THE RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDES TOWARDS FISH-CONSUMING BEHAVIOR IN COMMUNITY AFFECTED BY COVID-19 IN CIMANGGIS DEPOK

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Abstract

Fish is a product of natural resources with high economic and biological value. One of the benefits of fish is its nutrient that can increase immunity. However, fish to the public and have not been consumed evenly in Indonesia. This study aims to determine the relationship between knowledge and attitudes about fish consumption on society's fish consumption behavior. The type of research is quantitative with a survey approach. The sample in this study was the community affected by the covid-19 pandemic in the Cimanggis district, Depok city with a total sample of 25 respondents who were selected by random sampling technique. The research data were analyzed using descriptive analysis and inferential analysis. The results showed that the percentage of 25 respondents who had high fish knowledge was 64%, respondents who had high fish consumption attitudes were 72%, and 64% of respondents had low fish consumption behavior. Meanwhile, the results of the correlation test showed that there was no relationship between knowledge and fish-consuming behavior (r= 0,160) and there was no relationship between attitude and fish-consuming behavior (r = 0,395). Based on the research results, it is expected that the community, educators and the government can create and implement programs that can increase fish consumption, thus society would have excellent immunity.

Introduction

Fish is a a natural resource with high economic and biological values. Fish has an important role for people living on the coast as a livelihood and useful for urban communities to be consumed as a source of protein (Barik, 2017). Therefore, fish are considered very useful for human life. One of the benefits of fish is the nutrients that can increase immunity. (Lockyer, 2020) stated that fish is included in the list of immune-boosting foods because it contains various kinds of nutrients, both macro and micro. This means that by eating foods that contain high nutrients such as fish can maintain and increase immunity.

However, fish consumption in Indonesia are still relatively low. As a country with big fish production, Indonesia is only ranked 4th out of all countries in ASEAN (Food & Agricultural Organization, 2017). In addition to the low level of consumption, the Indonesian people are recorded in consuming fish in each province unevenly and one of the provinces that has a low level of fish consumption is West Java at 282.99 grams per

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capita per week (Central Bureau of Statistics, 2018). Meanwhile, people in Depok only consume fish an average of 8.28 grams per capita (Statistik, 2008) (Depok., 2020). This figure is lower than the national fish consumption target. This shows that the community has not used the national fishery products properly.

In response to this, the government implemented the provision of healthy food and accelerated nutrition improvement based on the Presidential Instruction of the Republic of Indonesia Number 1 of 2017, concerning the Healthy Living Community Movement or GERMAS. One of the efforts is to improve and expand the implementation of the Movement to Promote Fish Eating or GEMARIKAN. With the implementation of this program, it is hoped that people in Indonesia can meet national nutritional needs and create a healthy and high-immunity society by consuming fish.

Several factors affect the high or low level of public consumption of a food, one of which is the level of nutritional knowledge. (Sediaoetama, 2019) argued that someone who has good nutritional knowledge will be able to provide sufficient nutrients the body needs. This is stated in the research by (Yanti & Murtala, 2019) that high and quality education will increase the ability to determine the food to be consumed. Through higher education, a person can get information about good nutrition knowledge easily. Therefore, nutritional knowledge is very influential on food selection.

A person's food choices can be reflected through behavior, because a person's behavior is a response or action to the stimuli receives by the person. According to (Notoatmodjo, 2007) behavior is formed because of the phases experienced by a person, namely knowledge, attitudes, and actions. If behavior is based on knowledge, it will give more meaningful results than those that are not based on knowledge.

Supported by further discussion, (Notoatmodjo, 2007) explains that apart from knowledge, food consumption behavior is also influenced by perspective and other factors related to action. Based on the results, it is proven that the habit of consuming a food can occur various possibilities of the relationship between knowledge and attitudes towards behavior based on various factors. In addition to a person's internal factors such as knowledge and attitudes, there are also external influences, namely external factors such as environmental conditions.

At the beginning of 2020 the world was hit by an outbreak of a disease that attacks the acute respiratory system called the Novel Corona Virus or (SARS)-CoV-2. Then the name of the virus was updated to Coronavirus Disease 2019 (Covid-19). This outbreak was first revealed in late December 2019 in Wuhan, China (Nishiura et al., 2020). The virus spread rapidly throughout the world starting from South Korea, Japan, Taiwan, Thailand, Singapore, to the United States and Spain. Eventually, on March 11, 2020, the World Health Organization declared the Covid-19 outbreak a global pandemic disease (Choudhuri, Paul, Maiti, Kundu, & Kundu, 2009).

In Indonesia, on March 2, 2020, the first two positive cases were found in Depok. Then the number of sufferers doubled and spread throughout The country in less than a month. With the massive spread of the virus, on April 13, 2020, the President of the Republic of Indonesia announced through Presidential Decree No. 12 of 2020 that Covid-19 is a national disaster. This is because the transmission of Covid-19 occurs so easily and quickly and has an impact on the community, one of which is a decrease in people's income due to the implementation of the PSBB and PPKM policies.

(Covid, 2020) suggests that around 25 million jobs in the world could be lost due to the Covid-19 pandemic. The group which is most vulnerable to the impact is the lower middle class. It is supported by the results of research by (Ngadi, Meliana, & Purba, 2020) showing the Covid-19 pandemic caused 15.6 percent of workers in Indonesia to be laid off and the other 13.8 percent did not receive severance pay. This causes a very

drastic reduction in people's income. It indirectly affects the quality of balanced food supply access to nutritious food for the community. With the knowledge they have and respond to the challenges of the Covid-19 pandemic, the community is expected to continue to practice the behavior of consuming fish.

Therefore, this study was conducted to find out whether there is a relationship between knowledge and attitudes about fish consumption on the fish-consuming behavior of people affected by Covid-19 in Cimanggis sub-district, Depok city. In this study, the public is expected to increase fish consumption during the Covid-19 pandemic as an effort to maintain and increase immunity.

Research Method

This method is used to dig up information about the level of knowledge, attitudes and behavior in consuming fish. Then, the researchers tested the correlation between the three variables. This research was conducted in March 2021 in 6. This research was conducted in 6 sub-districts in Cimanggis sub-district consisting of Curug, Hajarmukti, Cisalak Pasar, Mekarsari, Tugu, and Pasir Gunung Selatan villages. The primary data used was data obtained from a questionnaires. In addition, secondary data used were theories and statistical research results.

The population in this study was the community of Cimanggis sub-district which includes 6 villages. The determination of the number of samples using random sampling with calculations using the formula to obtain 25 samples. For 25 people became respondents for this study including 2 from Curug, 3 from Hajarmukti, 3 from Cisalak Pasar, 5 from Mekarsari, 9 from Tugu, and 3 from Pasir Gunung Selatan. The inclusion criteria include people who are socially and economically affected by the Covid-19 pandemic. Meanwhile, the exclusion criteria were respondents who refused to participate and did not complete the questionnaires.

Primary data was obtained through filling out a questionnaire which included respondent characteristics such as data on gender, age, number of family members, village where they live, and monthly consumption of food and drink. In addition, there is a measurement of the level of basic knowledge about fish, the level of attitude about fish consumption and the level of behavior in consuming fish. The measurement of these three variables used a questionnaire with the Guttman and Likert scales.

The researchers distributed questionnaires online using Google Forms which aims to limit direct contact due to the PPKM policy. It began with looking for prospective respondents who were willing to participate in this study via WhatsApp. Then the researcher provided an online questionnaire link to the respondent. This data collection is carried out in stages based on the village.

All research data were analyzed using Microsoft Excel. The analysis in this study was used to see whether there was a relationship between knowledge and attitudes about fish consumption (independent variable) on fish consumption behavior (dependent variable). This analysis uses the Spearman rank correlation test (data not normally distributed). Then the significance test was carried out using the t test with a 95% confidence level.

Result and Discussion

The characteristics of the respondents in this study include gender, age, number of family members, place of residence, monthly consumption of food and drink, which are presented in the following table.

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Table 1. Distribution of Respondents Characteristics.

Characteristics of Respondents	n	%
Gender		
Female	16	64
Male	9	36
Age		
20-35 years old	10	40
36-45 years old	7	28
46-55 years old	6	24
>55 years old	2	8
Number of Family Members		
1-3 people	12	48
4-6 people	10	44
7-9 people	2	8
>10 people	1	4
Residential Village		
Curug	2	8
Hajarmukti	3	12
Mekarsari	5	20
Cisalak Pasar	3	12
Tugu	9	36
Pasir Gunung Selatan	3	12
Monthly Food and Drink Consumption Expenditure		
Rp. 300.000-500.000	2	8
Rp. 500.000-750.000	2	8
Rp. 750.000-1.000.000	2	8
Rp. 1.000.000-1.500.000	5	20
>Rp. 1.500.000	14	56
Total	**25**	**100**

Based on table 1 it can be seen that the gender characteristics show that there are fewer male respondents than female respondents. The number of male respondents was 9 people and the number of female respondents was 16 people. Then on the age characteristics, it is known that there is a division of age groups, where the age group of 20-35 years is more than the other three age groups. Furthermore, the number of family members is dominated by groups of smaller family members, namely 1-3 people and 4-6 people. Respondents who participated in the study were divided statistically based on the area of residence, namely the sub-district level, therefore the number of respondents in each sub-district was different. It is known that the respondent's expenditure for consumption is high, namely Rp. 1,000,000-1,500,000 per month and > Rp. 1,500,000 per month.

Based on the results of the questionnaire for measuring aspects of knowledge about fish from 25 respondents, it can be known through three categories. High category as many as 16 people with a percentage of 64%, medium category as many as 9 people with a percentage of 36%. Meanwhile, there are no respondents in the low category. From the results of the acquisition of this research data, it can be concluded that the level of knowledge about fish owned by the community affected by Covid-19 in the Cimanggis sub-district, Depok city is classified as moderate to high. The distribution of respondents' knowledge of fish categories is presented in the following table.

Table 2. Categories of Respondents' Knowledge of Fish.

Category	Total (People)	Percentage (%)
Height (≥ 75%)	16	64
Moderate (56-74%)	9	36
Low (< 55%)	0	0
Total	**25**	**100**

In this category, it shows that the respondents mastered basic knowledge about fish that can be applied to daily food consumption. Knowledge possessed by a person can be obtained from various sources, both formal education, information from the mass media, counseling or socialization, as well as personal experience. In line with the research of (Yuliono, Sofiana, Kushadiwijayanto, Nurrahman, & Aritonang, 2021) participants who participated in the socialization of consumption of marine fish in an effort to improve the body's immune system during the covid-19 pandemic experienced an increase in understanding related to consuming fish from 60-70% to 90-100%. With increased understanding of fish consumption, participants also experienced an increased interest in consuming fish. Thus, people have a tendency to prioritize fish food ingredients as daily food, so that the body's immunity is maintained both during the Covid-19 pandemic and throughout life.

Based on the results of the questionnaire for measuring aspects of attitudes about fish from 25 respondents, it can be seen through three categories. The high category was 18 people with a percentage of 72%, the medium category was 4 people with a percentage of 16%, and the low category was 3 people with a percentage of 12%. From the results of the acquisition of this research data, it can be concluded that the attitude category regarding fish owned by the community affected by Covid-19 in the Cimanggis sub-district, Depok city is classified as moderate to high. The distribution of categories of respondents' attitudes about fish is presented in the following table.

Table 3. Categories of Respondents' Attitudes Regarding Fish.

Category	Total (People)	Percentage (%)
Height (≥ 75%)	18	72
Moderate (56-74%)	4	16
Low (< 55%)	3	12
Total	**25**	**100**

In general, respondents responding to fish consumption based on indicators emphasized that the level of knowledge and socio-cultural factors possessed was classified as good, but indicators related to personal factors such as taste were classified as poor. In the research results (Waysima, Sumarwan, Khomsan, & Zakaria, 2010) stated that the availability of marine fish on the family menu had no significant effect on children's attitudes because the mother's affective attitude towards marine fish was the main predictor that influenced the child's appreciation level in consuming marine fish. So even though the mother's education and belief in the benefits of marine fish is very good and is able to provide marine fish into the family menu, the mother does not show affection or a supportive attitude, so the children tend to be less interested in consuming marine fish.

Based on the results of the questionnaire for measuring aspects of attitudes about fish from 25 respondents, it can be seen through three categories. In the high category there is 1 person with a percentage of 4%. For the medium category there are 8 people with a percentage of 32%. The low category has 16 people with a percentage of 64%. From the results of the acquisition of this research data, it can be concluded that the

category of fish consumption behavior owned by the community affected by Covid-19 in the Cimanggis sub-district, Depok city is classified as low to moderate. The distributionof respondents' behavior categories about fish is presented in the following table.

Table 4. Categories of Respondents' Behavior in Eating Fish.

Category	Total (People)	Persentase (%)
Hegiht (≥ 75%)	1	4
Moderate (56-74%)	8	32
Low (< 55%)	16	64
Total	**25**	**100**

In general, the results of measuring the behavior of respondents according to their preferences and frequency in consuming fish are low. In line with the results of (Sokib, Palupi, & Suharjo, 2012) research in Depok in order to formulate a strategy to increase fish consumption in the city of Depok, it shows fish consumption behavior that is relevant to the characteristics of research respondents. In this study, it was found that the fish consumption pattern of most of the respondents as much as 65% was classified as high, which was dominated by the age group above 45 years. Meanwhile, the younger age group tends to have a different consumption pattern, which is more like eating fast food and visually appealing foods. Based on where it is obtained, most consumers (72.5%) tend to consume fish outside the home for practical reasons, so that fish processing activities are considered an obstacle in consuming fish. In addition, the preferred type of fish is fresh fish compared to processed fish products.

Based on the results of the calculation of the hypothesis test that has been carried out, it was found that there is an almost positive and insignificant relationship between Knowledge about fish and the fish-consuming behavior of the community affected by Covid-19 in Cimanggis District, Depok City. The test is carried out using the Spearman rank correlation test formula so that the correlation coefficient value is = 0.160. This means that the direction of the relationship is close to positive with a weak strength level. Furthermore, a significant test of the relationship between knowledge and eating behavior of fish affected by Covid-19 was carried out using a two-tailed t test. This test compares the t-count value with t-table with a confidence level of 5% or = 0.05, then the results of the calculation of the t-count value are = 0.779 and the t-table value is -2.07 at the left limit and +2.07 at the limit right. It is known that the value of t arithmetic is inside the curve, which means that the decision of the hypothesis H0 is accepted and the hypothesis H1 is rejected. The results of this study can be concluded that there is no relationship between knowledge and eating behavior of people affected by Covid-19 in Cimanggis sub-district, Depok city.

Table 5. Results of Hypothesis Testing and Significance Test for Variable Y on X1.

Correlation Test			t test		
r_{count}	Connection	Interpretation	t_{count}	t_{table}	Connection
0,160	Positif	Lemah	0,779	2,070	Tidak Signifikan

The absence of a weak relationship between knowledge and fish-consuming behavior in Cimanggis sub-district, Depok city, proves that high knowledge does not necessarily have good fish-consuming behavior. This explains that the knowledge aspect only takes a small portion in influencing one's fish consumption and is followed by various other factors. This is in line with the research of (Asmaida & Sulaiman, 2020) in the Danau Sipin sub-district, Jambi city which stated that there was no relationship between knowledge and fish consumption behavior among housewives. Even though it

has a low and insignificant value, it means that knowledge about nutrition, especially fish consumption, has little effect because people are still considering the nutritional needs needed to maintain immunity during the Covid-19 pandemic.

Furthermore, it was found that there was a close positive and insignificant relationship between knowledge about fish and fish consumption behavior of the people affected by Covid-19 in Cimanggis District, Depok City. The test is carried out using the Spearman rank correlation test formula so that the correlation coefficient value is = 0.395. This means that the direction of the relationship is close to positive with a weak strength level. Furthermore, a significant test of the relationship between knowledge and eating behavior of fish affected by Covid-19 was carried out using a two-tailed t test. This test compares the t-count value with t-table with a confidence level of 5% or = 0.05, then the results of the calculation of the t-count value are = 2.062 and the t-table value is -2.07 at the left limit and +2.07 at the limit right. It is known that the value of t arithmetic is inside the curve, which means that the decision of the hypothesis H0 is accepted and the hypothesis H1 is rejected. The results of this study can be concluded that there is no relationship between knowledge and eating behavior of people affected by Covid-19 in Cimanggis sub-district, Depok city.

Table 7. Hypothesis Test Results and Significance Test for Variable Y on X2

Correlation Test			T Test		
r_{count}	Correlation	Interpretation	t_{count}	t_{table}	Correlation
0,395	Positive	Weak	2,062	2,070	Not significant

The absence of a weak relationship between knowledge and fish-consuming behavior in Cimanggis sub-district, Depok city, proves that high knowledge does not necessarily have good fish-consuming behavior. This explains that the knowledge aspect only takes a small portion in influencing one's fish consumption and is followed by various other factors. This is in line with the research of (Asmaida & Sulaiman, 2020) in the Danau Sipin sub-district of Jambi city which stated that there was no relationship between knowledge and fish consumption behavior among housewives. Even though it has a low and insignificant value, it means that knowledge about nutrition, especially fish consumption, has little effect because people are still considering the nutritional needs needed to maintain immunity during the Covid-19 pandemic.

Conclusion

From the results of the research that has been carried out, it can be concluded that there is an almost positive and insignificant relationship between knowledge about fish and fish consumption behavior. There is a close positive and insignificant relationship between attitudes about fish consumption and fish consumption behavior.

Based on the results of category calculations, the people affected by Covid-19 in the Cimanggis sub-district, Depok city, have knowledge and attitudes about fish consumption that are classified as moderate to high, meanwhile people's behavior in consuming fish shows a low to moderate category.

The results of the research that have been carried out do not prove that there is a relationship between knowledge and attitudes about fish on the behavior of consuming fish, but on the other hand there are allegations of factors that influence the behavior of consuming fish. Factors that are thought to influence behavior are income factors and personal taste factors. Even though they have tried to fulfill their primary needs, the community is also suspected of being selective in choosing the type of food they like or

according to individual tastes, for example choosing a protein source other than fish for consumption.

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