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**The Impact of the Government Policy on Large-Scale  
Social Restrictions on the Covid-19 Pandemic on Food  
Availability in Family in the Work Area of the Kotaraja  
Health Center, Jayapura City, Papua Province, in 2020**

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**Abstract**

Background Coronaviruses are a group of viruses that can cause disease in animals or humans. Several types of coronavirus are known to cause respiratory tract infections in humans ranging from coughs and colds to more serious ones such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). A new type of coronavirus found to cause the disease COVID 19. Latest data to date June 26, 2020 at 20.29 WIB in Indonesia Confirmed 52,667 cases, treated 27,411, recovered 21,333, died 2,683. Meanwhile, Papua as of June 26, 2020, confirmed 1,619, under treatment 790 (49%), recovered 813 (50%) and died 16 (1%). The highest cases occurred in Jayapura City with a total of 841 positive cases, 546 treated, recovered 286, and died 9. The spread of COVID-19 is mainly through respiratory droplets released by someone who is coughing or has other symptoms such as fever or fatigue. One of the effective prevention to break the chain of transmission is self-isolation. In line with the increasing and rapid development of cases, the government issued a policy of Large-Scale Social Restrictions (PSBB stands for Pembatasan Sosial Berskala Besar in Indonesian) in handling COVID-19 by issuing Government Regulation (PP) Number 21 of 2020 and Presidential Decree (Keppres) No.

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11 of 2020 with the aim of limiting various activities in areas with high spread cases. Restrictions on activities starting from school, work, and worship carried out at home and prohibiting people from congregating. The impact of the PSBB implementation has a negative impact on the economy. People's incomes, especially those who do not have permanent jobs and those with daily income are greatly affected because they can no longer carry out their usual activities to earn income every day, some even get laid off because their place of work is no longer able to pay wages due to reduced company or workplace income, some are closed. The area of impact that is very worrying is the decrease in the availability of food in the household and will result in an increase in cases of malnutrition or poor nutrition. In addition, in dealing with COVID-19, maximum immunity is needed so that it is not easily infected, in connection with that the body really needs good nutrition at this time to fight the virus before and during the PSBB Covid-19 outbreak policy or activity restrictions and regional quarantine. Objectives: The purpose of this study was to determine the differences and trends in food availability changes in the family before and during the PSBB Covid-19 outbreak policy or activity restrictions and regional quarantine so that it can be used as information and reference in formulating policies related to efforts to overcome COVID-19 so as not to have an impact on the problem of food availability in the family. Methods: The research was carried out in the Kotaraja Health Center area from July to October 2020. This type of quantitative research was carried out by surveying and processed by analytical descriptive. The populations in this study were all heads of families who live in the working area of the Kotaraja Health Center with a total of 456 households. Determination of the sample is based on consecutive sampling with criteria for areas that have family members with various sources of income, namely fixed income such as civil servants, army, police and the like, head of family engaged in the private sector such as entrepreneurs, farmers, fishermen, head of family with daily income and head of family with uncertain income such as construction workers, motorcycle taxi drivers, hawkers, street vendors, areca nut sellers, retail vegetable sellers. Data collections are obtained through online, offline, whatsapp, and manual questionnaires. Result: The results of the study describe a change in the decline in food availability, food adequacy, diversity of food consumption, and access to food in the form of rice, side dishes, vegetables, fruits, and spices in the family from before to during the Covid-19 pandemic. There are also difficulties in obtaining food.

**Keywords:** Impact; restriction; food availability; Covid-19; Kotaraja health centre.

## **1. Introduction**

Coronaviruses are a group of viruses that can cause disease in animals or humans. Several types of coronaviruses are known to cause respiratory tract infections in humans ranging from coughs and colds to more serious ones such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). It is a new type of corona virus that was found to cause COVID-19 disease. The first outbreak occurred in Wuhan, China, in December 2019 and has become a pandemic in many countries around the world [1]. In Indonesia, the first case was announced by President Jokowi on March 2, 2020. President Jokowi announced that there were 2 people who tested positive for Covid-19 [2]. The latest data until June 26, 2020 at 15.41 GMT+7 in Indonesia Confirmed 51,427 cases, recovered 21,333, died 2,683 [3]. Meanwhile, Papua as of June 26, 2020, confirmed 1,619, under treatment 790 (49%), recovered 813 (50%) and died 16 (1%). The highest cases occurred in Jayapura City with a total of 841 positive cases, treated 546, recovered 286 died 9 then

followed by Mimika with 372 positive cases, treated 62, recovered 304 and died 6, followed by Jayapura and Biak Numfor districts [4].

The most common symptoms of COVID-19 are fever, dry cough, and feeling tired. Most (about 80%) of infected people recover without the need for special treatment. About 1 in 5 people infected with COVID-19 suffer from severe pain and difficulty breathing. Older people and people with co-existing medical conditions such as high blood pressure, heart and lung disorders, diabetes, or cancer are more likely to develop more serious illness [5]. The spread of COVID-19 is mainly through respiratory droplets released by someone who is coughing or has other symptoms such as fever or fatigue. Many infected people experience only mild symptoms, especially in the early stages but can be transmitted to others. To protect yourself from contracting COVID-19, practicing hand and respiratory hygiene at all times is very important and the best way to protect others and yourself. Self-isolation is an important action taken by people who have symptoms to prevent transmission to others in the community including family members. Self-isolation such as staying at home and not going to work, school, or to public places is an effective measure to break the chain of transmission [6]. In addition to self-isolation, one of the government's efforts so that the spread of the COVID-19 outbreak can be suppressed, a policy related to the handling of CORONA-19 has been issued, preceded by forming a Rapid Action Team (TGC) in the territory of the State entrance authority at the airport, port, and cross-border post state land [7].

In line with the increasing and rapid development of cases, the government issued a policy of Large-Scale Social Restrictions (PSBB) in handling COVID-19 by issuing Government Regulation (PP) Number 21 of 2020 and Presidential Decree (Keppres) Number 11 of 2020 with the aim of limiting Various activities in the area have high spread cases. Restrictions on activities starting from school, work, and worship carried out at home and prohibiting people from congregating. The areas for which the PSBB was first applied were DKI Jakarta and West Java Provinces, which included Bogor Regency, Bogor City, Bekasi Regency, Bekasi City, and Depok City. Meanwhile, before implementing the PSBB, Papua province implemented two ways to prevent the spread of the corona virus, namely restrictions on residents' activities and regional quarantine, this is in accordance with the results of the coordination meeting of the Regional Leadership Communication Forum (Forkompinda) on 11 May 2020. The application of restrictions on residents' activities until 14.00 GMT+9 on 5 regions, namely Jayapura City, Mimika Regency, Keerom, Nabire, and Jayapura on the grounds that these five areas have a very high increase in cases. In addition to activity restrictions, the Jayapura City government has implemented a regional quarantine in a number of residential areas, namely Hamadi, South Jayapura District, the settlements of Hamadi Rawa, Hamadi Pontong and densely populated settlements around SMA 4 Entrop school, as well as closing the Hamadi market and the Hamadi Fish Auction, as well as in Jayapura district by closing the old Sentani Market.

Although until now the Papua Province PSBB policy has not been approved, but with the implementation of the Papua provincial government's policy, namely activity restrictions and area quarantine, it has greatly affected the economy in Papua Province, especially Jayapura City, which is the provincial capital. People's income, especially those who do not have permanent jobs and those with daily incomes are greatly affected because they can no longer carry out their usual activities to earn income every day, some even get laid off because their place of work is no longer able to pay wages due to reduced company or workplace income, some even closed.

The increase in positive cases that occur from day to day causes a lot of losses to various sectors in Indonesia. One of them is the Indonesian economic sector. The COVID-19 pandemic has severely damaged the Indonesian economy. On March 2, 2020, the rupiah exchange rate was still not as weak as it is now. On March 2, 2020, the rupiah exchange rate weakened by 1,615 points or weakened by 11.32% in 39 days. The worst weakening of the rupiah until April 10, 2020, occurred on March 23, 2020, with the exchange rate of 1 USD against the rupiah of IDR.16,575.00 or weakened by 16.19%. Another economic impact is the movement of the JCI which is in free fall. On April 6, 2020, the Minister of Finance of the Republic of Indonesia, Sri Mulyani even said that the current crisis caused by the corona virus was far more complex than the 1997-1998 and 2008-2009 crises [8].

Some of the economic impacts of Covid-19 on the Indonesian economy were described in the Press Conference April 1 of the Ministry of Finance: 1) Threats of health problems and threats to life due to the risk of increasing cases of up to tens of thousands of people. 2) Threat of loss of income, especially for poor people and families who work in the informal sector. 3) Bad Loans for MSMEs, because MSMEs cannot run their business normally. 4) Disrupted corporate system to banking conditions that may experience liquidity problems. 5) Rupiah depreciation, financial market volatility and capital flight [8].

The COVID-19 pandemic has affected economic life at the household level, where 50% of them are experiencing financial difficulties. Limited employment opportunities due to sluggish business activities as a result of the Large-Scale Social Restrictions (PSBB) policy, led to a reduction in household income, while the prices of various daily necessities tended to increase. Access to basic social services is also increasingly difficult during a pandemic, making it difficult for people to obtain quality food for proper nutrition, health services, and education for children [9].

In connection with the disruption of the economy due to COVID-19, the very worrying impact is the increasing problem of cases of malnutrition. The implementation of PSBB or activity restrictions and regional quarantines will have an impact on reducing food availability in the household. There are six types of food that Indonesia must pay attention to during the COVID-19 pandemic, namely rice, corn, soybeans, garlic, [four-legged] meat, and chicken. If not anticipated, the first scarcity will come from rice and garlic. The impact will be felt from March-April 2020 and the peak will be August-September 2020 [10].

The importance of quality food must exist during this outbreak. Low food quality is also a factor in a person's lack of immunity, making them vulnerable to COVID-19. Nutritional status plays an important role in the immune system. Lack of nutrition causes the body's defenses to be weak, susceptible to infection. If the body mass index is high [overweight or obese] will cause excessive inflammation, are susceptible to infections such as influenza, and are more at risk of complications so that the disease is more severe. Stunting is one of the most highlighted health problems in Indonesia. Imagine, the results of research in 2013, the prevalence of stunting under five in Indonesia reached 37.8 percent. The figure is the same as the number of stunted children under five in Ethiopia. In 2019, the stunting prevalence rate was still 27.67 percent. You could say, Indonesia's condition related to stunting is indeed increasingly worrying. Citing the results of the 2018 Basic Health Research (Risksedas), the prevalence of stunting for children under five in Indonesia was at 30.80%. This percentage has decreased from 2013 which at that time had penetrated 37.20%. For Papua Province itself, it was recorded that it

was in the national stunting prevalence rate, both in 2013 and 2018. If detailed, East Nusa Tenggara (NTT) Province became the area with the highest stunting prevalence, reaching 42.60% in 2018. Previously, in 2013 the prevalence even reached 51.70% [11].

Various efforts have been made by the government to overcome the rate of stunting cases, but at this time, with the Covid-19 outbreak, it will disrupt the previously determined response plan and of course the government will try to change or adjust the plan to the COVID-19 situation. According to Ali Khomsam through Indonesia.com media, the main complaint of the community is how to make a daily living for the purpose of fulfilling food. For daily workers, the current living conditions are like a small apocalypse that destroys the family's economy. The government is currently busy launching various aids for families affected by COVID-19. The stagnation of the community's economy in various sectors has resulted in indescribable suffering. The poor must still be guaranteed access to various services to which they are entitled, especially access to food. Covid-19 was only realized in Indonesia in early March 2020. There is no socio-economic survey to calculate the number of new poor people. Previous data put the number of poor people around 25 million people. Now people who used to be categorized as near or vulnerable to poverty have fallen into the poor group. When the industry stops, layoffs for day-to-day employees are inevitable. Likewise, the reduction in working hours which of course has an impact on take home pay which is brought home as family income. Indonesia and many other countries have experienced a great disaster due to covid-19. The people are required to have patience to face the current difficult situation. The government is struggling to overcome public health problems, economic, social and food problems. Food security concerns three important things, namely food availability, access, and consumption. Aspects of food availability depend on natural, physical and human resources. In the midst of the COVID-19 outbreak, availability is also constrained by limited food choices on the market, fewer mobile vegetable vendors, and the numbers of stalls selling street food that are closed. Meanwhile, access to food can only occur if the household has sufficient income. Covid-19, which causes people's income to drop drastically, certainly causes disruption to food access. Various government assistance, such as the basic food distribution program or the Family Hope Program (PKH) can temporarily help to overcome the situation of food shortages that may occur at the family level. Furthermore, after access to food is food consumption which will greatly determine whether all family members will be able to achieve optimal health status. The condition of fragile family food security raises further concerns, namely the deteriorating nutritional status of the community [12]. The problems described by Khomsan are in accordance with the facts that occurred in Papua Province. Many people have been affected by the Covid-19 outbreak. In addition to having an impact on decreasing food availability in the family, it also has an impact on increasing crime rates such as theft and if not addressed immediately, it will have an impact on major problems such as an increase in stunting and malnutrition. In order for the Government to be able to handle it properly, accurate and precise and reliable information is needed to be used as a reference in making policies so that the policy is effective, targeted and effective. Based on this, researchers want to see the impact of this COVID-19 prevention policy on food availability in the family.

## **2. Methods**

This type of quantitative research is carried out by means of surveys and processed by analytical descriptive. Data collection uses a questionnaire that is integrated through online and offline applications or WA, but if the

respondent does not have an Android cell phone, the questionnaire is in manual form. When collecting data and information, they still follow the procedures for preventing the transmission of COVID-19, both researchers and respondents. After the data is collected then the percentage is processed. The research was carried out in the Abepura district, VIM-RW1 Village from July to October 2020. The population in this study are all heads of families who live in the service area of the Kotaraja health center totaling 456 households and as respondents are housewives because they are considered the most knowledgeable about the availability of food at home. Determination of the sample is based on consecutive sampling with the criteria of all housewives who visit the health center until the desired number of samples is sufficient. The number of samples is determined by the "Slovin" formula ( $n = \frac{N}{1 + N(e)^2}$ ) with the result is 99.77 rounded up to 100 respondents. The data is processed quantitatively in the form of frequency and percentages and seen by comparisons or changes in the availability of food in the family. This study is limited only on food availability in the family before and during pandemic covid-19 in Papua, on November 2020-March 2021 and April-October 2021.

### 3. Results

#### 1. Availability of Food in the Family Before and During The Covid-19 policy regarding PSBB is enforced

##### a. Availability of Rice in the family Before and During Covid-19 PSBB Policy

**Table 1:** Respondents' Responses Regarding Availability of Rice in Family before and During Covid-19.

Availability	Before Covid-19	During Covid-19	Decrease	Percentage Change (%)
Rice (Kg)	2719	2019	700	25.74

*Source: Primary data, 2020*

Based on table 1, there was a decrease in the availability of rice in the amount of 700 Kg (25.74%)

##### b. Additional Type of Rice (Taro, Sweet Potato, Cassava, Sago)

**Table 2:** Respondents' Responses Regarding Availability of Similar Additional Rice in the Family before and During Covid-19.

Availability	Before Covid-19	During Covid-19	Decrease	Percentage Change (%)
Additional type of rice	77	43	34	44.16

*Source: Primary data, 2020*

Based on Table 2, there was a decrease in additional types of rice as many as 34 (44.16%).

**c. Sufficiency of Rice and Additional Kinds of Rice**

**Table 3:** Respondents' Responses Regarding Sufficiency of Rice and Additional Types of Rice

Sufficiency	Before	During Covid-19	Decrease	Percentage Change (%)
	Covid-19			
Sufficient	75	27	48	64.00
Not Sufficient	25	73	48	192.00
Total	100	100		

Source: Primary data, 2020

Based on table 3, there was a decrease in respondents' responses to 48 (64%) regarding the adequacy of rice and the like from 75 to 27 respondents or an increase in insufficiency of 48 (192%) from 25 to 73 respondents.

**d. Availability of side dishes**

**Table 4:** Respondents' Responses Regarding the Availability of Side dishes in the Family before and During Covid-19

Availability of side dishes	Before	During Covid-19	Decrease	Percentage Change (%)
	Covid-19			
Every day	49	21	28	57.14
3 Times A Week	40	31	9	22.50
1 Time a Week	9	36	27	300.00
Nothing in a month	2	12	10	500.00
Total	100	100		

Source: Primary data, 2020

Based on Table 4, there was a decrease in respondents' responses regarding the availability of side dishes every day from 49 respondents (49%) to 21 (21%) respondents or there was a decrease in 28 (57.14%) respondents, there was an increase in the availability of 3 times a week by 9 (22.5%) Respondents, and a significant change occurred in the availability of only 1 time from 9 (9%) respondents to 36 (36%) respondents or there was an additional 27 (300%) respondents.

**e. Sufficiency of side dishes**

**Table 5:** Respondents' Responses to the Adequacy of Side dishes

Sufficiency	Before Covid-19	During Covid-19	Decrease	Percentage Change (%)
Sufficient	80	29	51	63.75
Not Sufficient	20	71	51	255.00
Total	100	100		

Source: Primary data, 2020

Based on table 5, there was a decrease in the responses of 51 (63.75%) respondents regarding the adequacy of side dishes from 80 to 29 respondents and an increase in the inadequacy of 51 (255%) from 20 to 71 respondents.

#### f. Availability of Vegetables

**Table 6:** Respondents' Responses Regarding the Availability of Vegetables in the Family Before and During Covid-19

Availability of Vegetables	Before Covid-19	During Covid-19	Decrease	Percentage Change (%)
Every day	86	39	47	54.65
3 Times A Week	13	32	19	146.15
1 Time a Week	1	20	19	1900.00
Nothing in a month	0	9	9	900.00
Total	100	100		

Source: Primary data, 2020

Based on Table 6, there was a decrease in respondents' responses regarding the availability of vegetables every day from 86 respondents to 39 respondents or a decrease in 47 (54.65%) respondents, and an increase in the availability of 3 times a week as many as 19 (146.15%) respondents and significant changes occurs in availability only 1 time a week from 1 (1%) respondents to 20 (20%) respondents or there is an addition of 19 (1900%) respondents including those who previously said there were no in a month to 9 respondents.

#### g. Sufficiency of Vegetables

**Table 7:** Respondents' Responses to the Adequacy of Vegetables.

Sufficiency	Before	During Covid-19	Decrease	Percentage Change (%)
	Covid-19			
Sufficient	96	34	62	64.58
Not Sufficient	4	66	62	1550.00
Total	100	100		

Source: Primary data, 2020

Based on table 7, there was a decrease in the responses of 62 respondents (64.58%) regarding the adequacy of vegetables from 96 to 34 respondents and an increase in the inadequacy of 62 (1550%) respondents from 4 to 66 respondents.

**h. Availability of Fruits**

**Table 8:** Respondents' Responses Regarding the Availability of Fruits in the Family Before and During Covid-19

Availability of Fruits	Before	During Covid-19	Decrease	Percentage Change (%)
	Covid-19			
Every day	27	11	16	59.26
3 Times A Week	41	18	23	56.10
1 Time a Week	22	36	14	63.64
Nothing in a month	10	35	25	250.00
Total	100	100		

Source: Primary data, 2020

Based on Table 8, there was a decrease in respondents' responses regarding the availability of fruits every day from 27 to 11 respondents or a decrease in 16 (59.26%) respondents, there was also a decrease in the availability of 3 times a week as many as 23 (56.98%) respondents, and there was an increase in availability. only 1 time from 22 respondents to 36 respondents or an increase of 14 (63.64%) respondents, and in respondents who did not have fruit from 10 to 35 respondents or an additional 25 (250%) respondents occurred.

**i. Sufficiency of Fruits**

**Table 9:** Respondents' Responses to the Adequacy of Fruits.

Sufficiency	Before	During Covid-19	Decrease	Percentage Change (%)
	Covid-19			
Sufficient	66	23	43	65.15
Not Sufficient	34	77	43	900.00
Total	100	100		

Source: Primary data, 2020

Based on table 9, there was a decrease in the responses of 43 respondents (65.15%) regarding the adequacy of fruits from 66 to 23 respondents or an increase in insufficiency of 43 (900%) from 34 to 77 respondents.

**j.** Availability of Herbs

**Table 10:** Respondents' Responses Regarding the Availability of Herbs in the Family Before and During Covid-

19

Availability of Herbs	Before	During Covid-19	Decrease	Percentage Change (%)
	Covid-19			
Every day	63	24	39	61.90
3 Times A Week	32	28	4	0.19
1 Time a Week	4	37	33	825.00
Nothing in a month	1	11	10	1000.00
Total	100	100		

Source: Primary data, 2020

Based on Table 10, there was a decrease in respondents' responses regarding the availability of kitchen spices every day from 63 to 24 respondents or there was a decrease in 39 (61.90%) respondents, there was also a decrease in the availability of 3 times a week as many as 4 (12.5%) respondents, and there was an increase in availability. only 1 time from 4 respondents to 37 respondents and in respondents who do not have spices from 1 to 11 respondents or an increase of 10 (1000%) respondents.

**k.** Sufficiency of Herbs

**Table 11:** Respondents' Responses to the Adequacy of Herbs.

Sufficiency	Before	During Covid-19	Decrease	Percentage Change (%)
	Covid-19			
Sufficient	91	33	58	63.74
Not Sufficient	9	67	58	644.44
Total	100	100		

Source: Primary data, 2020

Based on table 11, there was a decrease in the responses of 58 respondents (63.74%) regarding the adequacy of kitchen spices from 91 to 33 respondents or a significant increase in the insufficiency of 58 (644.44%) respondents from 9 to 67 respondents.

**2. Diversity of Consumption of Family Food Types Before and During the Covid-19 Policy Regarding PSBB was implemented**

**a. Consumption of side dishes alternately with every meal**

**Table 12:** Consumption of Alternating Types of Side dishes at Every Meal.

Alternate	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Yes	92	92.00	18	18.00
No	8	8.00	82	82.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 12, there was a decrease in respondents' responses about the side dishes that were eaten every day by changing types, from a number of 92 (92%) respondents who said "yes" to only 18 (18%) respondents. Or an increase in respondents who said "no" from 8 (8%) to 82 (82%) respondents.

**b. Consumption of Alternate Types of Vegetables at Every Meal**

**Table 13:** Consumption of Vegetables Alternating at Every Meal.

Alternate	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Yes	96	96.00	23	23.00
No	4	4.00	77	77.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 13, there was a decrease in respondents' responses about the vegetables they eat every day in different types, from a number of 96 (96%) respondents who said "yes" to only 23 (23%) respondents. Or an increase in respondents who said "no" from 4 (4%) to 77 (77%) respondents.

**c.** Consumption of Alternate Types of Fruits at Every Meal

**Table 14:** Consumption of Fruits Alternating at Every Meal.

Alternate	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Yes	82	82.00	16	16.00
No	18	18.00	84	84.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 14, there was a decrease in respondents' responses about the fruits they eat every day in alternating types, from a number of 82 (82%) respondents who said "yes" to only 16 (16%) respondents. Or an increase in respondents who said "no" from 18 (18%) to 84 (84%) respondents.

**3.** Food Access

**a.** Access Source

**1)** Access Rice

**Table 15:** Respondents' Responses About Access to Rice.

Access Rice	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Own Garden	1	1.00	2	2.00
Buy	87	87.00	41	41.00
Help from:				
1. Family	2	2.00	13	13.00
2. Others	0	0.00	14	14.00
3. Government	10	10.00	30	30.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 15, there was a decrease in respondents' responses to the source or access of rice through purchases from 87 (87%) to 41 (41%) respondents and an increase in receiving assistance from families from 2 (2%) to 13 (13%), others from none to 13 (13%) and from the government from 10 (10%) to 30 (30%) respondents.

## 2) Additional Access Kind of Rice

**Table 16:** Respondents' Responses About Additional Access to a Kind of Rice.

Additional Access A Kind of Rice	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Own Garden	18	18.00	17	17.00
Buy	77	77.00	44	44.00
Help from:				
1. Family	4	1.00	19	19.00
2. Others	1	1.00	14	14.00
3. Government	0	0.00	6	6.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 16, there was a decrease in respondents' responses to additional sources or access of rice through purchases from 77 (77%) to 44 (44%) respondents and an increase in receiving assistance from families from 4 (4%) to 19 (19%), others from 1 to 14 (14%) and from the government from "none" to 6 (6%) respondents.

## 3) Side dish access

**Table 17:** Respondents' Responses About Access to Side dishes.

Side dish access	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Own Garden	3	3.00	2	2.00
Buy	93	93.00	53	53.00
Help from:				
1. Family	1	1.00	19	19.00
2. Others	2	2.00	8	8.00
3. Government	1	1.00	18	18.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 17, there was a decrease in respondents' responses about the source or access to side dishes through purchases from 93 (93%) to 53 (53%) respondents and an increase in receiving assistance from families from 1 (1%) to 19 (19%) , other people from 2 (2%) to 8 (8%) and from the government from 1(1%) to 18 (18%) respondents.

#### 4) Access Vegetables

**Table 18:** Respondents' Responses About Access to Vegetables.

Access Vegetables	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Own Garden	15	15.00	12	12.00
Buy	84	84.00	66	66.00
Help from:				
1. Family	0	0.00	10	10.00
2. Others	0	0.00	8	8.00
3. Government	1	1.00	4	4.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 18, there was a decrease in respondents' responses about the source or access of vegetables through their own gardens from 15 (15%) to 12 (12%) respondents and purchases from 84 (84%) to 66 (66%) respondents and an increase in receiving assistance from "no" families to 10 (10%), others from "none" to 8 (8%) and from the government from 1 (1%) to 4 (4%) respondents.

## 5) Access Fruits

**Table 19:** Respondents' Responses About Access to Fruits.

Access Fruits	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Own Garden	10	10.00	7	7.00
Buy	88	88.00	65	65.00
Help from:				
1. Family	1	1.00	19	19.00
2. Others	1	1.00	8	8.00
3. Government	0	0.00	1	1.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 19, there was a decrease in respondents' responses about the source or access of fruit through their own gardens from 10 (10%) to 7 (7%) respondents and purchases from 88 (88%) to 65 (65%) respondents and an increase on receiving assistance from family from 1 (1%) to 19 (19%), others from 1 (1%) to 8 (8%) and from the government from "none" to 1 (1%) respondents .

## 6) Kitchen Seasoning Access

**Table 20:** Respondents' Responses About Access to Kitchen Spices.

Kitchen Seasoning Access	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Own Garden	3	3.00	8	8.00
Buy	96	96.00	67	67.00
Help from:				
1. Family	0	0.00	14	14.00
2. Others	1	1.00	5	5.00
3. Government	0	0.00	6	6.00
Total	100	100.00	100	100.00

Source: Primary data, 2020

Based on table 20, there was an increase in respondents' responses about the source or access of kitchen spices through their own gardens from 3 (3%) to 8 (8%) respondents and a decrease in purchases from 96 (96%) to 67 (67%) respondents and an increase in receiving assistance from families from "none" to 14 (14%), others from 1

(1%) to 5 (5%) and from the government from "none" to 6 (6%) respondent.

**a. Ease of Accessing Food**

**Table 21:** Respondents Response Regarding the Ease of Accessing Food During Covid-19.

Convenience	Before	Percentage (%)	During Covid-19	Percentage (%)
	Covid-19			
Easy	97	97.00	8	8.00
Not easy	3	3.00	92	92.00
Total	100	100.00	100	100.00

*Source: Primary data, 2020*

Based on table 21, there has been a change in respondents' responses about the ease of obtaining/accessing food during covid from previously 97 (97%) respondents said "easy" to 92 (92%) respondents said "not easy"

**b. Sources and Forms of Assistance During Covid-19**

**1). Sources and Forms of Assistance**

**Table 22:** Respondents' Responses Regarding Sources and Forms of Assistance During Covid-19.

Form	Government	Percentage (%)	Public	Percentage (%)
Money	1	1.00	3	3.00
Food material	64	64.00	59	59.00
Do not accept	35	35.00	39	39.00
Total	100	100.00	100	100.00

*Source: Primary data, 2020*

Based on table 22, the most sources of aid from the government are 65 (65%), while the most types of assistance are in the form of food ingredients, 64 (64%) respondents, but not much different from community sources as much as 61 (61%) and in the form of food a number of 58 (58%). Those who have not received assistance from the government are still 35 (35%) respondents.

**2). Source of Money Assistance**

**Table 23:** Respondents' Responses Regarding Sources of Financial Aid Based on the amount and duration of assistance during Covid-19.

Information	From Government	From Public
Amount of Money (Rp)	300,000	150,000 – 300,000
Long time to receive (month) once	1	1

Source: Primary data, 2020

Based on table 23, the type of cash assistance that comes from the government is only 1 (1%) respondent with an amount of Rp300,000 and only received one time. Meanwhile, there were 3 (3%) respondents who received cash assistance from the community with an amount ranging from Rp150,000-Rp300,000, and only 1 time a month.

#### 4. Discussion

1. Availability and Sufficiency of Food in Families Before and During the Covid-19 Policy Regarding PSBB is enforced. The World Health Organization (WHO) defines three main components of food security, namely food availability, food access, and food utilization. In Law No. 7 of 1996 concerning food, food security is defined as a condition for fulfilling food for every community which is reflected in the availability of sufficient food, both in quantity and quality, safe, equitable, affordable, and based on the diversity of local resources [13]. Based on the results of research from the World Food Organization (FAO), as many as 19.4 million Indonesians are estimated to be still alive experiencing hunger, the main causes are poverty and the scarcity of basic food stuffs [14]. Insani (2020), a lecturer of Food Technology at the Indonesia International Institute for Life Sciences, said the Covid-19 pandemic had a major impact on food security, as reported by world organizations such as the Food Agriculture Organization (FAO), the International Food Policy Research Institute (IFPRI) and the United Nations (UN), said that this pandemic could create a new food crisis that would affect the food security of a country, especially poor and developing countries. Indonesia is one of the developing countries that is not free from these problems. Food access problems that arise are generally influenced by inadequate community income, even just to buy basic food. Many people have lost their jobs due to COVID-19, contributing to the decline in food security so that people have to depend on food assistance from the government [15].

##### a. Food availability

Food availability is the ability to have a sufficient amount of food for basic needs. Food availability is related to food supply through production, distribution, and exchange [16]. The results of the study found that the availability of food in the family for all types of basic food such as rice, side dishes, vegetables, fruits and spices when compared to before the COVID-19 pandemic with the duration of the pandemic decreased. The availability of rice decreased by 25.75%, the availability of side dishes every day in the family of 49% decreased to 21%, daily availability of vegetables decreased from 86% to 39%, availability of fruits decreased from 27% to 11% and availability of kitchen spices from 63% to 24%. The availability of food in the family is

one indicator of determining nutritional status in the family. As a result of this decrease in the availability of food for the family, it will disrupt the fulfillment of the family's food needs and in turn will have an impact on the fulfillment of nutrition for each family member.

#### **b. Food Adequacy**

The family's nutritional intake must be fulfilled so that the family is always healthy. Starting from choosing food ingredients and food processing, everything must be clean and healthy. The body needs some nutritional intake according to needs, not too little and not too much. The results of the study based on respondents' responses, it was found that food adequacy in the family when compared before and during the COVID-19 pandemic, all types of staple food in the family decreased. The sufficiency of rice decreased from 75% to 25%, side dishes from 80% to 29%, vegetables from 96% to 34%, fruits from 66% to 34%, and spices from 91% to only 33%. Although the results of this study are only based on respondents' responses which only refer to the adequacy in each respondent's family, it can be used as an early indicator to immediately pay attention and find solutions so that the fulfillment of food sufficiency in the family does not last long as long as the COVID-19 PSBB policy continues.

#### **2. Diversity of Consumption of Family Food Types Before and During the Covid-19 Policy Regarding PSBB was implemented**

Food utilization is the ability to use food ingredients correctly and proportionately. The diversity of food consumption in the family is very important because the nutritional content of each type of food is different. In order for the daily nutritional needs of the body to be fulfilled, it is certainly necessary to consume foods that are processed from various types of food. The results of the study based on respondents' responses, it was found that the diversity of food every day in the family when compared before and during the COVID-19 pandemic, all types of staple food in the family decreased. Side dishes that change daily from 92% to 18%, vegetables from 96% to 23% and fruits from 82% to 16%. Based on the results of this study, it can be estimated that there will be nutritional problems in the family, especially micronutrients for each family member if the family continues not to consume various sources of nutrients every day.

#### **3. Access to Food and Forms of Assistance During Covid-19**

##### **a. Food Access**

Food access is the ability to have the resources, economically and physically, to obtain nutritious food. Food access is one indicator of food security, which is determined by the availability of food in an area and the purchasing power of the family so that food can enter the household. The results of the study showed that access to food in the family when compared before and during the covid-19 pandemic, all types of staple food in the family decreased. Purchases of rice decreased from 87% to 41%, additional types of rice from 77% to 44%, side dishes from 93% to 53%, vegetables 15% to 12%, fruits 88% to 65% and spices kitchen 96% to 67%. Although there was a decrease in purchases due to lack of income and the scarcity of food availability due to restrictions on leaving the house, there was an increase in other sources such as assistance from families, the government

and other communities.

#### **b. Ease of Accessing Food**

Based on respondents' responses that the ease of accessing food during the implementation of this PSBB policy compared to before the COVID-19 pandemic said that 97% was "easy" before the pandemic, but during the pandemic 92% said it was "difficult" to access food.

#### **c. Forms of Assistance and Sources of Assistance During Covid-19**

Based on the respondents' responses, the majority of aid sources came from the government, amounting to 65%, while the most types of assistance were in the form of food ingredients, amounting to 64% of respondents, and from the community as much as 61% in the form of foodstuffs amounting to 58%. There are still 35% of respondents who have not received assistance from the government. There are types of assistance in the form of money but are only given once with an amount of between IDR150,000 – IDR300,000. In connection with the results of this food access research, giving a warning to the government that one day there will be a disruption in the availability of food in the family if they do not pay attention to the purchasing power of the people when implementing the Covid-19 PSBB, this is reinforced by their opinion that during this pandemic they have difficulty getting food, although they have provided assistance, they have not met the needs of the family because the assistance provided is still too small and only once.

#### **4. Impact of Changes in Food Availability Before and During Covid-19**

According to Law Number 7 of 1996 concerning food, food security is a condition of meeting food needs for households as reflected in the availability of sufficient food, both in quantity and quality, safe, equitable, and affordable. So an area is said to be successful in developing food security if there is an increase in food production, smooth food distribution and consumption of safe and adequate nutrition for the entire community [17]. In order for food to reach households, the most influential factor is family income. If the income is sufficient, it is likely that food will reach the household, including affecting household consumption patterns. If income increases, consumption patterns will be more diverse, this can indirectly meet the nutritional elements needed by the body for each family member.

During this COVID-19 pandemic, all social, economic, political, and national security aspects have had a negative impact. The impact of social change such as not shaking hands, not hugging, not gathering like before. The impacts on the economy, such as the scarcity of resources and the need to stay at home to reduce transmission, have resulted in reduced income and even none at all. The political impact is in the form of policies related to the COVID-19 pandemic.

The impact on the family due to the existence of a large-scale restriction policy based on research results is very large. The results of the study related to the availability of food in the family during the implementation of the PSBB although it was only limited to time restrictions and stay at home showed a significant decrease. Lack of food availability in the family will affect the diversity of food consumption every day. This occurs as a result of

difficulties in accessing food due to a decrease in people's purchasing power. This decline in purchasing power occurred as a result of a decrease in the income of most families due to the limited space for community movement.

Although the household has received assistance from the government and other communities, it is still not sufficient for the family's food needs. In order to avoid nutritional problems at a higher level in society, the government must immediately take new steps in making policies that do not conflict with the fulfillment of food availability in the family.

## **5. Conclusion**

### **1. Availability of food in the family before and during the Covid-19 Pandemic:**

- a.** There was a decrease in the availability of rice as much as 700 Kg (25.75%);
- b.** There was a decrease in additional types of rice from 77% to 43%;
- c.** There is a decrease in the availability of side dishes every day from 49% to 21% of respondents;
- d.** There was a decrease in the availability of vegetables every day from 86% respondents to 39% respondents;
- e.** There is a decrease in the availability of fruits every day from 27% to 11% of respondents;
- f.** There is a decrease in the availability of kitchen spices every day from 63% to 24% of respondents.

### **2. Food Sufficiency in the family before and during the Pandemic Covid-19:**

- a.** There was a decrease in Sufficiency of Rice and the like from 75 to 27;;
- b.** There was a decrease in the adequacy of side dishes from 80% to 29%;
- c.** There was a decrease in the adequacy of vegetables from 96% to 34%;
- d.** There was a decrease in fruit adequacy from 66% to 34%;
- e.** There was a decrease in the adequacy of kitchen spices from 91% to 33% of respondents.

### **3. Diversity of Consumption of Family Food Types Before and During the implementation of the Covid-19 Policy on PSBB:**

- a.** There was a decrease in the types of side dishes eaten every day, from 92% of respondents who said "yes" to only 18% of respondents;
- b.** There was a decrease in the types of vegetables eaten every day, from 96% of respondents who said "yes" to only 23% of respondents;
- c.** There was a decrease in the types of fruits eaten every day, from 82% of respondents who said "yes" to only 16% of respondents.

### **4. Food Access:**

- a.** There was a decrease in the source or access of rice through purchases from 87% to 41% of

respondents and an increase in receiving assistance from the government from 10% to 30% of respondents;

- b. There was a decrease in sources or additional access to rice through purchases from 77% to 44% of respondents and an increase in receiving assistance from families from 4% to 19%;
- c. There was a decrease in sources or access to side dishes through purchases from 93% to 53% of respondents and an increase in receiving assistance from families from 1% to 19%;
- d. There was a decrease in sources or access to vegetables through purchases from 84% to 66% of respondents and an increase in receiving assistance from "non-existent" families to 10%;
- e. There was a decrease in sources or access to fruit through purchases from 88% to 65% of respondents and an increase in receiving assistance from families from 1% to 19%;
- f. There was a decrease in sources or access to kitchen spices through purchases from 96% to 67% of respondents and an increase in receiving assistance from families from "none" to 14%;
- g. There has been a change in the ease of obtaining/accessing food during Covid-19 from previously 97 (97%) respondents said "easy" to 92 (92%) respondents said "not easy";
- h. The most sources of assistance from the government amounted to 65% while the most type of assistance was in the form of food ingredients by 64% of respondents, but not much different from those from the community as much as 61% and in the form of foodstuffs as many as 58%. Those who have not received assistance from the government are still 35% of respondents;
- i. The type of financial assistance that comes from the government is only 1% of respondents and from the community there are 3% of respondents with a total range between IDR150,000-IDR300,000.

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