



Child Malnutrition and Family Food Security in the COVID-19 Pandemic

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Abstract: *At the beginning of 2020 the world was shocked by a disease that caused death with such easy transmission, namely through the respiratory tract. This disease is caused by a virus called corona. Corona virus is a new type of virus that has now shocked the world community. The problem is that this virus has managed to infect thousands of millions of people globally in a very short time, even humans who do not show symptoms of being infected with the corona virus can also spread it to other humans. In Indonesia itself, the total number of cases caused by the COVID-19 virus is increasing, so the government is trying to contain the spread of the COVID-19 virus. One of the ways that the government has taken to deal with the COVID-19 virus is by implementing large-scale social restrictions (PSBB). People's lives have changed since the implementation of Large-Scale Social Restrictions by the Government. These changes are felt in various fields of the economy, namely income, employment, expenditure and purchasing systems made by the community. As a result, many people cannot work and their income decreases, especially to meet food needs which can cause nutritional imbalances in the community. Expenditure and purchasing systems carried out by the community. As a result, many people cannot work and their income decreases, especially to meet food needs which can cause nutritional imbalances in the community. Expenditure and purchasing systems carried out by the community. As a result, many people cannot work and their income decreases, especially to meet food needs which can cause nutritional imbalances in the community.*

Keywords: *malnutrition; food security; COVID-19*

I. Introduction

The Corona Virus Disease 2019 (COVID-19) pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, has affected the entire world impacting all aspects. Currently, COVID-19 is one of the main causes of death with a prevalence rate exceeding diabetes and other non-communicable diseases (Martha, 2021). One aspect that has an impact on the COVID-19 pandemic is the economic aspect, especially in terms of food security. The current COVID-19 pandemic threatens the nutrition and food conditions of millions of people and many of whom are already suffering, the escalating pandemic causing hunger and malnutrition problems globally. Previously conditions of social, economic and political inequality had also existed, but these conditions worsened by the COVID-19 pandemic. In addition, this condition shows that economic downturns, food imbalances and disruption of routine nutrition programs can increase the prevalence of very underweight children by 10-50% with an increase in child mortality (Renuka, 2021).

One of the ways that the government has taken to deal with the COVID-19 pandemic is to implement PSBB (Large-Scale Social Restrictions). Restrictions on movement and activity with the aim of controlling the spread of the pandemic also greatly affect people's

work, this results in food insecurity and increased vulnerability to malnutrition (Renuka, 2021).

Toddlers and children are age groups that are at high risk of various health problems, especially nutritional problems. Toddlers and children need adequate nutritional intake to meet nutritional needs for growth and development. If nutritional intake is inadequate, toddlers and children will cause nutritional problems. Nutritional problems experienced by toddlers and children are caused by various factors such as lack of nutritional fulfillment due to diet, eating habits that are applied and caused by infection. In a pandemic, this COVID-19 greatly affects the family's economic situation, especially in terms of food security, so that unbalanced food intake and inadequate needs can cause toddlers and children to experience malnutrition.

II. Review of Literatures

The first time the Novel Pneumonia Coronavirus Outbreak in Wuhan, Hubei Province, COVID-19 spread, these cases (officially named COVID-19) and have been reported to have also spread outside Wuhan. This new virus is highly contagious and has spread rapidly globally. In a meeting on 30 January 2020, in accordance with International Health Regulations (IHR, 2005), the outbreak was declared by WHO as a Public Health Emergency of International Concern (PHEIC) because it has spread to 18 countries with four countries reporting transmission to humans. An additional event occurred on February 26, 2020, when the first case of the disease not imported from China, was recorded in the United States. Initially, the new virus was called 2019-nCoV. Furthermore, Indonesia is one of 216 countries with confirmed cases of COVID-19. The first case of COVID-19 appeared in Indonesia on March 2, 2020 and until October 14, 2020 the number of confirmed victims was 344,749 267,851 people recovered and 12,156 people died. One of the reasons for the increase in COVID-19 cases in the community is the rapid and widespread spread of this virus to all regions in Indonesia. The wide spread of COVID-19 has had many impacts on the community and especially the COVID-19 patients themselves. One of the impacts is loss of life, economic decline, constraints on educational and social activities. This virus not only affects the physical condition but also the mental health and quality of life of the patient (Tim Kerja Kementrian Dalam Negeri, 2020).

This extraordinary event by the Coronavirus is not the first time. In 2002 severe acute respiratory syndrome (SARS) was caused by SARS-coronavirus (SARS-CoV) and Middle East respiratory syndrome (MERS) in 2012 was caused by MERS-Coronavirus (MERS-CoV) with an cumulative total of around 10,000 cases (1000s). MERS cases and 8000 SARS cases). Mortality due to SARS is around 10% while MERS is higher at around 40%. COVID-19 is a genus of coronavirus and has different genetic characteristics from SARSr-CoV and MERSr-CoV (Susilo, 2020).

Coronavirus is sensitive to ultraviolet light and heat, and can be effectively inactivated when the ambient temperature is 56°C for 30 minutes, fat solvents such as ether, 75% ethanol, disinfectants containing chlorine, pyroxyacetic acid and chloroform except chlorhexidine. Based on current epidemiological investigations, the incubation period for COVID-19 is 1-14 days, and generally within 3 to 7 days. Currently, the main source of infection is COVID-19 patients and asymptomatic carriers of COVID-19 can also be a source of infection. The main transmission routes are respiratory droplets and close contact, while aerosol and fecal-oral transmission routes have not been verified. One of the characteristics of the Covid-19 disease is that it is easily contagious, so it can quickly infect many people.

Sihombing (2020) state that Covid-19 pandemic caused everyone to behave beyond normal limits as usual. The outbreak of this virus has an impact especially on the economy of a nation and Globally (Ningrum, 2020). The problems posed by the Covid-19 pandemic which have become a global problem have the potential to trigger a new social order or reconstruction (Bara, 2021).

The way to control COVID-19 is to reduce risk, know the right information, and know what to do if you are sick. Governments in various countries have taken the necessary measures to reduce the spread of COVID-19. The measures are adjusted to the number of cases in the area. Some impose work holidays, cancel large gatherings, travel restrictions and others. Indonesia has also taken a number of measures to reduce the spread (Tim Kerja Kementrian Dalam Negeri, 2020).

Physical activity and the application of balanced nutrition principles during the Covid-19 pandemic are likely to experience changes due to the Covid-19 pandemic which requires everyone to work and study from home. As a result, many people are unable to do their jobs properly, resulting in an impact on health, economy, and work (Nurmidin, 2020).

III. Discussion

3.1 The Condition of Malnutrition before the Pandemic

Malnutrition in all its forms, including low nutrition (wasting, stunting, underweight), inadequate minerals or vitamins, overweight, obesity, and leading to diet-related non-communicable diseases. Malnutrition is the main cause of malnutrition in the world, especially infants, children, adolescents, and the elderly, increasing susceptibility to infection. Low nutritional status is a concern for low-income countries, facing a “double burden of malnutrition” such as child malnutrition (generally characterized by impaired growth and/or micronutrient deficiency) and overnutrition (overweight/obesity), affecting all levels of the population (Country, community, family, and individual) (Jayatissa, 2021).

Indonesia was a prime example of the “triple burden of malnutrition” even before the COVID-19 pandemic. More than 7 million children under 5 years of age suffer from stunting, placing Indonesia in the 5th highest ranking in the world for stunting in children. More than 2 million children under 5 years suffer from severe wasting (low weight for height), and 2 million children are overweight or obese. Almost half of pregnant women experience anemia because the food they consume is lacking in vitamins and minerals (micronutrients) (UNICEF, 2020).

3.2 The Condition of Malnutrition during the Pandemic

The COVID-19 pandemic threatens the nutrition and food security of millions of people, who have previously suffered. This pandemic is exacerbating global hunger and malnutrition problems. Previously existing social, economic and political imbalances have been exposed and exacerbated by the COVID-19 pandemic. Several attempts to respond to COVID-19, such as contact tracing, self-isolation, social distancing, and community lockdowns have resulted in poor diets and physical inactivity. There is great concern around the world as to where COVID-19 is having a negative impact on the nutritional status of children and women and whether it will only get worse over time. Economic decline, food security, and disruption of routine nutrition programs can increase the prevalence of wasting by 10-50% with increased child mortality (Jayatissa, 2021).

Increased concerns about the risk of increasing childhood obesity, especially in middle and high-income countries with the risk of turning into an "obesity pandemic"

when malnutrition is expected to occur in poor countries can threaten the process of stopping the world's preventable child deaths. Low-income countries experience problems of underweight and overweight, low nutrition is expected to increase by 6 million by 2020, especially in areas experiencing humanitarian crises, adding 47 million children under 5 years who are affected by wasting, and 144 million children who are stunted generally in Asia and Africa. More than 10,000 child deaths each month are expected to occur during this time. Social and opinion inequality in rich and poor countries is a major risk factor (Zemrani, 2021).

Indonesia is experiencing obstacles due to the triple burden which may worsen due to the COVID-19 pandemic. Malnutrition among children results from several causes (direct, underlying, underlying causes). The three most common direct causes are: (i) Poor diet and inadequate breast milk, followed by suboptimal care; (ii) inadequate nutrition and care for pregnant women and mothers; and (iii) high rates of infectious diseases, due to an unhealthy living environment and lack of access to health services. These factors are combined with poverty, unemployment, and low levels of education (UNICEF, 2020).

United Nations International Children's Emergency Fund (UNICEF) estimates that the number of children under 5 years old experienced an increase in the incidence of wasting in the world reaching 15% this year due to COVID-19. This means that there is an increased risk of wasting, a condition characterized by low body weight for height, in Indonesia itself, many families have lost their jobs and are unable to provide nutritious food for their children (UNICEF, 2020).

Children with wasting have a weaker immune system and are 12 times more likely to die than children with good nutrition, especially if the wasting is severe. Wasting can be prevented and treated, whereas stunting is generally reversible, and can only be prevented (UNICEF, 2020).

3.3 Factors that Affect the Condition of Malnutrition during the Pandemic

In Indonesia the incidence of malnutrition among children is caused by several causes (direct, underlying, basic causes). The three most common direct causes are: (i) Poor diet and inadequate breast milk, followed by suboptimal care; (ii) inadequate nutrition and care for pregnant women and mothers; and (iii) high rates of infectious diseases, due to an unhealthy living environment and lack of access to health services. These factors are combined with poverty, unemployment, and low levels of education (UNICEF, 2020).

During a pandemic, families and children who fall into poverty in a short time will experience severe impacts in terms of household food security and limitations related to access, availability, and affordability of healthy food ingredients. Loss of family income is one of the factors that increases the risk of children being micro-nourished and underweight and malnourished. Household food insecurity coupled with gender inequality in terms of food distribution in the household has the potential to increase maternal malnutrition, especially anemia and maternal underweight. As a result, malnutrition in mothers (especially those who are breastfeeding) can lead to various forms of malnutrition in children.

Other factors that cause malnutrition during a pandemic are low awareness of the fulfillment of balanced nutrition, lack of availability of clean water, increased urbanization rates, occurrence of natural disasters, and others (Litha, 2020).

IV. Conclusion

Solutions in Several Countries

Some problem points and solutions in several countries that can be used include:

1. Food insecurity and poor nutritional quality

The occurrence of a decrease in food supply, increased costs due to production and delivery restrictions, hoarding of food, loss of household income leading to food shortages, low agricultural productivity, disruption of the export-import system, increased intake of processed and unhealthy packaged foods (because they are cheaper and cheaper to eat). easily accessible) (Fernando, 2020).

The solution in Africa is to implement the Sustainable Development Goals and strengthen local and global food systems by supporting local production, small-scale producer communities and small farms in low- and middle-income countries. Africa has provided facilities and provided support to small-scale producer communities such as ranchers, fishermen, farmers. As a result, small-scale farmers in Africa produce 72% of food animals (Fernando, 2020).

In the Kyrgyz Republic the solution offered is agrarian reform. While Ethiopia uses a productive safety net program to provide assistance to 15 million people who are considered vulnerable to food insecurity (Akseer, 2020).

2. Decreased Income and Limited Financial Resources

The pandemic has drastically increased poverty rates. Many families fall into the category of poor, even in the category of chronic poverty. Tax relief can help ease the family's financial burden.

Learning from the Republic of Kyrgyzstan and Peru: using a model based on monthly financial incentives for marginalized and vulnerable populations with effective disbursement (data management based). Money is used for basic education, health and nutrition services for children (Akseer, 2020).

3. Limited Health Care and Services

The increasingly limited health system results in health problems and an increased risk of malnutrition for mothers and children. In addition, the decrease in family planning visits resulted in unwanted births (increasing children born with low birth weight/LBW, premature babies).

The solution that can be done is to send trained health volunteers to the field so that they can reach all areas. Volunteers are assigned to provide vaccines, nutritional supplements, health and nutrition education, as well as reproductive, maternal and newborn care (Akseer, 2020).

4. Unhealthy Household Environment

Safe buildings, clean water, good sanitation, and environmental hygiene really need interventions to protect health, prevent malnutrition and the spread of COVID-19 infection. Anticipation that can be done is to ensure sanitation infrastructure and environmental cleanliness (Akseer, 2020).

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