

Storage Technique Socialization Ingredient Food to Be Long Lasting and Content Nutrition Permanent Awake

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ABSTRACTS

Introduction: This research was carried out with the aim of knowing the effect of socialization on increasing public understanding of the importance of storing food ingredients properly to keep them nutritious and durable.

Methods: The method used is descriptive qualitative with data collection techniques through questionnaires filled out by 19 respondents who are residents of Cigugurgirang, Parongpong, Indonesia. The stages of data collection carried out are as follows; (1) pre-test, (2) socialization through learning media in the form of PowerPoint, and (3) post-test addressed to respondents.

Results: The results of the questionnaire data analysis, it can be seen that the provision of material through PowerPoint media given to respondents tends to have a positive impact. This can be seen through the answers in the post-test which have increased in a positive direction compared to the answers at the pretest. This research through the socialization of food storage techniques so they are durable and nutritional content is maintained is expected to educate the community in the Cigugurgirang area in paying attention to food safety in food processing and storage so the nutritional content is maintained.

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1. Introduction

Humans need nutritional intake to support their health. One source of nutritional intake is from food. Nutrition is one of the main factors determining the quality of life and human resources. Determinants of good nutrition are found in the type of food is good and adapted to the needs of the body (Ubro, 2014). Nutritional status should be a matter of great concern. Nutritional status is the state of the body as a result of food consumption and the use of nutrients which are distinguished between poor, less, good and more nutritional status (Kurniajati & Apriliani, 2015). However, not all foodstuffs have good nutrition and can meet the nutritional needs of the body. Because, food in addition to containing nutritional value is also a medium for the proliferation of microbes or germs, especially foods that are easily decomposed, namely foods that contain lots of water content and high protein value. In addition, food can be a source of disease transmission if cleanliness in the administration of the food is not properly maintained and does not pay attention to food sanitation in the processing process (Mulyani, 2017).

Basically, there are 6 principles of hygiene and sanitation in food processing, including the selection of food ingredients, storage of materials, food processing, storage of cooked food, transportation of food and serving of food (Fitriana *et al.*, 2018). Food sanitation itself is a prevention effort which focuses on activities/actions that are necessary to free food and beverages from hazards that can interfere or damage health starting from before food is produced, during the processing, preparation, transportation, until the food is ready for consumer consumption (Mulyani, 2017). One of the preventions can be done from the process of sorting raw materials until the food is served (Hutasoit, 2020). Hygiene and sanitation have the aim of preventing disease and poisoning as well as other health problems resulting from the interaction of human environmental factors (Rahmadhani & Sumarmi, 2017). Food poisoning can occur due to cross-contamination and recontamination, if the use of containers or processing and storage equipment is used together (Wibawa, 2008). There are several simple ways you can minimize the potential for food poisoning. One of them is to separate raw and cooked food and store it at a safe temperature (Arini, 2017).

Food storage is done so it has a long enough shelf & life by preventing food spoilage. Food spoilage is influenced by various factors, namely temperature, humidity and dryness, air and oxygen, light, and time. Meanwhile, food spoilage is caused by microorganisms (bacteria), fungi, yeast, algae, protozoa, and others, enzymes contained in food, insecticides and rodents. Based on their resistance, food is categorized into three, namely durable food, semi-durable food, and non-durable food. Generally, people store their daily needs in cupboards, refrigerators, freezers, barns, and others (Sari & Hadiyanto, 2013).

In the process or way of processing food there are three things needed to be considered, namely: 1) Food processing place, which is a place where food is processed, this processing place is often called a kitchen; 2) Food processors/food handlers, namely people who are directly related to food and equipment starting from the stages of preparation, cleaning, processing, transportation to serving; and 3) Food processing which includes the purpose of processing food ingredients, transporting food ingredients, polite presenters and always maintaining the health and cleanliness of their clothes (Atmoko, 2017).

Based on research conducted by Nuryanto *et al.* (2014), food is an important source of energy and nutrition for the human body. If the wrong food is given, it can lead to serious

nutritional problems in the body such as obesity, malnutrition and even stunting (Nuryanto *et al.*, 2014). From this study, it can also be seen there are still many people who do not understand and even do not understand the importance of food consumption on the nutritional effects it provides. In line with this, in his research, Adhitya Adji Candra revealed proper feeding can affect the nutrition and development of children appropriately (Candra *et al.*, 2013). This is also reinforced in the research of Rosyida Awalia Safitri, it was also found there is a great need for education related to how to store food ingredients properly and correctly in order to increase the body's immunity (Safitri *et al.*, 2021).

In connection with the research entitled Education on Food Handling and Storage during the Covid-19 Pandemic Condition for Housewives in the “Yuk Main” Community, where research conducted through outreach activities succeeded in increasing the knowledge of housewives regarding the supply of rice, mineral water, cooking oil, eggs, beef, complementary seasonings, frozen food and milk must be purchased for supplies per 2 weeks; storage of these materials so they are not damaged during storage; handling and storage of fruit and vegetable products; a substitute for rice can be used as an alternative to staple foods such as sweet potatoes, sorghum, tiwul, analog rice from corn and cassava (Choiriyah, 2020). In other similar studies there are also similar results. After the implementation of socialization, the level of the knowledge of the family or participants increases, a new understanding has been formed and then it remains only to monitor its implementation in their respective families (Rhomadona & Siagian, 2021).

Cigugurgirang, located in Parongpong, West Java, has an area of 411.40 hectares and has a population of 4,789. The people of the Cigugurgirang area on average make a living as farmers on vegetable plantations, fruit and ornamental plants. There are also those who raise animals such as cows and goats where the animal waste will be used as fertilizer for plants (Ningsih & Turgrini, 2020).

Based on the situation analysis, the internal area of Cigugurgirang has strengths, namely abundant and diverse food sources. However, with the average level of education is still low and the lack of awareness of the people of Cigugurgirang in processing food properly and correctly, it often makes the food easy to rot or lose its nutrition. Food waste has not been taken seriously by the community. Thus, food waste is not considered a serious problem. Throwing food away, not eating all the food available on the plate is not a mistake in today's society. This process is more likely to occur in two ways, the first is an error in the food storage process so it rots more quickly and is finally thrown away and in the consumption process by cooking a larger amount of food than will be eaten so the rest is thrown away. Food waste can also occur in errors and ignorance of managing food (Isnarti, 2018). The existence of potential human resources where most of them are students and women who are housewives, this is an opportunity to be able to encourage people to have a strong desire to live healthy through socialization. Socialization itself can be interpreted as a learning process to interact with others about how to act, think and feel, and it is important to produce effective social participation (Sekarningrum *et al.*, 2020).

Thus, this research through the dissemination of food storage techniques so it lasts longer and nutritional content is maintained is expected to be able to educate the community in the Cigugurgirang area in paying attention to food safety in food processing and storage so the nutritional content is maintained. The novelty of this research is (i) the research was conducted based on the socialization of food storage techniques to the people of Cigugurgirang,

Parongpong, Indonesia; (ii) storage socialization media using PowerPoint; and (iii) this study used a pretest and post-test questionnaire method where a pretest questionnaire was conducted in order to find out the community's initial knowledge and habits in storing food ingredients. Meanwhile, the post-test questionnaire was conducted to see the latest knowledge and people's desire to change the habit of storing wrong foodstuffs after receiving socialization.

2. Materials and Methods

This study uses a qualitative descriptive method with data collection techniques through questionnaires. Meanwhile, the subject of this investigation is the people of Cigugurgirang.

2.1. Research Subject

The subjects of this study were the people of Cigugurgirang, Parongpong, West Bandung Regency, West Java. With the number of respondents totaling 19 people with different occupational backgrounds, it is based on the consideration that qualitative research is more concerned with a lot of information than the large number of informants.

2.2 Research Design Analysis

The method used is descriptive qualitative with data collection techniques through questionnaires with the following stages; (1) pre-test, (2) socialization through learning media in the form of PowerPoint, and (3) post-test. There are 20 questions related to the knowledge and habits of respondents in storing food ingredients in the pretest and post-test given. The pre-test and post-test questions in this study are shown in Table 1.

Table 1. Pretest and post-test questions

No	Questions	Answer	
		Yes	No
1.	Do you know the cause of spoilage / perishability of the food you store?		
2.	Do you know the types of foodstuffs?		
3.	Do you separate food storage by type?		
4.	Do you know what foodstuffs should not be stored in an open air room?		
5.	Do you know what foodstuffs should not be put in the refrigerator?		
6.	Do you cook fish or poultry or red meat right after buying it?		
7.	Do you know the procedures for storing fish/poultry/red meat?		
8.	Should root vegetables like carrots and potatoes be refrigerated?		
9.	Do you always wash vegetables before storing them?		
10.	Do you organize your storage/refrigerator and its placement according to the type of food ingredients?		
11.	Do you cook/eat foods according to which ingredients you buy/get first?		
12.	Do you store all kinds of fruit in the refrigerator?		
13.	Do you use plastic-based packaging for wrap all kinds of groceries?		
14.	Do you often stockpile food in the storage/refrigerator?		
15.	Does the wrong way of storing food make food lose its flavors and nutritional content?		
16.	Is the correct way to store food is storage with put all the ingredients so it saves more spaces?		
17.	Can the wrong way of storing food make your body healthy?		
18.	Do you understand the benefits of proper food storage?		
19.	In your opinion, what are the benefits of proper and proper food storage?		Essay

No	Questions	Answer	
		Yes	No
20.	Write down your own tips or ways to store certain foodstuffs.	Essay	

3. Results and Discussion

The results of the distributed questionnaires indicate an increase in knowledge in food storage and a desire to have a healthy lifestyle that can be realized through good and correct food storage methods. This can be seen from the respondents' answers which are described in Table 2.

Table 2. Respondents answers to each pretest dan post-test questions

No	Pretest	Post-test	Descriptions
1.	57.90%	100%	57.9% of respondents know the cause of rotten/unsustainable food stored. Results post-test showed an increase to 100%.
2.	73.70%	100%	73.7% of respondents know the types of food ingredients. There is an increase after doing post-test is to be 100%.
3.	47.40%	94.70%	47.4% of respondents separate food storage based on type. When post-test, the result is 94.7%.
4.	52.60%	94.30%	52.6% of respondents know what foodstuffs should not be stored in an open air room. While on post-test increased to 94.35%.
5.	47.40%	100%	47.4% of respondents know what foodstuffs should not be put in the refrigerator. After the post-test, changes to 100%.
6.	15.80%	52.60%	15.8% of respondents immediately cooked fish or poultry or red meat immediately after buying it. After the post-test, it changes to 100%.
7.	31.60%	84.20%	31.6% of respondents know the procedures for storing fish/poultry/red meat. While on post-test, respondents who answered tofu increased to 84.2%.
8.	63.20%	100%	63.2% of respondents know that root vegetables such as carrots and potatoes should not be put in the refrigerator. While on post-test, respondents who answered now increased to 100%.
9.	63.20%	42.10%	63.2% of respondents answered that they wash vegetables before storing them and only. While on post-test, to 42.1%.
10.	73.70%	100%	73.7% of respondents know the arrangement of storage cabinets/refrigerators (refrigerators) according to the type of food ingredients. After the post-test, there is an increase to 100%.
11.	52.60%	84.20%	52.6% respondents have a habit of cooking/consuming food according to which food ingredient is obtained first. After done post-test, there was an increase to 84.2%
12.	36.80%	73.70%	36.8% of respondents have a habit of storing all types of fruit in the refrigerator. After the post-test, there was an increase to 73.7%.
13.	57.90%	73.70%	57.9% of respondents have a habit of using plastic packaging to wrap all types of food ingredients. After the post-test, there was an increase to 73.7%.
14.	78.90%	84.20%	78.9% of respondents have a habit of hoarding food in the storage/refrigerator. After done post-test, there was an increase to 84.2%.

No	Pretest	Post-test	Descriptions
15.	84.20%	100%	84.2% of respondents know the effect of the wrong storage method on the loss of taste and taste nutritional content. After done post-test, there is an increase to 100%.
16.	63.20%	89.50%	63.2% of respondents know the correct storage method. After done post-test, there was increase to 89.5%
17.	15.80%	21.10%	15.8% of respondents know the effect of storage methods on a healthy body. After the post-test, there was an increase to 21.1%.
18.	78.90%	100%	78.9% of respondents know the benefits of storing food properly. After the post-test, there was an increase to 100%.

These are Figure 1 and Figure 2 which describes respondents' answers to the essay's questions.

Menjaga kandungan gizi pada bahan makanan dan terhindar dari risiko penyakit dan keracunan makanan

Makanan terlihat segar dan kandungan gizi terjaga

Kandungan gizi terjaga dan lebih awet

Lebih awet dan sehat

makanan jadi tahan lama dan kandungan gizi di dalamnya tetap terjaga

Menerapkan gaya hidup sehat

jadi tidak terbuang sia sia karena busuk

Bahan makanan lebih awet

Menjaga kandungan gizi pada makanan, menjaga kesegaran bahan makanan, lebih sehat dan lebih hemat, menghindari resiko keracunan bahan makanan

Figure 1. Respondents' answers to question number 19

Menyimpan sesuai jenis makanannya

Menyimpan makanan dengan dipisah² ke dalam wadah yang berbeda beda

Menghindari kentang dari sinar matahari langsung

Menyimpan sesuai dengan jenisnya

alpukat yang belum matang di beras

Menyimpan bahan makanan dengan tempat berbahan plastik. Tidak mencuci terlebih dahulu ketika ingin dimasukan ke kulkas.

menutup pangkal tomat dengan selotip

Gunakan bahan makanan yang paling lama dulu di tempat penyimpanan

Membungkus sayuran dengan kertas untuk mencegah sayuran berlendir

Figure 2. Respondents' answers to question number 20

Judging from the analysis of the data obtained through questionnaires to the Cigugurgirang community can be understood that the provision of material through PowerPoint media given to respondents tends to have a positive impact. It can be seen through the answers on the post-test which have increased in a positive direction compared with the answers at the pretest. When viewed from the answers of essay questions, respondents tend to know enough about the benefits of storing the right food ingredients and have their own way of storing foodstuffs to make them last longer.

The novelty of this research is (i) the research was conducted based on the socialization of food storage techniques to the people of Cigugurgirang, Parongpong, Indonesia; (ii) storage socialization media using PowerPoint; and (iii) this study used a pretest and post-test questionnaire method where a pretest questionnaire was conducted in order to find out the community's initial knowledge and habits in storing food ingredients. Meanwhile, the post-test questionnaire was conducted to see the latest knowledge and people's desire to change the habit of storing wrong foodstuffs after receiving socialization.

4. Conclusions

The research was conducted with the aim of educating the community in the Cigugurgirang area in paying attention to food safety in the processing and storage of foodstuffs so long-lasting nutritional content is maintained. The steps used in this study are in the form of: 1) pre-test; 2) the provision of materials through PowerPoint media; and 3) post-test.

The research data shows people in Cigugurgirang tend to know enough about food storage. From the comparison of the answers given during the pre-test and post-test after reading the material, respondents experienced an increase in knowledge about proper food storage, although if you look closely the results are not too different. Thus, it can be concluded that the increase in the understanding of the people of Cigugurgirang has experienced a significant increase in the provision of material through PowerPoint media.

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