

INTRODUCTION TO NUTRITION AND EXERCISE ON PKK CADRES DURING THE COVID-19 PANDEMIC TIME IN GAJI VILLAGE, DEMAK

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Abstract

Corona Virus Disease 2019 or commonly abbreviated as COVID-19 is an infectious disease caused by SARS-CoV-2. People with COVID-19 may experience fever, dry cough, and difficulty breathing. With the outbreak, the government gives appealed to the community to leave the house as necessary, work from home and maintain health. Salary village is a village located in Demak Regency, Central Java. Public knowledge about the COVID 19 pandemic is still limited, most people do not know that nutrition and physical exercise can improve the body's immune system and prevent COVID 19 disease. Community service is carried out in Gaji Village due to low public knowledge about nutrition and physical exercise (exercise) during the Covid 19 pandemic. Activities were carried out by providing pre and post-tests, counseling to increase public knowledge, and measuring Body Mass Index with 23 participants. Knowledge about Covid 19 increased but not very significantly while increasing knowledge about nutrition and physical exercise experienced a significant increase among the pre and post-test participants. The results of the BMI measurement of 23 respondents had an ideal body weight of 9 people (39.13 %), overweight 12 people (52.17%), and 2 people obese (8.70%). BMI ideal body weight 39.13%; overweight 52.17% and 8.70% fat.

Keywords: Covid 19, Nutrition, Physical Exercise

INTRODUCTION

Corona Virus Disease 2019 or commonly abbreviated as COVID-19 is an infectious disease caused by SARS-CoV-2, a type of coronavirus. People with COVID-19 may experience fever, dry cough, and difficulty breathing. The infection spreads from one person to another through droplets from the respiratory tract which are often produced when coughing or sneezing. The droplet range is usually up to 1 meter. Droplets can stick to objects, but won't stay in the air for long. The time from exposure to the virus to the onset of clinical symptoms is between 1-14 days with an average of 5 days. So, people who are sick are required to wear masks to minimize the spread of droplets. Until now, the cause of the Coronavirus is unknown, but it is known that this virus is spread by animals and is able to infect from one species to another, including humans. It is known that the Coronavirus originated in the city of Wuhan in China and emerged in December 2019. Precautions to reduce the possibility of infection include staying at home, avoiding traveling and activities in public places, washing hands frequently

with soap and water, and not touching eyes, nose, or mouth with unwashed hands. Immediately contact the Hotline if you experience symptoms or have a history of travel/traveling from an infected country.

The Ministry of Health publishes the COVID-19 Health Protocol Infographic. This infographic tries to explain what needs to be done and is presented in the form of images. As we know, this COVID-19 Health Protocol Infographic is another form of the COVID-19 Health Protocol released by KSP for the handling of the Corona Virus in Indonesia. The handling of COVID-19 in Indonesia continues to develop along with the outbreak in Surakarta and public pressure. The government has not looked at the lockdown option but has given an appeal to the public to leave the house as necessary, work from home and maintain health. A pretty good and subtle appeal to order people to self-isolate, or self-isolate, to prevent the spread of COVID-19. So far, the handling of COVID-19 in Indonesia is still carried out by hospitals appointed by the ministry.

Gaji Village is located on the east side bordering the Sidokumpul Village area, in the north bordering the Krandon Village area, in the east bordering the Sidokumpul Village area, and on the west bordering the Blerong village. Salary village is one of the villages located in Guntur District, Demak Regency, Central Java, Indonesia. The health facilities owned by Gaji Village are 3 units of Posyandu, 1 unit of sub-health center, 3 units of Medical Center/Polyclinic and 1 house of practicing doctor, while the socio-economic status of the people of Gaji Village is classified as lower middle class.

Public knowledge related to the COVID-19 pandemic is still limited, most people do not know which areas include the red zones in the spread of COVID 19. The information received is not fully understood by the public. On the other hand, the kelurahan urges residents to prepare isolation rooms for migrants from the Jakarta area. Media-related information in the form of banners and leaflets are not widely found. People are really depressed and blind to the data on the spread of the coronavirus in Indonesia. There is no adequate information system to help the public track and find out the extent of the spread of Covid 19 in Indonesia. It is necessary to do mutual cooperation for the community in helping to protect their territory. The purpose of this service is to introduce the fulfillment of nutritional needs and exercise can increase body immunity during the Covid 19 pandemic.

IMPLEMENTATION METHOD

This community service activity was carried out in the Salary Village Area, Demak. This activity involved 23 PKK cadres with 2 types of activities:

Activity 1: Counseling

The counseling materials provided consisted of 3 interrelated topics, namely: covid 19, nutrition, and exercise. To determine the level of knowledge of PKK cadres, pre-test and post-test were carried out by answering the same questions before and after being given counseling. The equipment used includes LCD, laptop, speaker, wireless, and pointer.

Activity 2: Measuring Body Mass Index (BMI)

Body Mass Index (BMI) or Body Mass Index (BMI) is a way to monitor the nutritional status of adults, especially those related to underweight and overweight (Supariasa, 2013). Body

Mass Index is defined as a person's weight in kilograms divided by height in meters (kg/m²) (Irianto P, 2017). The equipment used is weight scales, height gauges, and writing instruments.

RESULTS AND DISCUSSION

The Payroll Village PKK cadres as participants participated in this activity from beginning to end with great enthusiasm.

Activity 1: Counseling

The counseling was attended by 23 PKK cadres and their level of knowledge was measured before and according to the counseling. There are 15 question items with the following data:

Table 1. Pre and Post-Test Knowledge Level about Covid 19

No	Question Items	Before		After		Information
		Yes	Not	Yes	Not	
1	COVID-19 is a disease caused by a viral infection and can be transmitted through close contact with an infected individual	23 (100%)	-	23 (100%)	-	Good
2	The things that need to be done to ward off the corona virus is to get enough rest. Exercise and eat fruit	23 (100%)	-	23 (100%)	-	Good
3	Washing hands with soap and water, using a face mask can help prevent the transmission of COVID-19	23 (100%)	-	23 (100%)	-	Good
4	To prevent the transmission of COVID-19, traveling to crowded places such as malls and public transportation should be avoided	23 (100%)	-	23 (100%)	-	Good
5	Physical activity and exercise are beneficial for controlling excess weight	23 (100%)	-	23 (100%)	-	Good
6	Children and young adults do not need to be involved in preventing Covid-19 disease	21 (91,30%)	2 (8,70%)	-	23 (100%)	There is an increase
7	Balanced nutrition is an arrangement of daily food that contains nutrients in types and amounts	23 (100%)	-	23 (100%)	-	Good
8	Isolation and treatment of covid patients is an effective way to reduce the spread	23 (100%)	-	23 (100%)	-	Good
9	The main function of carbohydrates is as a source of energy for the body	23 (100%)	-	23 (100%)	-	Good

10	An example of a side dish that contains high protein is corn	5 (21,74%)	18 (78,26%)	3 (13,04%)	20 (86,96%)	There is an increase
11	Peanuts, corn kernels and coconut are sources of vegetable protein	21 (91,30%)	2 (8,70%)	22 (95,65%)	1 (4,35 %)	There is an increase
12	Food ingredients that are a source of carbohydrates are chicken meat	4 (17,39%	19 (82,61%)		23 (100%)	There is an increase
13	Sesame oil is a source of vegetable fat	23 (100%)	-	23 (100%)	-	Good
14	Overweight (obesity) is dangerous because it can be exposed to various diseases	23 (100%)	-	23 (100%)	-	Good
15	Tubers are a food ingredient as a source of carbohydrates	23 (100%)	-	23 (100%)	-	Good

From the data above, it shows that the knowledge of the PKK cadres in the Salary village is good, meaning that the PKK cadres already understand knowledge about transmission, and prevention of covid 19 very well, but for nutrition problems, there is additional knowledge after attending counseling. From the results of statistical analysis, the pre-test and post-test data showed that because the data were not normally distributed, a non-parametric test with a nominal scale was carried out, the Wilcoxon Signed Ranks Test was carried out and the following results were obtained:

Table 2. Statistics Test Results^a

	Before – After
Z	-1.841 ^b
Asymp. Sig. (2-tailed)	.066

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

From these results, it can be concluded that the p value > 0.05 , it can be said that by providing counseling on knowledge of covid 19 statistically there was no significant difference between before and after but related to nutrition counseling there was an increase in knowledge.



Figure 1. Extension Activities

Corona Virus Disease 2019 or commonly abbreviated as COVID-19 is an infectious disease caused by SARS-CoV-2, a type of coronavirus. People with COVID-19 may experience fever, dry cough, and difficulty breathing. The infection spreads from one person to another through droplets from the respiratory tract which are often produced when coughing or sneezing. The droplet range is usually up to 1 meter. Droplets can stick to objects, but won't stay in the air for long. The time from exposure to the virus to the onset of clinical symptoms is between 1-14 days with an average of 5 days. So, people who are sick are required to wear masks to minimize the spread of droplets. Until now, the cause of the Corona virus is unknown, but it is known that this virus is spread by animals and is able to infect from one species to another, including humans. It is known that the Corona virus originated in the city of Wuhan in China and emerged in December 2019. Precautions to reduce the possibility of infection include staying at home, avoiding traveling and activities in public places, washing hands frequently with soap and water, not touching eyes, nose, or mouth with unwashed hands (WHO, 2020).

COVID-19 infection can cause mild, moderate or severe symptoms. The main clinical symptoms that appear are fever (temperature $>38^{\circ}\text{C}$), cough and difficulty breathing. In addition, it can be accompanied by severe shortness of breath, fatigue, myalgia, gastrointestinal symptoms such as diarrhea and other respiratory symptoms. Half of patients develop shortness of breath within one week. In severe cases rapidly and progressively worsens, such as ARDS, septic shock, uncorrected metabolic acidosis and bleeding or coagulation system dysfunction within a few days. In some patients, symptoms appear mild, not even accompanied by fever. Most patients have a good prognosis, with a minority in critical condition or even death. The following clinical syndromes can appear if infected (Wang Z, 2020; WHO, 2020; Burhan E, 2019).

Activity 2: Measuring Body Mass Index (BMI)

Body Mass Index is defined as a person's weight in kilograms divided by height in meters (kg/m^2) (Irianto P, 2017). All cadres were weighed and measured for TB to assess nutritional status. The following are the results of the measurements that have been carried out:

Table 3. BMI Measurement Results

No	Weight (Kg)	Height (Meter)	Score IMT	Information
1	56	1,60	21,88	Ideal weight
2	68	1,65	25,00	Over weight
3	72	1,59	28,45	Over weight
4	69	1,60	26,95	Over weight
5	75	1,59	29,64	Over weight
6	65	1,67	23,30	Ideal weight
7	68	1,54	28,69	Over weight
8	78	1,58	31,2	Gemuk
9	81	1,60	31,64	Gemuk
10	74	1,62	28,24	Over weight
11	70	1,60	26,92	Over weight
12	64	1,57	26,02	Over weight
13	59	1,60	23,05	Ideal weight
14	62	1,55	25,81	Over weight
15	67	1,67	24,00	Ideal weight

16	55	1,65	20,22	Ideal weight
17	59	1,60	23,05	Ideal weight
18	63	1,59	24,90	Ideal weight
19	72	1,58	28,91	Over weight
20	67	1,60	26,17	Over weight
21	65	1,55	27,08	Over weight
22	59	159	23,41	Ideal weight
23	60	160	23,43	Ideal weight

Based on the results of the calculation of the BMI of the participants, it can be categorized that the mothers of PKK cadres in Gaji Demak Village from 23 respondents indicated that the total ideal body weight was 9 0 people (39.13 %), over weight there were 12 people (52.17%) and the rest were categorized as Fat 2 people (8.70 %). Body Mass Index (BMI) or Body Mass Index (BMI) is a way to monitor the nutritional status of adults, especially those related to underweight and overweight (Supariasa, 2013).



Figure 2. Measurement of BMI

In general, nutrients can come from natural sources (macro and micro nutrients) in the form of medicinal dosage forms containing vitamin C, vitamin E, multi vitamins or vegetables and fruits are sources of various vitamins, minerals, and dietary fiber. Some vitamins, minerals contained in vegetables and fruits act as antioxidants or antidote to bad compounds in the body. Unlike vegetables, fruits also provide carbohydrates, especially in the form of fructose and glucose. Certain vegetables also provide carbohydrates, such as carrots and potato vegetables. While certain fruits also provide unsaturated fats such as avocados and red fruit. Therefore, the consumption of vegetables and fruits is an important part in realizing a balanced diet. Various studies show that adequate consumption of vegetables and fruits plays a role in maintaining normal blood pressure, blood sugar and cholesterol levels. controlling blood pressure. Consumption of sufficient vegetables and fruit also reduces the risk of difficult bowel movements and obesity. This shows that nutrients are needed by the body. Nutrition is a chemical bond that is needed by the body to carry out its functions, namely energy, building and maintaining tissues, and regulating life processes (Soenarjo, 2000) or in other words nutrition is a process of organisms using food that is consumed normally through the process of digestion, absorption. , transport, storage, metabolism and excretion of substances that are not used to maintain life, growth, and normal function of organs, as well as produce energy.

Nutritional needs include meeting nutritional needs, namely reducing the consequences of a prolonged response to injury and regulating the inflammatory response. There are several ways to calculate nutritional needs, the first is the Metabolic Chart- Indirect Calorimetry Resting Energy Expenditure (REE); Basal Energy Expenditure (BEE) equation: Calculates nitrogen balance using 24-hour urine urea and in conjunction with blood urea and albumin.

Therefore, nutrition must be fulfilled to prevent COVID-19. To be able to coexist with the virus without being infected, the body needs to be assisted by the fulfillment of good nutrition to support our body's immune system. Based on research in the American Journal of Physiology-Gastrointestinal and Liver Physiology, about 70-80 percent of the body's immunity is influenced by the health of the digestive tract. If the digestive tract is healthy, this certainly has a good effect on the immune system.

The Health Organization or WHO still recommends a balanced nutritional diet amid the COVID-19 pandemic. This means that every food menu must include complete nutrition, be it macronutrients such as carbohydrates, proteins, fats, and micronutrients from vitamins and minerals. However, to build a strong immune foundation (building block), it is necessary to focus on protein intake. Currently, nutrition plays an important role to prevent the risk of transmission of COVID-19. So it is necessary to increase the side dishes that contain protein. The Indonesian Ministry of Health recommends the "Fill My Plate" guideline by dividing the plate into three parts, namely 1/3 carbohydrates, 1/3 vegetables, 1/3 side dishes and fruits. Include a variety of protein in every meal, for example: animal protein: meat, chicken, fish, eggs, milk, or dairy products and vegetable protein: tempeh, tofu, all kinds of nuts, or seeds.

Animal and vegetable proteins complement each other in forming the body's immune system, thereby helping to protect the body from infectious diseases. Especially for those who are physically active in the new normal, it is very important to maintain daily nutritional intake. To help maintain nutritional fulfillment, you can also drink liquid foods that have been equipped with balanced nutrition. This liquid food is very practical to consume, especially for those of us who are already active outside the home and want to ensure that nutritional needs are met, balanced, and complete.

Physical activity can be recreational (takes place at leisure); work (takes place during the execution of work, including: household tasks); or it could include walking or cycling specifically for transportation or travel. Any type of physical activity is considered a sport. It can be planned for sports such as running, swimming, tennis or bowling, exercise programs, or hobbies such as cycling or walking.

It can also include physical activities that are part of your daily life, such as gardening, cleaning or walking to the store. To stay healthy, you should get 30 minutes of moderate exercise five days per week. For a healthy person, moderate exercise may be walking at a speed of 4 to 6 km per hour. If you have lung problems, you have to walk fast enough to make yourself quite short of breath.

The work of the immune system in the digestive system

There are various cells that play a role in the immune system in the body, ranging from lymphocytes, T cells, natural killer cells, and others. There are many organs that also play an important role in the formation of the immune system, such as the thymus gland, spinal cord, including the digestive tract. The intestine as an organ of the digestive system plays a major role in the immune system. The intestines have walls that are lined with villi or fine fibers, like the surface of a towel. Between the villi there is mucus or mucus which is part of the body's defense system mechanism. Digestive health needs to be maintained through the intake of probiotics from fermented foods. For example, tempeh, kimchi, miso, tape, yogurt, and others. All of these foods can increase the number of good bacteria in the gut. Foods containing

probiotics are needed so that these good bacteria can support the immune system in a new normal situation.

In addition to consuming essential nutrients to prevent the risk of COVID-19 transmission, don't forget to always apply health protocols. Mainly by paying attention to clean living behavior. Wash hands with running water and soap. Fulfillment of nutrition is still needed even though we are in good health

CONCLUSION

From the data above, it shows that the knowledge of the Salary Village PKK cadres about Covid 19 is good both before and after being given counseling. However, knowledge about nutrition is still lacking, but after being given counseling there has been a significant increase. Most of the nutritional status of PKK cadres has an ideal body weight, although they are still found in the overweight and obese categories. There needs to be a continuation of this activity by providing assistance so that the results of the counseling are implemented by PKK cadres and disseminated to the community.

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