

The Roles of Women in Food Security in South Merapi Slope Villages

Hastuti¹, & Edi Widodo²

¹ Department of Geography Education, Yogyakarta State University, Karang Malang Campus, Yogyakarta, Indonesia

² Geography Education Master Program, Yogyakarta State University, Indonesia

Correspondence: Hastuti, Department of Geography Education, Yogyakarta State University, Karang Malang Campus, Yogyakarta, Indonesia. E-mail: hastuti@uny.ac.id

Received: December 27, 2019

Accepted: July 23, 2020

Online Published: August 31, 2020

doi:10.5539/ass.v16n9p1

URL: <https://doi.org/10.5539/ass.v16n9p1>

Abstract

Economic conditions and poverty in rural areas have become problems in meeting the needs of food as the most basic needs/need. This problem can lead to food insecurity. This research aims to: (1) examine the characteristics of women; (2) study the obstacles faced by women in achieving food security; and (3) investigate women's efforts to achieve food security. The data were analyzed using quantitative descriptive technique by means of frequency tables. The livelihood diversification in Jetis Suruh was more visible than that in Bulus Lor. The fulfillment of individual food needs was related to economic, social, and cultural conditions. The year-round food needs of both villages indicated the need for food throughout the year. The need for food throughout the year in Bulus Lor was relatively better than that in Jetis Suruh. In general, food security in Bulus Lor was better than that in Jetis Suruh. Food security included the quantity and quality of food that met the standard of living of all family members. The availability of food in every household experienced dynamics at a certain time. When confronted with the limited food availability challenge, food for fathers was prioritized and this was dominant in both villages. Strategies to expand the diversification of businesses undertaken to increase household incomes included mobilizing all household members to go to work, borrowing money to make ends meet, saving money, reducing food, reducing the quality of food consumption, migrating jobs, and asking for help from family through friendship.

Keywords: food security, village household, women's role in village family

1. Introduction

Economic conditions and poverty in rural areas have become problems in meeting the needs of food as the most basic needs/need. This problem can lead to food insecurity. Food insecurity may become one of the causes of the emergence of more serious problems such as social vulnerability, decreased health status, and low quality of human resources. When society is trapped in poverty, the stability of the institutions of civilization is threatened (Suharto, 2002). Given the importance of food issues, the stability in food security is an issue that requires attention in the fulfillment of food needs.

Rural women have an important role in the fulfillment of food for their households in marginal households. Rural women with such limitations must be faced with the fact that they will feel the most severe suffering in marginal households, especially in poor households. When dealing with food, mothers tend to prioritize the needs of their children, husband, and other household members, due to their high dependence on husbands. Women as mothers are even willing to bear the burden of their households to be able to meet their family's food needs as the most important part of their domestic duties. To sustain food security, women are willing to find a job to earn a living as a strategy to maintain the stability of food fulfillment for their household members.

The Merapi slope is a disaster-prone area. Mount Merapi (2,968 meters a.s.l., per 2006) is a volcano in the middle of Java Island and is one of the most active volcanoes in Indonesia. This volcano is very dangerous for it erupts in every two to five years, while the volcano itself is surrounded by a very dense settlement to a height of 1,700 meters, located only four kilometers from the craters. Since 1548, this volcano has erupted as many as 68 times. This periodic threat requires vigilance of the people living on the slopes of Merapi. The Volcanic Explosivity Index (VEI) 4 eruption occurred in 1872 with a recorded death toll of 200 and in 2010 recorded 367 fatalities (Voight et al., 2000; BNPB, 2010; Gertisser et al., 2012). There are 435,331 people living in the Merapi

area, from four districts (Kabupaten Boyolali dalam Angka tahun 2018; Kabupaten Klaten dalam Angka tahun 2018; Kabupaten Magelang dalam Angka tahun 2018; Kabupaten Sleman dalam Angka tahun 2018).

The occurring disasters often marginalize women especially with the disaster management that is more oriented to men. The disaster has resulted in losses of property and even many casualties. Disasters do not recognize gender differences though women are part of a marginalized group of people in disasters. When natural disasters such as floods, droughts, volcanic eruptions, earthquakes, tsunamis, landslides, and endemic diseases occur, women are highly vulnerable in this circle of disasters.

The low quality of life due to poverty makes the poor especially women vulnerable to attacks of several diseases in the occurrence of a disaster. When striking, natural disasters can make women and children the most vulnerable group, and after the disaster, they will suffer more heavily. Women experience more severe suffering or injustice due to the disasters and the post-disaster management. The disasters have made women more vulnerable to poverty. Structurally, disasters have caused women to become poor and marginalized in disaster management. The suffering caused by the disaster will be worse if it happens to an area that is already poor before the disaster. Natural disasters make the burden of poor women who have suffered previously become more severe after the disaster. Women are constructed as subordinated groups to men so women must suffer difficulties for access to information not even in the event of a disaster to the stage of disaster mitigation.

The concept of food security according to the international agreement in World Conference on Human Right 1993 and World Food Summit 1996 is the condition in which individual nutritional needs are fulfilled in both quantity and quality so that they can live actively and healthily in accordance with their local culture. Food security exists when food is available to everyone at all times, they have means of access, and that it is nutritionally, adequate in terms of quantity, quality and variety also that it is acceptable, within the given culture (FAO, 2004). Food security according to Law No.7 of 1996 concerning food is the condition of fulfillment of food for the household which is reflected from the availability of adequate (both in quantity and quality), safe, equitable, and individually or jointly affordable foods. In terms of quantity and quality, food availability in Indonesia will never race against population growth. Population in rural areas is dominated by farmers who are identical to poverty. Poverty is often found in rural areas that should be a food provider; even worse, some cases of food insecurity are often found in rural areas. The Poverty Gap Index in March 2015 was 2,442 and in September 2015 it declined to 2,167. In September 2015, the Poverty Gap Index for urban areas was 2,032 and for rural areas it was higher (2,281). Meanwhile, the Poverty Severity Index for urban areas was 0.597 and 0.577 for rural areas (Susenas, 2015).

The fulfillment of individual food needs depends on economic, social, and cultural conditions. Despite the differences in the food needs of each group viewed from the quality of food, food is needed by humans to survive. Poor people have not been able to fulfill their food needs based on the food quality; they only focus on fulfilling food to prevent hunger. Unlike the people who have adequate economic support, the fulfillment of food needs is based on the food quality. The fulfillment of quality food will support the improvement of life quality to be better and more productive. Better life quality provides opportunities for more valuable education and resource enhancement.

Food security in Indonesia is relatively poor as food distribution has not evenly reached the poor. Food security is faced with problems of food supply stability throughout the seasons, adequate food availability throughout the year, and low purchasing power. The food security of poor households in rural areas is faced with the low access of the poor to food fulfillment. The low level of food affordability for the poor causes them to only be able to reach the low-quality food. Food security is defined as the availability of food in sufficient quantity and quality that is distributed at affordable prices and is safe for every citizen to sustain his daily activities over time (Rachman & Ariani, 2002).

The even availability of food means that the amount of the available food must meet the people's needs, either from domestic or imported production. Food stability shows decreasing food fluctuations during the season. Food stability is the ability to minimize the likelihood of food consumption being below the level of standard needs when facing *paceklik* (Javanese, famine) season during the wait for the harvesting season or *paceklik* season due to natural disturbances such as natural disasters. The problems faced in maintaining food stability due to seasonal differences are expected to be minimized so that food security throughout the year can be maintained. The increased demand for food with the increasing number of population and diversified patterns of life poses challenges to food security.

Women have an important role to play in meeting the food needs of their household members. Women account for 6 % of household food production in Asia (Quisumbing et al., 1996). Strategies are needed to meet their food

needs in both quality and quantity. Women have to think about how their households can survive in facing the economic difficulties caused by poverty (Roosganda, 2007). Women must work hard to ensure that their households are able to meet their food needs; even women are required to work hard to make all household needs fulfilled when they act as the breadwinners. Based on these descriptions, the researcher aims to answer the following research questions: (1) What are the characteristics of women?; (2) What are the constraints faced by women in realizing food security?; and (3) What are the efforts made by women to realize food security?

2. Method

The research site selection was done by utilizing information from DIY thematic map study on the characteristics of women and food security. The research population was composed of wives of nuclear families in two villages in Sleman, Yogyakarta, namely Jetis Suruh, Donoharjo Village, Ngaglik and Bulus Lor, Candibinangun Village, Pakem Subdistrict. In data analysis, the data were analyzed using SPSS PC and then were presented in the frequency table. The data analysis was carried out both quantitatively and qualitatively. Quantitative descriptive data analysis was used to analyze the primary and secondary data related to demographic variables covering age, livelihood, education, land ownership, income, transportation, communication, and health facilities. Frequency tables were used to explain the patterns and distributions of the characteristics of these variables. Quantitative descriptive analysis was done based on association to indicate the patterns and distributions of the phenomena, which were reinforced by the results of the field observations (Robson, 1993).

2.1 The Characteristics of the Research Areas

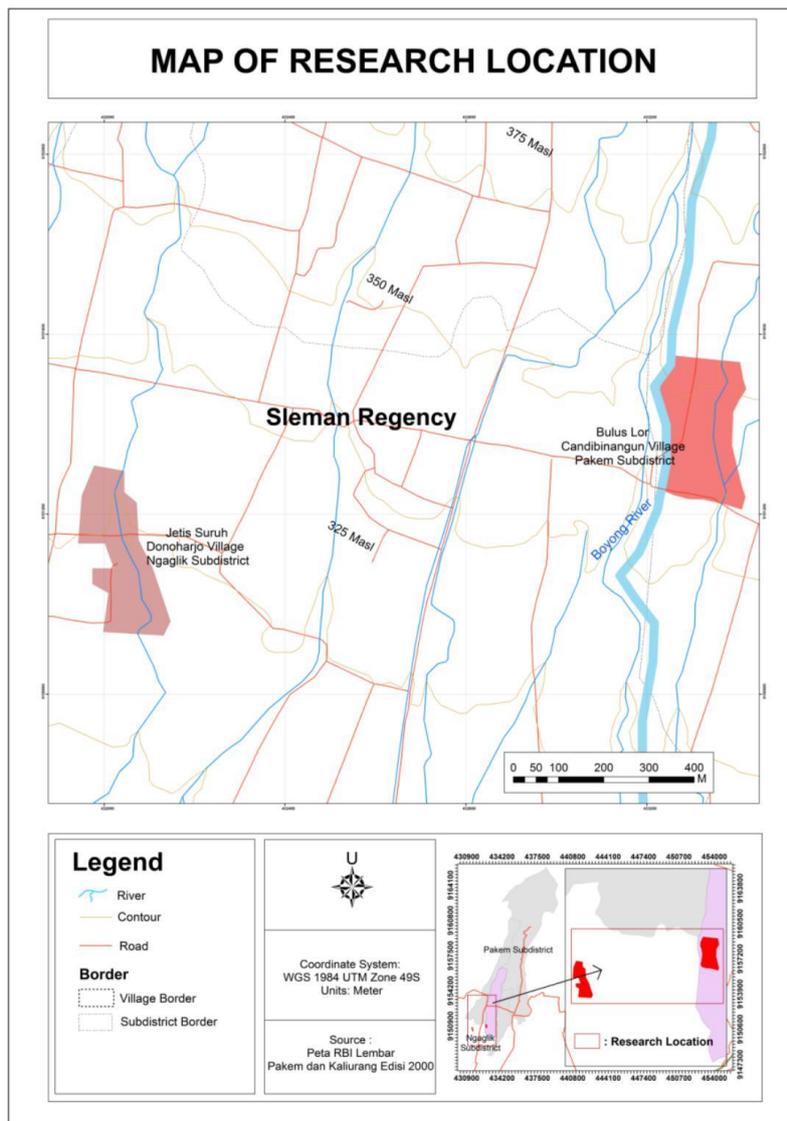


Figure 1. Map of Research Location (Source: Analysis 2019)

The two research villages are located in two districts in Sleman Regency. Geographically, Sleman Regency is located between $107^{\circ}15'03''$ and $107^{\circ}29'30''$ east longitude, and $7^{\circ}34'51''$ and $7^{\circ}47'30''$ south latitude. The area reaches 57,482 hectares or 574.82 square kilometers (approximately 18% of the total area of Special Region of Yogyakarta province which reaches 3,185.80 square kilometers) and is directly adjacent to the north of Mount Merapi. The research areas are in two villages in Sleman Regency located in the lowest and highest point of Mt. Merapi slope (Pakem and Ngaglik districts respectively). Jetis Suruh and Bulus Lor villages are characterized by their population that relies on farming activities.

The two villages have different accessibilities so that they have different dynamics of economic activities. Jetis Suruh is relatively more static than Bulus Lor. Better accessibility in Bulus Lor gives people the opportunity to diversify their income sources. The differences between the two villages are not highly significant in both the social and economic conditions of the population. The two villages are linked with the same lane although the overall accessibility to the two villages is relatively different.

2.2 The Characteristics of the Respondents

The respondent characteristics such as age, education, basic livelihood, and household responsibilities become important variables in economic activities in rural areas that rely on the use of natural resources to meet the household needs. Agricultural activities are the dominant economic activities in both villages. Women in the two villages are predominantly young. The distribution of the respondent characteristics from the two research areas can be seen in the following table.

Table 1. Respondent Characteristics

No	Age (year-old)	Bulus Lor		Jetis Suruh	
		f	%	f	%
1	< 30	0	0	1	2.3
2	30 – 39	3	8.1	3	6.9
3	40 – 49	9	24.3	9	20.9
4	50 – 59	15	40.5	12	27.9
5	> 59	10	27.0	18	41.8
	Total	37	100 %	43	100 %

No	Education	Bulus Lor		Jetis Suruh	
		f	%	f	%
1	Elementary School Graduate	7	18.9	5	11.2
2	Junior High School Graduate	11	29.7	11	25.5
3	Senior High School Graduate	10	27.0	17	39.5
4	No Degree	7	18.9	9	20.9
5	College Graduate	2	5.4	1	2.3
	Total	37	100%	43	100%

No	Land Area (square meter)	Bulus Lor		Jetis Suruh	
		f	%	f	%
1	< 500	11	29.7	16	37.2
2	500 – 1000	17	45.9	19	44.1
3	1000 – 2000	5	13.5	5	11.2
4	2000 – 2500	2	5.4	2	4.6
5	> 5000	2	5.4	1	2.3
	Total	37	100 %	43	100 %

No	Livelihood	Bulus Lor		Jetis Suruh	
		f	%	f	%
1	Agriculture	19	51.3	30	69.7
2	Commerce	10	27.0	7	16.2
3	Worker	3	8.1	2	4.6
4	Others	5	13.5	4	9.3
	Total	37	100 %	43	100 %

No	Household Members	Bulus Lor		Jetis Suruh	
		f	%	f	%
1	≤ 3	13	35.1	7	16.2
2	4 – 6	22	59.4	27	62.7
3	> 6	2	5.4	9	20.9
	Total	37	100 %	43	100 %

(Source: Primary data of 2016)

Food is the most basic human need. The fulfillment of individual food needs is related to economic, social, and cultural conditions. The most economically vulnerable people are more oriented towards the fulfillment of food needs to overcome hunger and to survive; while those with adequate economic support are more quality-oriented. The respondents in Jetis Suruh are mostly 50–59 years of age, while in Bulus Lor most respondents are older than 59 years. The percentages of Women aged 40 – 60 in Bulus Lor and Jetis Suruh are 64.8% and 48.8% respectively. Married women in Jetis Suruh are younger than those in Bulus Lor as respondents under 30 are only found in Jetis Suruh.

Accessibility in Bulus Lor is better than that in Jetis Suruh, making women have a better chance of getting education. Education is an important characteristic to be discussed in this study for education is closely related to a person's mindset on how to meet his/her needs and how to overcome the difficulties he/she encounters. The villages under this study are relatively close to the center of education starting from the elementary school, high school, to higher education. All respondents from both villages have had formal education, even though some of them are only able to complete their primary education.

Ease of reaching the center of education can be seen through the fact that no respondents are found to never go to school. Women who graduate from universities in Bulus Lor are as many as 5.4% and 2.3% in Jetis Suruh. A total of 18.9% of the respondents in Bulus Lor are graduated from the elementary school; this percentage is higher compared to that in Jetis Suruh (11.2%). The respondents are dominated by high school graduates.

The villages under study are rural areas engaged in agriculture as an occupation; however, economic activities other than agriculture are beginning to develop in both villages. Land ownership is an important characteristic because it affects household incomes; larger land ownership allows better household incomes. Land is used for various businesses, either for farming or for other business. Land ownership in both villages is relatively low for rural areas that rely on farming as a source of income. Land ownership of less than 0.1 ha is dominant in each village. A total of 75.6% of the respondents in Bulus Lor own land as wide as less than 0.1 ha; while in Jetis Suruh, this percentage is higher (81.3%). This low land ownership becomes an obstacle for rural households with farming activities to increase their incomes.

Although various occupations such as trader, employee, tailor, and cooking have grown in both villages, most women still rely on the agricultural sector to support their household economy. Agricultural and trade activities become the dominant activities of women there. Women with agricultural activities in Bulus Lor reach 51.3% and those in etc 69.7% in Jetis Suruh. Trading becomes the second choice for women of both villages, more women in Bulus Lor work in this sector. Better accessibility in Bulus Lor is a factor that encourages women to have more open opportunity to earn a living outside farming.

The number of dependents reflects how much household income is used to meet the needs of all dependent household members, from the fulfillment of food, clothing, to other needs. In households with low incomes, most of their income and even their entire income are often spent for the fulfillment of consumption. In households with low incomes, their income may only be enough to meet consumption needs, if there is an earning residue, it is used to raise their quality of life, such as improving health, education, and even investment. In rural areas, independent household members work in agriculture, animal husbandry, or other production activities. The households in both villages are dominated by nuclear families consisting of husband, wife, and children. Most households have a relatively small number of dependents, making up four to six household members. An awareness to limit birth rates has developed in poor women in rural areas. For them, the more children they have without adequate economic capacity, the more burdens they will have for the households. The higher the number of the dependents, the higher the capitals they will need to achieve a better future.

3. Results

3.1 The Roles of Women in the Fulfillment of Food Needs

The fulfillment of qualified food can support the improvement of life quality to be healthier and more productive. A better quality of life will then make ways for better education and resources. The distribution of the fulfillment

of food throughout the year in both villages can be seen in the following table:

Table 2. The Quality of Food Fulfillment throughout the Year

No	Food Fulfillment throughout the Year	Bulus Lor		Jetis Suruh	
		f	%	F	%
1	Fulfilled	34	91.8	38	88.4
2	Unfulfilled	3	8.2	5	11.6
	Total	37	100 %	43	100 %

No	Food Security	Bulus Lor		Jetis Suruh	
		f	%	F	%
1	1 month	1	2.7	5	11.6
2	2 months	4	10.8	5	11.6
3	3 months	6	16.2	7	16.2
4	4 months	5	13.5	9	20.9
5	5 months	14	37.8	14	32.5
6	≥ 6 months	7	18.9	3	6.9
	Total	37	100 %	43	100 %

No	Food Assistance by the Government	Bulus Lor		Jetis Suruh	
		f	%	F	%
1	Adequate	25	67.5	32	74.4
2	Inadequate	12	22.5	11	25.6
	Total	37	100 %	43	100

No	Food Fulfillment Priority	Bulus Lor		Jetis Suruh	
		f	%	F	%
1	Father	23	62.1	29	67.4
2	Mother	-	-	1	2.3
3	Children	14	27.9	13	30.2
4	Others	-	-	-	-
	Total	37	100 %	43	100 %

(Source: Primary data of 2016)

Both villages are fertile agricultural areas located on the slope of Mount Merapi. The farmland there is a volcanic soil with adequate water availability throughout the year enabling farmers to grow paddy three times. The fulfillment of food needs in both villages has a relatively high level of security because the harvest of farming can support the food needs throughout the year. In fact, in the context of food security for every month, if the production of farming is used for the fulfillment of various needs, food insecurity will happen. The income earned from their relatively low economic activities makes it difficult for women to meet the needs of their family life other than food. Food security that can be achieved from the income of women in both villages is dominated in the range of five months, 37.8% in Bulus Lor and 32.5% in Jetis Suruh. Food security in both villages is relatively adequate as the percentage of food security for one month only is very low. Food security for more than six months in Bulus Lor is higher than that in Jetis Suruh (18.9% and 6.9% respectively). In general, the food security in Bulus Lor is better than that in Jetis Suruh.

The fulfillment of food for the household is reflected in the availability of adequate (both in quantity and quality), safe, equitable, and affordable food. Food security includes the quantity and quality of food so that each individual can meet the standard of their calorie and energy needs to carry out economic activities and improve the living standards of their household members. Women have an important role in managing the adequacy of food in their household. The challenges for women become more severe in providing food when the household income is so low that they have to find ways to overcome these difficulties. According to the respondents, assistance from the government is quite beneficial to meet the food needs of all members of their household. The adequacy of food subsidiary from the government is considered sufficient, 67.5% in Bulus Lor and 74.4% in Jetis Suruh. This subsidiary has a more strategic role in Jetis Suruh than in Bulus Lor. This is seen from the amount of food sufficiency. Their food consumption tends to increase from year to year causing every household to struggle to protect food security for their household members. The increased food demand is faced with the shrinking of potential land area for planting crops. Food is the most basic human need. Food is needed by

humans to survive even though the food needs of every layer of society vary, especially in terms of the quality of the food consumed.

Food insecurity due to internal and external factors especially in rural households requires much attention so that the impacts can be suppressed. The fulfillment of individual food needs is related to economic, social, and cultural conditions. For the most economically vulnerable level of society, the orientation of the fulfillment of food needs is more on the efforts to overcome hunger and to survive. The food quality is not their main attention. Their life orientation is simply to prevent hunger; they have not been able to meet their daily food needs and have not had time to think about their food quality. In contrast, for those with sufficient economic support, their fulfillment of food needs has increased with the orientation of food quality. They realize that qualified food can improve their quality of life to be healthier and more productive. Better quality of life means greater opportunity to achieve better education and resources.

Food security must be faced with problems on food supply stability throughout the season, adequate food availability throughout the year, and low purchasing power. Food security for poor households in rural areas is faced with the low level of affordability so that they can afford only low-quality food. The availability of food in every household experiences dynamics in a certain period of time. The household limitation in providing food leads to the food fulfillment for household members only. When confronted with limited food availability, the fulfillment of food needs is prioritized dominantly for fathers in both villages. Such a decision is due to the fact that fathers are the breadwinners so that they are given priority to food fulfillment. The second priority is the fulfillment of food for their children. Mothers are much ruled out in term of food fulfillment priorities.

4. Discussion

4.1 The Role of Women in Securing Revenue Sources

Women have a role in realizing food security in their household through various efforts. The government acts as a facilitator for the development of women’s social relations such as through farmer groups, *posyandu* (health service post), and *dasa wisma* (wives association); however, in reality, the role of government in the formation of social networks is not as a facilitator but as a network creator. The government creates networks by giving assistance in the process of selling agricultural products, providing water for irrigation of rice fields, providing agricultural facilities, giving services, especially health services, and educating people on ways to improve welfare in the countryside. The government often provides training to women on how to improve the quality of the crops so that the selling price becomes higher.

Women meet the needs of food for their households through alternative subsistence by working to help meet the needs of their lives. In addition, some children are also directed to work. Besides having side jobs or jobs other than as farmers such as traders, private employees, and laborers, women borrow money from *'plecit'* banks, cooperatives, and *arisan* (a small-scale rotating savings group) and withdraw their personal savings. The development of productive economic activities in the two villages often experiences constraints of capital availability, skills acquisition, marketing, and raw material availability. Capital limitation is the main constraint of women in the two villages to be engaged in productive activities; however, women attempt to be engaged in productive economic activities even without adequate capital support. Capital is an important variable to drive the economy in rural areas, supported by farming or other than farming. In obtaining capital, women often face difficulties due to the requirements that must be met and the collateral that women do not have. Women are often entangled in high-interest loans because only in that way can they get capital. Even when women have to provide some money for urgent purposes, they are forced to take out loans at high interest. In addition to seeking loans with high interest, women are often forced to do *ijon*, i.e. selling crops long before the harvest time. Such a way makes the harvest or income of women worthless because of the low price set by the lender.

The difficulty of obtaining capital for rural businesses is the reason why women often take shortcuts by taking loans even though it is very burdensome for them to pay back the high interest rates. Capital from formal institutions such as banks requires tight requirements, making it difficult for women to obtain loans from such institutions for their productive economic activities.

Table 3. Women's Efforts to Obtain Financial Sources

No	Sources of Capital/ Finance	Bulus Lor		Jetis Suruh	
		f	%	f	%
1	<i>Plecit</i> bank/ loan shark	1	2.7	3	6.9
2	<i>Ijon</i> system	2	5.4	6	13.8
3	<i>Arisan</i>	11	29.7	11	25.5

4	KUD / Cooperative	5	13.5	13	0.2
5	Non-bank financial institution/ BPR	7	18.9	3	6.9
6	Public or private bank	1	2.7	-	-
7	Relative/ Neighbor	6	16.2	3	6.9
8	Pawnshop	3	8.1	4	9.3
9	Others	1	2.7	-	-
	Total	37	100%	43	100%

(Source: Primary data of 2016)

Arisan is a popular capital source in both villages. Although it can only offer small amounts of capital and the members have to alternate with other members, all women benefit from it. Earning cash for business capital or for the fulfillment of needs through *ijon* system and an unofficial/loan shark institution is still the preferred choice of women in both villages. Cooperative institutions in each village also become alternatives for women to get capital. Women's access to loans from cooperatives is often marginalized because men tend to have a more open opportunity for access to cooperatives. Seeking loans to relatives or neighbors is also the choice many women make to earn capital or money for various needs.

5. Conclusions

A different characteristic between the two villages, i.e. different accessibility, makes the two villages have different dynamics of economic activities. Jetis Suruh is relatively more static than the more dynamic Bulus Lor. Better accessibility to Bulus Lor gives better opportunity for the population to diversify their income sources.

The respondents are dominated by women aged between 40 to and 59. The ease of reaching the education center encourages every respondent in the study to achieve a proper education. Land ownership is relatively limited for rural areas that rely on agriculture as a pedestal income. Agricultural and trade activities are the dominant activities for women in the two villages. The households are dominated by nuclear family members consisting of husband, wife, and children. The households in both villages have a relatively small number of dependents of four to six. An awareness has grown in poor women in rural areas that having more children without having sufficient support of economic capacity will only be a burden for the households. A higher number of dependents requires a greater capital to build a better future. The intensity of poverty is more apparent in Jetis Suruh than in Bulus Lor. Compared to that in Bulus Lor, the household income in Bulus Lor is dominated by that which is earned from commercial crop farming, as well as other sources of income outside the farming business. Bulus Lor has a relatively good infrastructure rather than Jetis Suruh. Diversification of livelihood is more visible in Bulus Lor than in Jetis Suruh.

The fulfillment of individual food needs is related to economic, social, and cultural conditions. The fulfillment of food needs throughout the year in both villages indicates that most people are able to meet their food needs throughout the year. The fulfillment of food needs throughout the year in Bulus Lor is relatively better than that in Jetis Suruh. Food security that can be realized from the income of women in the two villages is mainly in the range of five months (37.8% in Bulus Lor and in 32.5% in Jetis Suruh). Food security in both villages is relatively adequate as security for one month only is very low. Food security for more than six months in Bulus Lor (18.9%) is higher than that in Jetis Suruh (6.9%). In general, food security in Bulus Lor is better than that in Jetis Suruh.

Food security includes the quantity and quality of food so that each individual can meet the standard of his/her calorie and energy needs to carry out economic activities and improve the living standards of his/her household members. Food assistance subsidiary from the government has a more strategic role in Jetis Suruh than in Bulus Lor viewed from the food sufficiency level.

The availability of food in every household experiences the dynamics in a certain period of time. The household limitation in providing food leads to the food fulfillment for the prioritized household members. in both villages When confronted with limited food availability, the fulfillment of food needs is prioritized dominantly for fathers in both villages. Such a decision is due to the fact that fathers are the breadwinners of the families so that they are given the priority to food fulfillment. The second priority is the fulfillment of food for children. Mothers are much ruled out in term of food fulfillment priorities.

Acknowledgments

Thank you to all the Donoharjo Village and Candibinangun Village people who have taken the time to do the research and assistants who assist with data collection so that this article can be finished.

References

- Badan Nasional Penanggulangan Bencana (BNPB). (2010).
- Badan Pusat Statistik (BPS). (2019). *Kabupaten Boyolali dalam Angka tahun 2018*. Boyolali: BPS.
- Badan Pusat Statistik (BPS). (2019). *Kabupaten Klaten dalam Angka tahun 2018*. Klaten: BPS.
- Badan Pusat Statistik (BPS). (2019). *Kabupaten Magelang dalam Angka tahun 2018*. Magelang: BPS.
- Badan Pusat Statistik (BPS). (2019). *Kabupaten Sleman dalam Angka tahun 2018*. Sleman: BPS.
- Baliwati, Y. F., Khomsan, A., & Dwiriani, C. M. (2004). *Pengantar Pangan dan Gizi*. Jakarta: Penebar Swadaya.
- Chamber, R., & Conway, G. (1992). *Sustainable Livelihoods: Practical Concept for The 21 st Century*. IDS Discussion Paper 296, Institute For Development Studies, Sussex.
- Choudhary, N., & Parthasarathy, D. (2007). Gender, Work and Household Food Security. *Economic and Political Weekly*, 42(6), 523-531.
- Deptan Republik Indonesia. (2006). *Kebijakan Umum Ketahanan Pangan 2006-2009*. Jakarta: Dewan Ketahanan Pangan Departemen Pertanian RI.
- Elaine, M. P. (2008) Conceptualizing Food Security for Aboriginal People in Canada. *Canadian Journal of Public Health*, 99(2), 95-97. Canadian Public Health Association. <https://doi.org/10.1007/BF03405452>
- Food and Agriculture Organization. (2004). *FAO Statistics*. Food and Agriculture Organization of the United Nations, Statistic Division, Socio-Economic Statistics and Analysis Service. Retrieved from <http://www.FAO.Org/faostat/Food Security/MDG/EN/Pakistane.Pdf>
- Food and Agriculture Organization. (2004). *The state of food insecurity in the world: Monitoring progress towards the world food summit and Millenuim Development Goals*. Rome F.A.O.
- Gertisser, R., Charbonnier, S. J., Keller, J., & Quidelleur, X. (2012). The geological evolution of Merapi vulcano, Central Java, Indonesia. *Bull Volcanol*, 74, 1213-1233. <https://doi.org/10.1007/s00445-012-0591-3>
- Lingam, L. (2006). Gender, Households and Poverty: Tracking Mediations of Macro Adjustment Programmes. *Economic and Political Weekly*, 41(20), 1989-1998. Published by: Economic and Political Weekly.
- Ndhleve, S. L. M., & Zhou, L. (2012). Household food security in a coastal rural community of South Africa: Status, causes and coping strategies. *Journal of Agricultural Biotechnology and Sustainable Development* 4(5), 68-74. <https://doi.org/10.5897/JABSD12.040>
- Quisumbing, A. R., Brown, L. R., Feldstein, H. S., Haddad, L., & Pena, C. (1996). Women: The key to food security. *Food and Nutrition Beulletin*, 10(1). <https://doi.org/10.1177/156482659601700116>
- Rachman, H. P. S., & Ariani, M. (2002). Ketahanan Pangan: Konsep, Pengukuran, Dan Strategi. *FAE*, 20(1), 12-24. <https://doi.org/10.21082/fae.v20n1.2002.12-24>
- Rao, N. (2005). Gender Equality, Land Rights and Household Food Security: Discussion of Rice Farming Systems. *Economic and Political Weekly*, 40(25), 2513-2521. Published by: Economic and Political Weekly.
- Robson, C. (1993). *Real World Research*. Oxford: A Resource for Social Scientists and Practitioner Researchers. Blackwell Publishers Inc.
- Roosganda, E. (2007). Peran Ganda Wanita Tani dalam Mencapai Ketahanan Pangan Rumah tangga di Pedesaan. *Forum Penelitian Agro Ekonomi*, 25(2), 126-135.
- Sidh, N. S., & Basu, S. (2011). Women's Contribution to Household Food and Economic Security: A Study in the Garhwal Himalayas, India. *Mountain Research and Development*, 31(2), 102-111. International Mountain Society. <https://doi.org/10.1659/MRD-JOURNAL-D-10-00010.1>
- Susan, L. C., & Finch, C. (2008). Temporal and Spatial Changes in Social Vulnerability to Natural Hazards. *Proceedings of the National Academy of Sciences of the United States of America*, 105(7), 2301-2306. National Academy of Sciences. <https://doi.org/10.1073/pnas.0710375105>
- Suharto, E. (2002). Coping Strategies Dan Keberfungsian Sosial: Mengembangkan Pendekatan Pekerjaan Sosial Dalam Mengkaji Dan Menangani Kemiskinan. *Bahan seminar di Institut Pertanian Bogor*. Di akses pada tanggal 5 Juni 2016, di www.policy.hu.
- Teeje, J. (2014). Contribution of peasant migration to household food security: A case study of kidea village of kigoma rural district, tanzania. *European Scientific Journal*, 2.

- Vini, A., & Rini, W. D. E. (2007). Peran Wanita Tani dalam Mewujudkan Ketahanan Pangan pada Tingkat Rumahtangga di Kabupaten Sleman, Daerah Istimewa Yogyakarta. *Jurnal Ekonomi Pembangunan*, 13(1), 71-82. (Situs Universitas Islam Indonesia [http://journal.uui.ac.id/index.php/JEP/article/view File/52/150](http://journal.uui.ac.id/index.php/JEP/article/view/File/52/150). <https://doi.org/10.20885/ejem.v13i1.52>)
- Voight, B., Constantine, E. K., Siswamidjono, S., & Torley, R. (2000). Historical eruptions of Merapi volcano, Central Java, Indonesia, 1768-1998. *Journal of Volcanology and Geothermal Research*, 100, 69-138. [https://doi.org/10.1016/S0377-0273\(00\)00134-7](https://doi.org/10.1016/S0377-0273(00)00134-7)

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).