents (17.2%) did not meet food storage requirements.

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This happens because of the lack of awareness of fried food sellers to place food in a closed place and avoid dust and pollution.

5) Characteristics of food transportation: 27 respondents (93.1%) met the food transportation requirements, while 2 respondents (6.9%) did not meet the food transportation requirements. This happens because there are no special vehicles used to transport groceries and food.
6) Characteristics of food serving: 23 respondents (79.3%) met the food serving requirements, while 6 respondents (20.7%) did not meet the food serving requirements. This happens because food handlers do not use tools and gloves when serving food.

Compliance with ethical standards

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Disclosure of conflict of interest

This research collaboration is a positive thing for all researchers so that conflicts, problems and others are absolutely no problem for all writers.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

References

Agustina, Pambayun, R. & Febry, F., 2009. Hygiene and Sanitation among Traditional Food Vendors in Elementary School Environments in Demang Lebar Daun Subdistrict, Palembang. Journal of Scientific Publications, Faculty of Public Health, Sriwijaya University, 23(3), pp. 233-239.

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 1 | Number 4 | Desember 2023 |

Ayu, I.D., 2015. The relationship between nutritional knowledge and attitudes in choosing snacks among elementary school children. University of Surabaya, pp. 50-62.

Asan, B., 2015. Description of Elementary School Hygiene and Canteen in Tunang Village, Mempawah Hulu District, Landak Regency. Muhammadiyah University Pontianak.

BPOM Sultra, 2017. Data on Food Poisoning, Kendari: Southeast Sulawesi Food and Drug Monitoring Agency.

Chandra, B., 2006. Introduction to Environmental Health. Jakarta: EGC.

Chandra, B., 2007. Environmental Health Sciences. Jakarta: EGC.

Republic of Indonesia Ministry of Health, 2004. Minister of Health Regulation no. 924/Menkes/VII/2003. About Hygiene Guidelines and Sanitation, Jakarta: Directorate General of PPM & PLP.

Republic of Indonesia Ministry of Health, 2006. Republic of Indonesia Ministerial Decree No.942/Menkes/SK/VII/2006. About Guidelines for Hygiene Sanitation Requirements for Snack Food, Jakarta.

Republic of Indonesia Ministry of Health, 2007. Food Delivery in Hospitals, Jakarta: Directorate General of Public Health Nutrition Development. FAO Indonesia, 2009. How to Select and Process Food to Improve Community Nutrition. Jakarta, Health R&D Media.

Fathonah, S., 2006. Food Hygiene and Sanitation. Semarang State University Journal.

Fatmawati, S., Rosdini, A. & Handarsari, E., 2013. Food Processing Hygiene Behavior Based on Knowledge of Food Processing Hygiene in Food Preparation at Sports Education and Training Centers in Central Java. Journal of Nutrition, 20(6), pp. 50-62.

Hartono, A. & Widyastuti, P., 2006. Foodborne Illnesses. Jakarta: EGC Medicine.

Hidayat, A. H., 2010. The Relationship between Knowledge and Practices of Food Handlers Regarding Food Sanitation Hygiene and the Presence of Cherchia Coli Es in Rames Rice (Study in Canteens in the Diponegoro University Tembalang Environment). Diponegoro University.

Handayani & Werdiningsih, 2010. Sanitation Conditions and Traditional Food Poisoning. Agroteksos,20(2), pp. 76-82.

Islamy. G. P, 2018. Hygiene, Sanitation and Safety Analysis of Snacks in the Big Market in Malang City.

Decree of the Minister of Health of the Republic of Indonesia, 2003. Decree of the Minister of Health of the Republic of Indonesia No.942/Menkes/SK/2003. About the Guidelines for Sanitary Hygiene Requirements for Snack Foods.

Kindi, A., 2013. The relationship between food knowledge and health and the frequency of snack food consumption among elementary school children in laboratory development. Padang State University Journal.

Kusmayadi, 2008. How to Select and Process Food to Improve Community Nutrition. 2008.

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 1 | Number 4 | Desember 2023 |

Lestari, 2015. The Relationship between Beverage Sanitation Hygiene and the Presence of Escherchia Coli in Fruit Juices in Several Favorite Elementary School Canteens and Traders in Samarinda City.

Murti, 2006. Design and Sample Size for Quantitative and Qualitative Research in the Health Sector. Yogyakarta: UGM Press.

Musfirah, M., 2014. Counseling on Mothers' Attitudes in Providing Toilet Training to Children. Journal of Public Health,9(2), pp. 157-166.

Nani, S., Ahmadi, D.S. & Relia, N., 2013. Getting to Know Food and Health. Bandung: PT. Qibla Main Book.

Naria, E., 2015. Hygiene Sanitation of Food and Beverage Snacks at the USU Complex, Medan. USU FKM Environmental Health Department Journal.

Ningsih, R., 2014. Counseling on Hygiene, Sanitation of Food and Drinks and the Quality of Food Sold by Traders in the SDN Environment of Samarinda City. Journal of Public Health, 10(1), pp. 64-72.

Notoadmodjo, S., 2003. Introduction to Health Education and Health Behavior. Yogyakarta: Adi Offset.

Oginawati, K., 2008. Food and Drink Sanitation. Bandung: Bandung Institute of Technology.

Republic of Indonesia Minister of Health Regulation, 2011. Regulation of the Minister of Health of the Republic of Indonesia No.1096/Menkes/Per/VI of 2011 concerning Requirements for Hygiene Sanitation for Food Services Number 21 of 2013, Jakarta: Indonesian Ministry of Health.

Republic of Indonesia Minister of Health Regulation, 2011. Minister of Health Regulation no. 2349/Menkes/PER/XI/2011 Concerning Organization and Verbs of Technical Implementation Units in the Field of Environmental Health Engineering and Disease Control, Jakarta: Directorate General of PPM & PLP.

Potter & Perry, 2012. Textbook of Fundamental Nursing Concepts, Processes and Practices. Jakarta: Mitra Medika. Tamalanrea Profile, 2019.

Ramdani and Sumarni, 2017. Overview of the Implementation of Food Sanitation Hygiene Principles at PT Aerofood Indonesia Tangerang Banten. Department of Health Nutrition, FKM-Airlangga University

Rejeki, S., 2015. Sanitation Hygiene Occupational Health and Safety. Bandung: Science Engineering.

Sari, Sulistiyani, Nikie, A.Y. & Marsulina, 2016. Differences in Food Handlers' Behavior Before and After Receiving Food Sanitation Hygiene Counseling at Food Stalls at Terboyo Terminal, Semarang. Journal of Public Health,4(5), pp. 2356-3346.

Sihite & Richard, 2000. Food Product (Basics of Culinary Management). Surabaya: SIC.

Slamet, J.S., 2009. Environmental Health. Yogyakarta: Gadjah Mada University Press. Streeth & Southgat