



The Role of Women in Facing the Covid-19 Outbreaks in the Volcanic-Foot Plain Village of Yogyakarta, Indonesia

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Abstract. This study examines the role of women in dealing with the Covid-19 pandemic including: (1) women's socio-economic conditions, (2) women's efforts in maintaining household income sources during the pandemic, and (3) knowing women's efforts to find alternative socio-economic activities in Indonesia. Pandemic period. This study uses a quantitative descriptive method with a female population who are married. 60 female samples were taken from the research area in Girikerto Village which included 30 samples from hamlets with limited accessibility and another 30 samples from easy accessibility areas. The results showed that: (1) there were variations in the socio-economic conditions of women during the COVID-19 pandemic between the two hamlets with different levels of accessibility. (2) these various efforts are made to maintain sources of income during the pandemic. Women in areas with easy accessibility do alternative businesses by selling small businesses, while in areas with accessibility it is difficult to do business by working odd jobs. (3) Social and economic activities experience many obstacles, especially in areas with good accessibility. Activity restrictions affect gotong-royong, community service, and religious activities.

Keywords: Women · Socio-Economic · Covid-19 Pandemic

1 Introduction

The world was shocked by the events that disrupted the global order in 2019 when the Covid 19 pandemic outbreak hit. The Covid 19 pandemic has also hit Indonesia and the whole world since the end of 2019 until now 2021 has not ended. At the beginning of January 2021, Indonesia recorded that those infected had reached ten thousand with a death rate of 200 per day. The high infection rate and the duration of the pandemic have affected the socio-economic conditions of the entire community.

The weight of the socio-economic burden during the pandemic is felt by all the inhabitants of the earth, including women. Most women who work in the informal

economy do not get social protection and are at high risk of becoming victims of poverty. They have to face severe challenges not only health problems but economic and livelihood difficulties in the post-covid-19 pandemic period [1]. The declining level of health, economic conditions, difficulties in obtaining a decent income have become a heavy burden for women. Women have to struggle to meet the food needs of their families and are faced with difficulties in finding sources of livelihood.

The COVID-19 pandemic has become the fastest-moving global public health crisis in a century, causing significant mortality and morbidity and posing daunting health and socioeconomic challenges. The government has had to take unprecedented steps to limit the spread of the virus, while health and social systems to cope with the growing caseload are still stuttering, accompanied by supply chain bottlenecks, movement restrictions, and economic stress. In humanitarian and vulnerable situations especially in low-income countries, where these systems are already weak, the pandemic disrupts access to life-saving sexual and reproductive health services, this exacerbates existing gender and social inequalities [2].

The crisis limits the global food supply, the economic demands to increase domestic production are increasingly difficult, and the pressure on women increases. Life is no longer safe, making it difficult for anyone, especially vulnerable groups, vulnerable groups including women. Increasing cases of exploitation by men in getting jobs and getting credit services especially in developing countries like Pakistan. In these developing countries, women are culturally restricted from harvesting on their farms. In the case of restrictions on field workers, more participation is demanded from women and girls, while both groups are already burdened with household work. In addition, natural selection due to covid will restrict women from accessing local markets to sell agricultural products, which will further worsen their economic conditions [1].

In Indonesia, the economic difficulties during the pandemic have been felt until now. Difficulties in finding sources of income, low consumption, loss of job opportunities, deteriorating public health have become problems that people have to face day to day since the outbreak of Covid 19. Research in India in early 2020, the unprecedented nature of COVID-19 prompted India, among many other countries, to take decisive action to stem the spread of the virus and the cost of human life. Telephone-based survey of disruptions to agricultural production and food security, conducted with 1515 smallholder producers in the states of Haryana and Odisha. There was substantial heterogeneity in how the lockdowns affected farmers in these two states, possibly related to existing structural differences in market infrastructure and differences in state-specific COVID-related policies. As consumers, farmers in Haryana face more disruption than in Odisha, due to reduced food availability in markets, whereas farmers in Odisha benefit from more diverse cropping patterns and increased local food supply after transport restrictions [3].

Indonesia has never implemented a lockdown, but PSBB has been implemented since March 2020 in several areas. Currently, the PSBB is being implemented in Java and Bali from January 11–25, 2020, meaning that it has been almost a year since the pandemic has shown no signs of improving. The COVID-19 pandemic has changed the socio-economic structure of society. When the socio-economic order changes, women are the most vulnerable group to be affected by these impacts. The fulfillment of household needs is disrupted forcing women to be involved in economic activities to earn income to

meet their needs. Sleman Regency is one of the districts with high Covid 19 infections in Yogyakarta Special Province. The research location is one of the Sub-district in Sleman Regency. Based on this background, researchers are interested in researching the topic of women in dealing with the Covid 19 pandemic.

2 Method

A. *Data Collection and Data Analysis*

This research was conducted in Girikerto Village, located at the foot of the Merapi Volcano in Sleman Regency, Yogyakarta Special Province, Indonesia. Samples were taken in two hamlets. One hamlet represents an area with good accessibility and the other hamlet represents an area with poor accessibility. Data were taken in the form of quantitative and qualitative data in the form of primary and secondary data. Primary data on rural potential includes data on the poor and rural areas. Meanwhile, secondary data was obtained from various related institutions from the hamlet to the national level as a reference for describing the physical and non-physical potential possessed by the village.

Data were collected by observation, interviews, and literature study. Data about the poor and the potential of the area was obtained in the form of primary data obtained through direct observation and interviews in the field with interview instruments and guidelines that had been prepared previously for community leaders. Secondary data is obtained by reviewing data information from various related institutions. Research data analysis is divided into quantitative data analysis and qualitative data analysis. Descriptive quantitative data analysis is used to analyze primary data and secondary data related to demographic variables including age, livelihood, education, land tenure, income, and utilization of transportation, communication, and health facilities.

B. *The Study Area*

This research was conducted in Girikerto Village, Turi Sub-district which is part of Sleman Regency, Yogyakarta Special Province, Indonesia. The area of the Girikerto Village is 13.07 km² or 30% of the total area of Turi Sub-district. Girikerto sub-district is physiographically located at the foot of the volcano to the plain of the foot of the Merapi volcano. Data from the Central Bureau of Statistics of Sleman Regency [4] shows that the Girikerto Village in 2018 was occupied by a population of 9,475 people or 27.5% of the population of Turi Sub-district. Although it is occupied by a large number of people, due to the large area, the population density is relatively low.

Girikerto sub-district is divided into 13 hamlets, namely Ngandong, Ngaggring, Kloposawit, Kemirikebo, Sukorejo, Pancoh, Nangsri, Bangunmulyo, Babadan, Glagahombo, Daleman, Surodadi, and Karanggawang. The monograph data of Girikerto Village in February 2021 shows that the highest number of family heads is in Hamlets Nangsri while the least family heads are in Hamlets Glagahombo (Table 1). Hamlets Ngandong is located at the northernmost or the top morphologically, while Hamlets Karanggawang is located at the southernmost or lowest morphologically. The distribution of hamlets in the Girikerto sub-district is shown in Fig. 1.

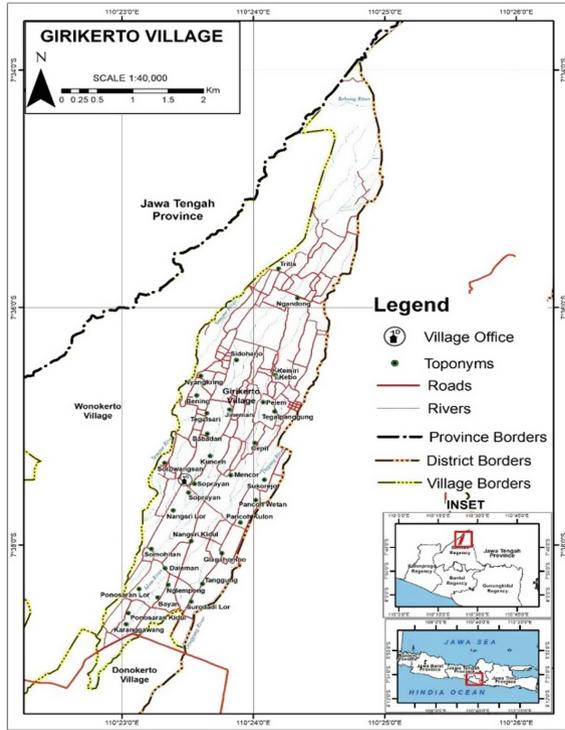


Fig. 1. Map of the research area

Table 1. NUMBER OF HEADS OF FAMILIES IN GIRIKERTO VILLAGE

No	Hamlets	Number of Family Heads
1	Ngandong	316
2	Nganggring	291
3	Kloposawit	181
4	Kemirikebo	256
5	Sukorejo	214
6	Pancoh	173
7	Nangsri	206
8	Bangunmulyo	171
9	Babadan	296
10	Glagahombo	100
11	Daleman	171
12	Surodadi	196
13	Karangawang	179

This research was conducted in two Hamlets namely Ngandong and Karanggawang. Ngandong represents areas with difficult accessibility while Karanggawang represents areas with easy accessibility. Ngandong is occupied by 316 heads of families. Land use in Ngandong is dominated by mixed gardens. The distance from the Girikerto Village Headquarters to Ngandong is 4.8 km. Meanwhile, the distance from the Turi Sub-district office is 9.8 km. Karanggawang is occupied by 179 heads of families. The land use in this hamlet is dominated by settlements with the little moor. The distance from the Girikerto Village Office to Karanggawang is 3 km, while the distance from the Turi Sub-district Office is 1.5 km.

3 Results

A. *Women's Socio-Economic Conditions During the COVID-19 Pandemic*

The results of the studies that have been carried out show that there are variations in the socio-economic conditions of women during the COVID-19 pandemic. Concerning food sufficiency, this problem has generally occurred within the last year during the COVID-19 pandemic. This problem occurs quite a lot in Ngandong but less in Karanggawang. In the aspect of worrying about running out of food and not having money to buy it, most women feel worried. Women as housewives sometimes worry that the family's food will run out while they don't have the money to buy it. Interestingly, concerns about food shortages during the pandemic are more common in Karanggawang, which has better accessibility. Women in Ngandong also feel worried because of accessibility constraints. However, this concern has been slightly resolved because it is still possible to utilize natural products, even though it is only in the form of tubers and other crops. Karanggawang, which has easy accessibility and is close to the market, actually benefits from meeting food needs. However, because the people in this hamlet do not have much agricultural land, they generally only rely on their income from their work to meet their daily needs. Even though people's incomes decreased during the pandemic.

In terms of the lack of money when running out of food during the COVID-19 pandemic, this study has an interesting finding. In general, in the Girikerto sub-district, half of the women stated that they never had money when they ran out of food. Interesting findings were obtained when doing a comparison between Ngandong and Karanggawang. Incidents of not having money are more common in Ngandong than in Karanggawang. This condition is probably related to the respondent's type of work, where women in Ngandong who work as farmers do not have a fixed monthly income so it is possible that they do not have money when they run out of food. Having money affects the ability to provide food for the family. The findings of this study also show that the availability of a small budget for eating well, not providing balanced food for children, and undernourished children, is relevant to having money to buy food.

Other findings show that the food needs of children in the family are an important matter of concern, especially for a mother. Women in the research area have never been unable to provide balanced food for their children. Generally, they always put their children's needs first, including food needs. Some women who are not

able to provide balanced food for their children usually only provide minimal food. This happened based on various factors, such as declining income, crop failure, and faced with various needs. A decrease in the quality of the food provided may occur. However, no family members, especially children, have their food rations reduced. During the COVID-19 pandemic in the past year, there has never been a child who has not eaten regularly, a child has suffered from hunger, and a child has not eaten for a day due to not having money to buy food.

Other problems caused by the COVID-19 pandemic besides food needs are the need for clothing, education, health, and other urgent needs. Meeting the needs of clothing during the pandemic is not very important, even during the holidays. Educational needs are increasing during the COVID-19 pandemic when learning must be carried out from home. Children need learning facilities in the form of stationery, smartphones/laptops, internet quota, and other needs. Various other problems also arise related to efforts to provide educational facilities for children, such as broken smartphones and the absence of an internet network. The various educational needs and problems of children are the responsibility of parents to continue to provide the best. Thus the education of children remains a priority.

B. *Women's Efforts to Maintain the Household Economy during a Pandemic*

The COVID-19 pandemic has generally resulted in a decline in income. Many necessities of life must be met, both food, clothing, children's education, and other needs. In this situation, there are several efforts made by women to maintain the household economy. All women in the study area at a certain time may experience difficulties in meeting the needs of food, clothing, education, health, and other urgent needs. This condition occurs when faced with many needs. All women have strategies in dealing with these situations, especially in meeting subsistence needs. The strategies of women in the research area include utilizing social relations, utilizing family relationships, selling valuable goods, and other strategies.

The most widely used strategy in Ngandong is to take advantage of social relations and take advantage of family relations. The next strategy is to sell valuables. Meanwhile, in Karanggawang the most common strategy is to use social relations, then sell valuables, take advantage of family relationships, and other strategies. Conditions that are not much different are found in meeting food needs. From various respondents received various kinds of assistance, among others in the form of money, goods, and necessities.

The implementation of women's strategies in maintaining the household economy during the pandemic turned out to provide benefits in the form of obtaining various types of assistance. In both hamlets, both Ngandong and Karanggawang, the most common type of assistance received was cash. Compared to various types of goods and necessities, cash is indeed easier to give, especially if the strategy applied is to sell valuable goods. Interesting findings were found in Karanggawang. This area has easy accessibility with the socio-economic characteristics of a more diverse community, but it turns out that assistance in the form of necessities has been received quite a lot. Women are trying to get help because it is based on a very urgent need during this pandemic.

Various alternative efforts were also made by women to maintain the household economy during the COVID-19 pandemic. This alternative effort is carried

out to help husbands in obtaining additional income. Various objectives become the basis for carrying out this alternative effort, among others, to meet: (1) food needs, nutritional intake, and calories, (2) clothing needs, (3) educational needs, (4) health needs, (5) urgent, and (6) social needs. Among women who make alternative efforts, the form of effort that is mostly done in Ngandong is odd jobs, while in Karanggawang is selling small businesses.

The number of women who do this alternative business is relatively small when compared to women who do not do business and only rely on their husband's income. In both hamlets, women who do not do alternative businesses are above 80% (Table 2). These various types of alternative businesses apply to meet all needs ranging from food, clothing, education, health, social, to urgent needs. There were no specific strategies used by women in all study areas to address specific needs.

In terms of tightening their belts to reduce spending during the COVID-19 Pandemic, the efforts made by some women in Ngandong and Karanggawang are to consume foods of lower quality (45%). This number is still lower compared to women who did not apply the belt-tightening strategy, which was 55%. Meanwhile, another strategy by fasting and reducing the intensity of eating so that it is less than 3 times a day, is not carried out in both hamlets. This strategy by consuming lower quality food is a solution so that you can still eat 3 times a day as in normal times. Meanwhile, the strategy of tightening the belt by fasting does not seem to be commonly practiced by people in the research area. Fasting is seen as a religious ritual instead of getting double benefits for saving expenses.

- C. *Women's Efforts to Find Alternative Socio-Economic Activities during the Pandemic*
The COVID-19 pandemic that has been felt in the past year has had a considerable impact on the household economy. Women in the research area have made various efforts to deal with this situation. In addition to making efforts to maintain the household economy, women are also trying to find alternative socio-economic activities during the pandemic. Many alternatives for socio-economic activities in Ngandong and Karanggawang continue to be sought to continue normal life during the pandemic.

Social activities such as cooperation, community service, visiting sick neighbors, helping neighbors/relatives who are in trouble, collecting funds for neighbors/relatives who are affected by the disaster, as well as religious activities, continue as usual although in different ways. Ngandong has not faced any difficulties in carrying out cooperation activities during the COVID-19 pandemic. The limited accessibility and mobility of people outside the area make this area feel more normal and fine even though it is in a pandemic situation. Community service activities to clean the environment also did not experience any problems. Different conditions are found in Karanggawang. In this area, gotong-royong activities were stopped due to the pandemic and only started to be reactivated in the last months before this research was carried out. In addition to cooperation activities, community service activities were also delayed due to the pandemic. This is inseparable from the higher risk of COVID-19. To limit the crowd of residents, community service activities are carried out with a rotating system between RT. Women take part in this activity by doing community service in their respective yards.

Social activities in the form of visiting sick neighbors and helping neighbors affected by the disaster were difficult to carry out in both hamlets. This is inseparable from the health procedure policies implemented during the COVID-19 pandemic, where interactions with patients are strictly limited. In visiting a sick neighbor, there is a difference between Ngandong and Karanggawang. In Ngandong, the community will first check the status of sick neighbors, while in Karanggawang a stricter provision is applied, namely, only representatives of residents are allowed to visit. Meanwhile, to assist sick neighbors, most respondents overcome this by making contributions or using the RT's health fund and handed over by one of the residents' representatives. Residents or representatives of residents who visit sick neighbors/relatives still comply with health protocols. In addition, if the sick neighbor has no clear illness or is hospitalized, the respondent usually postpones or cancels activities to visit him.

The implementation of religious activities encountered obstacles in both hamlets. Efforts are being made to overcome this, namely to follow the government's advice by praying at home. When the spread of the pandemic began to subside and the COVID-19 pandemic alert status was lowered, religious activities had begun to be carried out again. Efforts to find alternatives are also carried out for activities related to the economy. This is inseparable from the difficulties in economic activities during the COVID-19 pandemic which was felt in the agriculture, trade, livestock, and labor sectors. The agricultural sector in both hamlets is experiencing difficulties because the prices of agricultural products are not in line with expectations.

In facing the situation of difficulties in economic activities during the COVID-19 pandemic, some farmers did not make any efforts and just resigned themselves to the situation. The sales effort from the collectors is to sell only to local areas and not to distribute outside the region. This agricultural difficulty is only felt by 3.3% of women in Karanggawang because the number of farmers and agricultural land in this area tends to be small. Meanwhile, in Ngandong, 16.7% of women experienced agricultural difficulties.

The trading sector is experiencing the impact of the pandemic as indicated by a decrease in the number of buyers. However, no efforts were made to restore their economic activity. Some of those who did not experience a decrease in the number of buyers were wholesalers, so the effects of the pandemic were not too felt on the decline in the number of buyers. There are 13.3% of women in both Ngandong and Karanggawang who experience this difficulty. The livestock sector is also experiencing difficulties, where the high price of animal feed makes farmers have to look for grass further up the slopes of Merapi to add the animal feed. Some workers who work in milk processing factories had to stop working at the beginning of the pandemic as a result of forced production activities to stop. This condition has not yet been resolved. Different conditions occur for farmworkers who are still able to work as usual despite the COVID-19 pandemic situation.

Table 2. NUMBER OF HEADS OF FAMILIES IN GIRIKERTO VILLAGE

Research Area	Alternative work done (%)			
	Small bussiness	odd job	Working out of the village	Other
Ngandong	3.3	10.0	3.3	83.3
Karanggawang	10.0	0.0	3.3	86.7
Girikerto	13.3	10.0	6.7	70.0

^a Source: Research results (2021). Number of respondents (n): Ngandong = 30, Karanggawang = 30, Girikerto = 60

4 Discussion

The COVID-19 pandemic has had a major social impact on the global community, including women as members of society. The results of this study indicate that women have to make a lot of efforts to help maintain the family economy and meet the proper needs of children during the pandemic. This condition occurs in women who work as farmers and traders with irregular incomes and tend to experience a decline due to the pandemic. The findings of this study are relevant to the statement of Malik and Naeem [1], that most women who work in the informal economy do not get social protection, so they are at high risk of becoming victims of poverty. During the pandemic, women have to face severe health challenges as well as economic and livelihood difficulties.

Malik and Naeem [1] further explain that in developing countries such as Pakistan there is an increasing number of cases of exploitation by men in getting jobs and obtaining credit services. Women in developing countries whose people make a living as farmers are bound by culture to help harvest on their land. There is participation from women in agriculture even though they are already burdened with household work. The COVID-19 pandemic has also restricted women from accessing local markets to sell agricultural products, exacerbating economic conditions. The same situation as the results of this study in Pakistan was also found in studies at the foot plain of the Merapi volcano, particularly in the Ngandong hamlet. As fellow developing countries, women here are also involved in helping to manage agricultural land. Accessibility barriers also complicate efforts to improve economic conditions during the pandemic.

The findings of this study are also relevant to the findings of a study from Ceballos et al. [3] in India. In this study, a comparison is made between the conditions of small farmers in the states of Haryana and Odisha. Farmers in Haryana are facing more disruption due to the pandemic than farmers in Odisha. Many disturbances occur because of the reduced availability of food in the market. Farmers in Odisha benefit from more diverse cropping patterns and increased local food supplies during times of transport restrictions. This situation is similar to what we found in Karanggawang and Ngandong. Karanggawang is a hamlet with easy accessibility, the availability of food is very dependent on market conditions. On the other hand, limited agricultural land and more varied types of livelihoods have also caused this hamlet's low ability to provide its food during the pandemic. Ngandong Hamlet, which is hampered by accessibility and topography,

turns out to have a good ability to provide its food ingredients due to difficult accessibility and increasingly limited due to the pandemic.

5 Conclusion

The socio-economic conditions of women during the COVID-19 pandemic turned out to be quite diverse. Women who live in villages also have conditions that vary between regions with easy and difficult accessibility. Sufficiency of food and possession of money to buy food during a pandemic are problems that are a common concern for women during a pandemic. However, women in areas with difficult accessibility, difficult terrain, and areas that tend to be isolated have a lower level of concern due to the availability of alternative foodstuffs from agricultural land in the region. Even though there are concerns about running out of food and experiencing problems with having money to buy food, women always prioritize the needs of their children.

The various difficulties faced during the COVID-19 pandemic prompted women to make various efforts to maintain the family economy. These various efforts are made to assist husbands in earning income, among others by utilizing social relations, family relations, and selling valuable goods. Women in areas with easy accessibility do alternative businesses by selling small businesses, while in areas with accessibility it is difficult to do business by working odd jobs. However, the number of women with alternative businesses is not more than those who do not have alternative businesses. Areas with good accessibility experience more socio-economic constraints during the pandemic due to the implementation of strict health procedures. Among the various social activities, the most difficult to do during the pandemic is visiting sick people. However, social activities to help others who have experienced disasters have never been constrained.

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