

## EFFECTIVENESS OF SELF-HELP GROUPS IN THE IMPLEMENTATION OF LIVELIHOOD IMPROVEMENT PROGRAMS AND FOOD SECURITY IN LAMPUNG, INDONESIA

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**Abstract:** The Community-Based Livelihood Improvement Programme (PPMK) implemented with the help of Self-Help Groups (SHG) is expected to improve the livelihoods of poor people. This study aims to analyse: 1) the effectiveness of SHG in the implementation of PPMK programmes, 2) food security of SHG member households, and 3) the relationship between the effectiveness of PPMK programme implementation and SHG member food security. The study was conducted at Margodadi Village, Metro City in October-December 2018. The research method used involved a survey with a quantitative approach with saturation sampling techniques. Respondents were 25 SHG members who were recipients of aid under the PPMK programme. A descriptive analysis method was used to answer the first and second objectives, while the non-parametric statistic of Spearman's Rank correlations was used to answer the third objective. The results showed that:

- 1) SHG members were effective in implementing the PPMK programme with a rating in the "good" category, with all the overall programme objectives being achieved, helping to increase the income of SHG member households, strengthening SHG's institutional capacity and the ability of SHG members to expand their business;
- 2) the food security level of the majority of SHG member households in Margodadi Village was both objectively and subjectively in high category; and
- 3) the effectiveness of SHG in the PPMK was significantly different from the level of household food security.

Keywords: Group effectiveness, program, food security, household.

Abbreviations: [Effectiveness of Self-Help Groups in Lampung Indonesia].

### Introduction

Poverty is a problem that is still faced by many developing countries, including Indonesia (Suryahadi, Suryadarma, & Sumarto, 2009; Alatas, Banerjee, Hanna, Olken, & Tobias, 2012; Sumner & Edward, 2014). Many factors cause poverty including: a lack of natural resources (Hassan, Zaman, & Gul, 2015), a lack of human resources (Roca-puig, Beltrán-martín, & García-juan, 2019), low education levels (Buck & Deutsch, 2014; Mihai & Manea, 2015), and the lack of available jobs (Siwar *et al.*, 2016; Sri & Suliswanto, 2010). This condition causes helplessness in the community to face economic hardships, such as the weakness of the small-

and-medium business sector (Dartanto, 2013; Rangga & Syarief, 2018).

One of the community empowerment programmes used to alleviate poverty and expand employment opportunities in urban areas is the National Urban Independent Community Empowerment Programme (PNPM-MP) (Fatriadi, Asteriani, & Cahyaningsih, 2017; Soesanta, 2013) so that sustainability will be difficult if not prepared right formula. This paper also examines some of the things that occurred starting from the history of poverty alleviation programs in Indonesia, until the emergence of a national program priorities under the PNPM Mandiri (Rural and Urban.

This National Programme aims to support the government's efforts to reduce the number of poor people in Indonesia and is expected to improve the welfare of Indonesian communities according to the mandate of the UUD'45. The strategy implemented by the programme involves strengthening community institutions and engaging elements of the community, right from the planning stage, through to the implementation, monitoring and evaluation stages (Mubarak, 2010; Yamsul & Salim, 2013; Mufid, 2014; Yanfika, Listiana, Mutolib, & Rahmat, 2019).

There are three programmes run by PNPM-MP comprising physical, economic and social development schemes (Soesanta, 2013; Munawar, 2017). On the economic side, the poor can avail of a revolving economic loan assistance facility (Matridi *et al.*, 2015; Rahjuni, Badriah, & Rafinda, 2019). Revolving loans are provided to assist productive activities in order to create business and employment opportunities, and can also be used to start schemes that improve community welfare (Fatriadi *et al.*, 2017). Revolving loans to the poor are given directly to the community through Non Governmental Organisations (NGO) in each village in various regions, including Metro City in Lampung Province. The NGO is an institution established to expedite the running of the PNPM-MP programme under the purview of the Financial Management Unit (UPK), which will consider the feasibility of the community loan.

Metro City has 22 NGO's, slightly fewer than other regions, which have two NGO's with a "civilized" status, the highest status, for the Community-Based Livelihood Improvement Programme (PPMK). The programme is a part of the Urban Independent Empowerment programme (PNPM) which is devoted to the development of manufacturing and production activities that have received revolving economic loans with returns of up to 98%. The PPMK scheme uses the same principles as revolving economic loans, the only differences being the amount of funds loaned are higher than revolving loans and the period of repayment being longer.

Through the mentoring approach to Self-Help Groups (SHG), the PPMK is expected to improve the livelihoods of the poor, particularly with regard to the income levels which ultimately impacts the level of household food security (Meilia, Zakaria, & Prasmatiwi, 2014; Rangga, Darsono, Anantanyu, & Wijaya, 2014).

However, if a programme that aims to help the community prosper is not adopted and accommodated properly by the target audience that is supposed to benefit from it, problems such as the misuse or abuse of the programme and inappropriate implementation may occur.

Research on the effectiveness and impact of the Self-help Groups has proven that they have a good impact on society (Mehta, Mishra, & Amrinder Singh, 2011; Hartina *et al.*, 2017; Gugerty, Biscaye, & Anderson, 2018; Nimisha & Arumugam, 2019).

However, research on the relationship between SHGs and household food security has not been studied at any length and is something that this research paper aims to rectify. This research is very interesting and expected to provide new findings that will aid efforts to improve global food security, especially for the poor in both urban and rural areas.

The success of the SHG-run programme is expected to support enhancement of food security initiatives and Sustainable Development Goals in Indonesia.

Based on this, it is necessary for research to analyse:

- 1) The effectiveness of SHG in the implementation of the PPMK in Margodadi Village, Metro City,
- 2) the food security of SHG member households, and
- 3) the relationship between the effectiveness of SHG and the food security of SHG members.

## Materials and Methods

The research site was Margodadi Village, Metro

City in Lampung Province, Indonesia. The site was determined using a purposive sampling method with the consideration that Margodadi Village was the only village in Metro City with an NGO that received the PNPM Award from the Mayor of Metro City. Data collection and research were conducted in October-December 2018.

The sampling technique in the study used saturation sampling technique. Saturation sampling is a sample determination technique using population members as samples. The study population came from members of the Non-Governmental Organisation in LKM (Community Self-help Organization) of Metro City who were recipients of the PPMK. The method of analysis was carried out using descriptive analysis and nonparametric statistics. Descriptive analysis was used to answer the first and second objectives, while the third objective was obtained by using non-parametric analysis of Spearman's rank correlation (Nichols & Holmes, 2007; Henseler, 2012; Fujita, Takahashi, & Patriota, 2014).

The effectiveness of SHG in implementing the PPMK can be seen from the large increase in the income of SHG members, the improvement of institutional capacity, and the ability to expand the business. The level of household food security is known by using objective and subjective measures. Objective measures are derived by comparing the food expenditure and total household expenditure. If the share rate of food expenditure in household is  $<60\%$ , then the household is said to have food security, and if the share rate of food expenditure is  $\geq 60\%$ , then the household is said not to have food security (Sapar, Jahi, Ilham, & Bonar, 2007).

The subjective food security of SHG member households in this study was seen from the opinions, views, attitudes, or arguments of SHG member households on their food situation, namely the availability of food for SHG household members, household food distribution, and consumption of food items to meet the food needs of its members from time to time in order to live a healthy life and be able to carry out their daily activities.

## Results and Discussion

### *Responden Identity*

The majority of SHG members (68%) are women. The results of field observations revealed that the types of businesses pursued by SHG members (72%) were mostly various foods (various chips: bananas, cassava), and stalls that were easy to set up and run by women (mothers), while things related to fisheries business, namely fish spawning and catfish farming activities were carried out by men (fathers).

The productive age allows respondents to have high morale and good understanding of the material. This condition is one of the potentials to increase the active role of SHG members to get involved in the PPMK. The higher a person's age, the better his performance will be (Nurhardjo, 2012; Sapar, Yusuf, & Haedar, 2014; Mutolib, Yonariza, Mahdi, & Ismono, 2016) West Sumatra Province in Indonesia, leads to the clan's women experiencing injustice when it comes to the management of communal forest land (ulayat). This shows a maturity owned by each individual in order to determine the decision-making and concrete steps in the future in doing a business. The details of the respondents in this study is presented in Table 1.

Table 1: Identity of Self-Help Groups (SHG) based on age, formal education, and number of dependent family members

No	Variable	Number (Persons)	Percentage(%)
1	Gender		
	Male	8	32.00
	Female	17	68.00
	Total	25	100.00
2	Age (years)		
	(1) Young (28—41)	13	52.00
	(2) Adult (42—55)	9	36.00
	(3) Old (56—66)	3	12.00
	Total	25	100.00
3	Formal Education		
	(1) Elementary School	6	24.00
	(2) Junior-Senior High School	18	72.00
	(3) Diploma	1	4.00
	Total	25	100.00
4	Number of dependent family members(person)		
	(1) 2	5	20.00
	(2) 3	8	32.00
	(3) 4	12	48.00
	Total	25	100.00
5	Type of business		
	(1) Fisheries	7	28.00
	(2) Various foods	13	52.00
	(3) Stall	5	20.00
	<b>Total</b>	<b>25</b>	<b>100.00</b>

### *An Overview of PPMK and SHG*

PPMK is an intervention programme under the PNPM-MP established by the Ministry of Public Works of the Republic of Indonesia, to develop its manufacturing and business activity levels. The PPMK aims to strengthen SHG institutional and business activities and make them more independent and sustainable, which are oriented to improving the livelihoods of the poor (sustainable livelihood) with a group assistance approach. SHG are groups of people who voluntarily unite over a shared vision, interest

or need. The group works together to achieve the same goals. The PPMK in Metro City began on August 6, 2014, at KSM (Community Self-Reliance Institution) of Margodadi Jaya. The program consists of the preparation, planning, disbursement, and utilisation stages, as well as the strengthening and development stages. Before the programme started running, KSM, SHG, and city facilitators met and continued to meet as much as eight times between the preparation stage and the planning stage of the programme.

### *Effectiveness of SHG Members in the Implementation of the PPMK*

The effectiveness of SHG in implementing the PPMK can be seen by the magnitude of the success of the PPMK in achieving its goals, which include: increasing the income of SHG members after participating in the PPMK, increasing institutional capacity, and the ability of SHG members to expand their businesses. The results of the study related to the effectiveness of SHG in running the PPMK is displayed in Table 2.

From Table 2, information it can be seen that most respondents considered the PPMK as capable of boosting member income (52.00%), strengthening institutional capacity (44.00%), and being able to increase the ability of members to expand their businesses (36.00%).

### *Increasing of SHG Members income*

There was an increase in the total income of SHG members after participating in the PPMK program (Table 3). The highest percentage of income was obtained by SHG Sembada members, with 211 percent. SHG Sembada is one of the SHGs that is involved with fish hatchery businesses. This significant increase in income is due to SHG Sembada having a business that always runs smoothly (has continuous production), a large initial capital from SHG members, a demand for catfish seeds that always increases every season and a ready availability of PPMK loans, which has allowed SHG Sembada to increase its capital and expand its marketing activities exponentially.

On the other end of the spectrum lies SHG Kenanga, an SHG which has the majority of its members working as small traders (self-employed) who do not require large loans or

Table 2: Effectiveness of SHG Members in the Implementation of the PPMK

No	Variable (Score)	Number (Person)	Percentage (%)
1	Increase in income of SHG members		
	2,000–3,325 (Less increased)	6	24.00
	3,326–4,651 (Quite increased)	6	24.00
	4,652–5,975 (Increased)	13	52.00
	Total	25	100.00
	Average: 4,560 (Quite increased)		
2	Strengthening institutional capacity		
	8,400-- 12,306 (Bad)	7	28.00
	12,307--16,213 (Fairly good)	11	44.00
	16,214--20,120 (Good)	7	28.00
	Total	25	100.00
	Average: 14.513 (Fairly good)		
3	The ability of members to expand business activities		
	2,000–3,255 (Less capable)	8	32.00
	3,256–4,511 (Quite capable)	8	32.00
	4,512–5,767 (Capable)	9	68.00
	Total	25	100.00
	Average: 4.005 (Quite capable)		

start up capital. This SHG sells raw/cooked vegetables, various chips, market snacks, and grocery store items. After a PPMK loan, SHG members can increase their income by more than 50 percent. The increased revenue details can be seen in Table. 3.

### ***Strengthening SHG Institutional Capacity***

Strengthening institutional capacity of SHG in question is an increase in the ability of groups to understand the rules and carry out development sustainably in a broad sense, which consists of norms/regulations implemented as well as facilities and technology owned by SHG members. Strengthening institutional capacity of SHG includes:

- 1) Utilisation of loan capital,
- 2) Loan instalments,
- 3) Appropriateness of instalment payment times,
- 4) Reporting on the utilisation of loan funds,
- 5) Ownership of facilities and technology,
- 6) Computer-use in SHG administration management, and
- 7) Internet use in accessing information.

Institutional capacity strengthening of SHG members (44%) is in a fairly good category. The results showed that in the use of loan capital, SHG members were quite cooperative, most of which used loan capital only for businesses, not used for other purposes outside the business.

### ***Ability of SHG Members to Expand Business Activities***

The level of ability of SHG members to expand their businesses is can be seen from: the increase in the types of businesses run by SHG members and the increase in the volume of business conducted. The level of ability of SHG members to expand their businesses was in the mostly capable category at 68%, yet the average level of ability of SHG members was in the category of “quite capable”. The ability of SHG members to expand their businesses can be seen in Table 4.

The increase in the type of business carried out by SHG members showed that nine people decided to continue to have one type of business, because they wanted to focus on developing the business. All SHG members who only carried out one type of business, namely SHG Sembada with its catfish hatchery business, sought to increase the number volume of business transactions, even though the type of businesses owned was only one. Unlike members of SHG Kenanga, Tunas Karya, and Kenari, whose entrepreneurs and traders wanted to add many different types of businesses. Irrespective of the types of businesses owned, all SHG members experienced an increase in business volumes at one time or another, with the average business volume increase being more than 50 percent. This is due to the high demand. This condition proves that the NGO's have been effective in implementing the PPMK, by increasing members' income, strengthening institutional

Table 3: Average income and increased income of SHG members before and after participating in the PPMK program.

No.	Name of SHG	Average Income of SHG Members (Rupiah per Month)		Percentage of Increase in Income of SHG Members (%)
		Before	After	
1	Matahari	1.290.000	2.614.000	102
2	Sembada	1.700.000	5.292.800	211
3	Tunas Karya	1.000.000	2.020.000	102
4	Kenanga	1.300.000	2.150.000	65
5	Kenari	1.290.000	2.300.000	78
Total		6.580.000	14.376.800	

Table 4: Expansion of SHG member business activities per person

No	Name of Self-Help Group	Expansion of SHG Member Business Activities Per Person					
		Increase in Type Business			Increase in Business Volume		
		1 type	2 type	> 2 type	Not increased	Increased	Highly Increased
1	Matahari	2	0	3	0	1	4
2	Sembada	5	0	0	0	0	5
3	Tunas karya	0	4	1	0	2	3
4	Kenari	0	3	2	0	3	2
5	Kenanga	2	1	2	0	4	1
	Total	9	8	8	0	10	15

capacity, and the ability of SHG members to expand their businesses; a clear signal that the overall programme objectives have been well-achieved.

#### ***Household Food Security of SHG Members***

Food Security according to Law no. 18 of 2012 is the condition of the fulfillment of food for the State up to individuals and reflected in the availability of sufficient food both in quantity and quality, safe, diverse, nutritious, evenly distributed and affordable and not in conflict with the religion, beliefs and culture of the community in order to be able to live healthy, active and productive in a sustainable manner.

Subjective food security is measured based on the views, opinions, and attitudes of the people in affected by the situation and involves three indicators, namely the availability of food, the distribution of food and the level of consumption of food. While objectively, food security is based on the amount of food in general, energy consumption, per-capita food availability, the share of household food expenditure on total household expenditure and household ability to deal with shocks.

#### ***Level of Household Food Security of SHG Members Objectively***

The level of food security objectively can be seen from the share of household food expenditure. Household expenditure is the costs incurred by a household to fulfill their living

needs. Household expenditure is divided into expenditures for food and non-food expenditure. Household expenditure of SHG members was dominated by non-food expenditure, with average of IDR1,918,186 per month (66.35%), while the remaining 33.64 percent was spent for food expenditure. Food expenditure of SHG member households is generally used to meet basic food needs, while non-food expenditure was dominated by expenses for home furniture, education, and fuel. The share of low food expenditure indicates that objectively most households (96%) had food security.

Household income was in the high category (Table 6). This is in accordance with Engel's coefficient, which states the proportion of money spent on food in household expenses falls as a country's economic growth makes its people wealthier, and tends to rise when they get poorer (Sapar *et al.*, 2007), so that the higher the income, the lower the share of food expenditures incurred. Share Rate of food expenditure for SHG member households in Margodadi Village displayed in Table 6.

#### ***Level of Household Food Security of SHG Members in Margodadi Village Subjectively***

There are three aspects that are used in the food security of SHG member households subjectively, namely: aspect of household food availability, aspect of household food distribution, and aspect of household food consumption (Table 7).

Table 5: Expenditure for food and non-food stuff of SHG members household in Margodadi Village of 2016

<b>Types of Food Expenditure</b>	<b>Average Expenditure (IDR/month)</b>	<b>Percentage (%)</b>
Flour and grains	268.120	9.28
Cassava	14.360	0.50
Oil and fat	32.880	1.14
Animal food	133.300	4.61
Vegetable food	72.460	2.51
Fruit /oily seeds	26.860	0.93
Nuts	18.740	0.65
Sugar	36.560	1.26
Colored vegetables	113.960	3.94
Colorless vegetables	12.380	0.43
Fruit vegetables	161.587,5	5.59
Fruit	66.460	2.30
Seasonings	21.840	0.76
Beverage	25.220	0.87
Amount of food expenditure	972.527,5	33.64
<b>Expenditure Type</b>	<b>Average Expenditure</b>	<b>Percentage (%)</b>
<b>Non-Food</b>	<b>(IDR/month)</b>	
Health	22.840	0.79
Education	232.580	8.05
Electricity	98.496	3.41
Phone/cell phone	69.800	2.41
Home Furniture	895.792	30.99
House reparation	19.800	0.68
Clothes	151.880	5.25
Goods and services	116.200	4.02
Fuel	178.400	6.17
Transportation	5.200	0.06
Social	5.200	0.18
Tax	24.354	0.84
Body cleanliness	40.836	1.41
Cosmetics	62.008	2.15
Amount of Non-Food Expenditure	1.918.186	66.35
Amount of Household Expenditures	2.890.713,5	100,00



Table 6: Share rate of food expenditure of SHG member households in Margodadi Village

Share Rate of Expenditure	Classification	Number	Percentage (%)
RT<60%	Have Food Security	24	96.00
RT≥60%	Does Not Have Food Security	1	4.00
Number		25	100.00

Table 7: The level of household food security of SHG members subjectively of 2017.

No	Sub-variable (Score)	Number (person)	Percentage (%)
1	Food Availability Level		
	7.431–9,926 (Low)	8	32.00
	3.326–4,651 (Medium)	10	40.00
	12.423–14.916 (High)	7	28.00
	Total	25	100.00
	Average: 11.121 (Medium)		
2	Food Distribution Level		
	10.193 – 12.498 (Low)	10	40.00
	12.499 – 14.804 (Medium)	8	32.00
	14.805 – 17.108 (High)	7	28.00
	Total	25	100.00
	Average: 13.415 (Medium)		
3	Food consumption level		
	13.477 – 17.014 (Low)	6	24.00
	17.015 – 20.552 (Medium)	12	48.00
	20.553 – 24.089 (High)	7	28.00
	Total	25	100.00
	Average: 18.725 (Medium)		
4.	Recapitulation of Food Security Subjectively		
	31.476 – 38.092 (Low)	2	8.00
	38.093 – 44.709 (Medium)	15	60.00
	44.710 – 51.324 (High)	8	32.00
	Total		100.00
	Average = 43.260 (Medium)		

a. *Aspect of Household Food Availability of SHG Members*

The food security level of SHG member households in Margodadi Village based on the aspect of food availability was in

the “medium” category with an average value of 11,121 which means that the SHG member households food was sufficient to fulfill their household food needs. Based on the conditions that occurred in the field, it

was concluded that the conditions of food availability for SHG member households mostly tended to be “fairly good” and the food was available in sufficient quantities to meet the needs of all SHG member households.

b. *Aspect of Household Food Distribution of SHG Members*

The household food distribution was in the classed as “medium”, with an average value of 13.415, which meant that the distribution of food in SHG member households was “fairly good”. Given the data collected from respondents, it is clear that the accessibility and affordability of food for SHG member households was easily accessible. This is because only a small portion of food needed by SHG member households purchased, the rest is self-produced.

c. *Aspects of Household Food Consumption of SHG Members*

The food security level of SHG member households from the aspect of household food consumption was “medium” with an average value of 18,725. The results of field observations showed that the knowledge of SHG members regarding the food needed was of the right composition and type. Additionally, the food consumed was “fairly good” for health, however, the majority of SHG members still did not consider the quality of the food being consumed.

Generally SHG members only consume food as it is according to what suits their tastes without any particular consideration to the quality of the food being consumed.

The result of the recapitulation and observation of the food security of SHG member households in Margodadi Village was in the Medium category with an average value of 43,260 which means that SHG member households in Margodadi Village have sufficient food security. This is because the aspect of food availability of SHG member households and

aspects of food distribution of SHG member households were in the “medium” at best.

***The Relationship between the Effectiveness of SHG in the PPMK and the Level of Household Food Security of SHG Members***

The relationship between the effectiveness of SHG in the PPMK program and the level of food security of SHG member households using the Spearman’s Rank correlation analysis showed a significance value of 0.017. This value was smaller than the  $\alpha$  value of 0.05 or at confidence level of 95%, which means that there is a significant difference between the effectiveness of SHG in the PPMK and the level of food security of SHG member households in Margodadi Village.

Based on the results of the research above, it can be concluded that the more effective SHG in the PPMK, the higher the level of food security of SHG members in Margodadi Village. The success of the community based PPMK is supported by many factors such as ongoing assistance, and social capital that has been owned by the community (willingness and commitment of the target community).

In other regions, the implementation of PPMK may not be the same as the PPMK in Metro City because it is influenced by several factors. The scope of this research is small, namely at the village level, but the success of the PPMK in Metro City is an indication that this program has the potential to be replicated in other regions to realise food security and community-based independence. The food security programme is very important, especially in poor communities where the level of food security is low.

**Conclusion**

The effectiveness of SHG members implementing the PPMK was “good” with the overall objective of the programme being achieved, namely the increase in the income of SHG member households, the strengthening of institutional capacity of SHG was “fairly good”, and the ability of SHG members to expand their

businesses was “quite capable”. The level of household food security of SHG members in Margodadi Village objectively shows that the majority of households were in high level of food security.

The effectiveness of SHG in the PPMK was significantly different from the level of household food security, with a correlation coefficient of 0.017 and a confidence level of 95%. This result indicates that the more effective the programme gets, the higher the level of household food security of SHG members becomes.

Based on the Global Food Security Index assessment in 2018, Indonesia is in the 65th position out of 113 countries. In 2019, the number of poor people in Indonesia was 24.79 million people. This research provides positive findings to improve food security and reduce poverty in Indonesia. Increasing food security and poverty alleviation must be following the capacity and character of the community. Therefore the approach through SHG is considered appropriate to overcome the problem of food security and poverty.

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