

Participatory action research for rural women's empowerment: Household production of herbal dish soap

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Abstrak Artikel ini bertujuan untuk melakukan penelitian dengan pendekatan Participatory Action Research dalam rangka pemberdayaan ekonomi perempuan pedesaan. Participatory action research (PAR) merupakan penelitian yang melihat partisipasi komunitas untuk mendefinisikan masalah yang dihadapi yang kemudian mengolah informasi yang diperoleh untuk menerapkan solusi secara langsung. Penelitian ini didahului dalam proses pencarian masalah yang dihadapi perempuan di Desa Jatisari Provinsi Lampung. Solusi yang diperoleh adalah dalam bentuk memberikan pengetahuan, keterampilan kewirausahaan, dan contoh bagaimana menghasilkan produk-produk inovatif dengan memanfaatkan sumber daya alam sekitar mereka. Kegiatan pemberdayaan meliputi tiga tahapan yaitu: (1) Memberikan penyuluhan tentang kemungkinan manfaat sumber daya alam di lingkungannya sebagai produk kebutuhan perempuan dengan memberikan contoh pemanfaatan tanaman yang mudah didapat dan tumbuh, misalnya lidah buaya yang mudah ditemukan di pekarangan untuk menghasilkan suatu produk; (2) Memberikan penyuluhan bagaimana menjadi pengusaha perempuan dan menganalisis produk kebutuhan sehari-hari rumah tangga dengan demand yang tinggi (misalnya sabun cuci piring cair); dan (3) Mendemonstrasikan cara pemanfaatan lidah buaya sebagai salah satu komponen dalam pembuatan sabun cuci piring cair.

Abstract This article aimed to do research on the economic empowerment of rural women using Participatory Action Research approach. PAR required performing research to define a problem or implement information as solutions to problems that have been defined. PAR is "research by, with, and for people" as opposed to "research on person." Participatory action research is participatory in the sense that it is a necessary condition that people play a key role and have relevant information about the existing social system (community) under review, and that they participate in the design and implementation of the action plan based on the findings of the research. This research was preceded in the search for problems faced by women in Jatisari Village, Lampung Province. The solutions obtained were in the form of providing knowledge, entrepreneurial skills, and examples of how to produce innovative products by utilizing the natural resources around them. Empowerment activities include three stages, namely: (1) Providing counseling about the possible benefits of natural resources in the environment as products for women's needs by providing examples of the use of plants that are easy to obtain and grow, for example aloe vera which is easily found in the yard to produce a product; (2) Provide counseling on how to become a woman entrepreneur and analyze household products with high demand for daily needs (eg liquid dish soap); and (3) Demonstrating how to use aloe vera as a component in the manufacture of liquid dish soap.

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INTRODUCTION

Women have been recognized as an important driving force behind the nation's progress. The empowerment of women has emerged as one of the most pressing issues nowadays as a direct result of their special roles at home, economic, and society. Mayoux (2000) asserts that the term "women's empowerment" refers to a multifaceted concept that includes economic empowerment, social empowerment, and political empowerment among other subcategories. Through economic empowerment, women are able to have access to more income, which will in turn impact their purchasing habits and, as a result, increase their sense of well-being and self-confidence. Therefore, any effort to promote empowerment will result in a shift in viewpoint, moving from the position of having no choice to the one-off having numerous possibilities (Haugh et al., 2014). The elimination of women's inequality in terms of their ability to make decisions for themselves is another aspect of women's empowerment.

According to Duflo (2012), economic empowerment for women become priority to enable individuals to make positive changes not just in their own lives but also in the lives of their families and the people in their immediate environment. Their capacity to enhance the financial situation of their family is directly proportional to the degree to which they participate in the activities designed to empower them. Moreover, it has been associated with opportunity and creativity; engaging in inventive activities enables individuals to learn a wide range of skills, allowing them to earn a living and expand their networks. This is extremely important due to the fact that limitations placed on the mobility of women are a significant barrier to the economic participation of women, which is necessary for the emancipation of women within harmonious and well-functioning families and society.

Therefore, empowering women does not mean giving them power or empowering them; rather, it means providing them with opportunities, knowledge, resources, and support to enable them to organize themselves in order to increase their self-reliance, freedom of choice, and control over their resources. This is what we mean when we talk about women's empowerment. In point of fact, closing the significant opportunity gap that exists between women living in urban and rural areas is another challenge that must be met (Singh et al., 2013). When we talk about empowering women in rural regions, we are generally referring to programs that are designed to improve the rural women's standard of life and ensure their financial stability.

In general, it demonstrated that women possess powerful personalities and determination to support their family financially (Sunanto et al., 2017). As a result, it is much simpler to encourage these women to start their own businesses if we first provide them some ideas and blueprints for businesses they could start. These ideas for businesses can originate from associated items that cater to a wide variety of needs that women have from their heads to their toes, as well as from the way women interact with the world around them. Because the vast majority of rural women already have some level of agricultural expertise, this opens up great chances for them to make money off of the natural resources in their surroundings.

The next step that was taken was to incorporate Participatory Action Research (PAR), which is one of the research methods that establishes a connection between the research process and the social transformation processes. This societal shift can be seen in three

significant aspects, including a commitment to one's community, the existence of influential community leaders, and the construction of an essential institution. This research brings the research process into the realm of people's interests, identifies practical answers to common problems and challenges requiring action and contemplation, and contributes to practical theory. In addition, this research brings the research process into the realm of people's interests.

The first paradigm of participatory action research to be implemented, individuals must have a significant role and have access to information pertinent to the social system or community under study. Members of the community are most aptly referred to as participants in the conception, implementation, and execution of research. Incorporating aspects of activity also constitutes a change in the character of the phenomenon's perception. PAR refers to the process of conducting research to define a problem and employing information to find solutions to problems that have been defined. A research study on the issue's outcomes facilitates community members' participation in the creation and implementation of a strategic action plan.

The second paradigm of Participatory Action Research is the way for communities to examine problems in a scientific manner in order to guide, enhance, and evaluate their own decisions and actions. There are a number of different ways in which research that has been consistently carried out by academics and researchers in our community might pose a risk and a difficulty for the community. When it comes to society, the connection between intellectual research (which includes scientific study) and society can be both invasive and exclusive. Both of these types of research have the potential to leave out important aspects and aspects of a research project, such as the real-life experiences, aspirations, views, wants, and objectives of community members.

The Participatory Action Research offers ways for modifying the nature of the interaction that often exists between individuals and the institution (here the university) that is responsible for carrying out research and development. This relationship involves how we understand our role more as facilitators than as subject matter experts, how we manage our relationships with educational and business institutions, and how we collaborate in the roles of students, instructors, neighbors, and members of the community.

The principle of Participatory Action Research in education and training can be formulated as: (1) Learning from reality or experiences; (2) Refraining from being patronized; and (3) Learning process through dialogue and discussion. This first principle emphasizes the theoretical and practical nature of this PAR approach. Therefore, existing concepts and ideas are applied to the analysis of reality and needs. Consequently, no one's knowledge is superior to that of another. Because, in truth, every person has a singular experience. This experience must be recognized as a resource for the acquisition of fresh information. Based on the first principle, then the second principle note that there is no single teacher and student position. It means that everyone processes simultaneously as teacher and pupil that focus on the object being examined. Here the researchers take position as outsider. The third component of the learning process is discussion. Due to the absence of teachers and students, the process is no longer a one-way "teaching-learning" process, but rather a dialogical learning process. Dialogic learning process is a learning method that ensures "active and critical dialogue" in a variety of activities, including group discussions, plenary discussions, role acting, etc. This technique of dialogical learning is also aided by appropriate learning media, such as instructional aids, graphics, audio-visuals, etc. This learning technique is intended to encourage participation from all individuals.

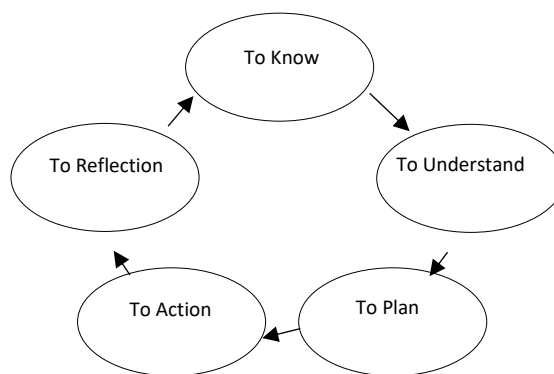


Figure 1. Participatory Action Research Cycle

In the Figure 1 illustrates the cycle of PAR approach, known as KUPAR, for the success of the process community empowerment-based research. The cycle is Know, Understand, Plan, Action, and Reflection. “To Know” is the initial process in empowerment by considering the subjective view of the researcher on the life of the people who researched, such as identifying natural resources and human resources, and building agreements so that researchers are accepted by the community. “To Understand” is the process in which researchers and empowered communities are able to identify the problems that exist in their lives, then correlated with assets owned by the community, so as to realize community commitment in solving strategic issues in their lives. “To Plan” is the process of planning actions strategy in solving problems that arise in society. “To Action” is the balance between human resources and natural resources and the flow of stakeholders who bring the community together. “To Reflection” is the stage where researchers and the community evaluate and monitor the empowerment actions that have been carried out so that empowerment is directed and measurable.

METHODS

This research was conducted in Jatisari, a small village located at the tip of the South Lampung district. Jatisari is a general example of rural area in Indonesia where most of the residents work in agricultural sector as farmers. Administratively, Jatisari is the 5th small village of Jatimulyo Village beneath of Jati Agung sub-district is Jati Agung. Agriculture is the main aspect of life support for Jatisari residents. The castles such as cows, goats, buffaloes, and chickens’ live side by side with farmers giving each other their respective benefits, including the interaction of the herder with his livestock, making the Jatisari atmosphere more truly village. A very noticeable condition in Jatisari is the road in is still rocky and unpaved which makes it difficult for the transportation.

This Participatory Action Research (PAR) was carried out in a participatory manner among women in Jatisari Village with the intention of encouraging transformative acts to improve better living condition. This study was conducted with the goal of gaining a better understanding of how rural women view their living situations and how those conditions may be changed. This research used PAR approach by using these following steps: (1) Developing a communication strategy with the community; (2) Identifying social issues through research conducted within the community; (3) Developing a strategy for community organizing; (4) Taking action to address the issues; and (5) Conducting an evaluation.

Furthermore, to achieve the best possible outcome, participants should carry out the following four procedures: (1) Experiencing technique to provide individuals with the opportunity to feel and experience an event; (2) The ability to reveal "what" has been done or felt, as well as the impressions of others; (3) After completing the disclosure stage, participants collaborate to analyze (based on prior experience) the disclosed materials (data); and (4) Participants are asked to form their own opinions.

RESULT AND ACHIEVEMENT

Developing a Communication Strategy with the Community

The team conducted preliminary study to determine the true condition of Desa Jatisari. The social preparation aimed to gain a better understanding of area of research focus. During preparatory research, the team incultrurated themselves within the community in order to create communication then grasp comprehensive view. It will be much simpler to engage community members in assisting researchers if there is strong communication that is built up within the group. Understanding the duties and responsibilities of pre-existing institutions in society, as well as being aware of the customs practiced by the community, are all important aspects of social preparedness.

Researchers found that the women in Jatisari have strong personalities and determination to support their family economy. Therefore, it is easier to motivate these women to become entrepreneurs by providing them with business ideas and plans. These business ideas can arise from related products from a very diverse women's need from head-to-toe and also based on their interactions with the surrounding environment.

Identifying Social Issues through Community Research

This process investigated the societal issues in Jatisari. Researchers spotted the challenging dan opportunities in community. In addition, facilitators conducted FGDs with the community in order to identify and comprehend the existing issues. Then analyses through mapping, transects, and an awareness of the community's history and traditions.

Generally, among housewives, the most frequent expenses on soap consumption is dishwashing soap (Waspodo et al., 2017). Every household uses dishwashing liquid soap as one of essential homecare supplies. There has been an increase in the use of liquid soap in recent years because of its advantages over solid soap including being more cost-effective, hygienic, and simple to make. Due to their daily uses of dishwashing soap, in a month, it can cost up to IDR 100,000 a month, and some can even cost more than IDR 125,000.

An example of plant that can be used as dish-washing soap is *Aloe vera* (Rahama et al., 2020). *Aloe vera*, a member of Lily family (liliaceae), is an easy-to-grow plant that finds almost anywhere in Indonesia. *Aloe vera* is well-known for its beneficial properties in food, beverages, medicine, pharmaceuticals, and cosmetics. Additionally, Gusviputri *et al.*, (2013) reported that *Aloe vera* contains saponins, which have the ability to clean and act as an antiseptic. Saponins levels in *Aloe vera* are about 5.651% per 100 grams and will produce foam when mixed with water.



Figure 2. *Aloe vera* plant

For calculation of capital and profit begin with calculate how much of each ingredient cost. For example, for liquid dish-washing soap ingredient that need cash as follow: (1) The cost of Texapon is IDR 11,500 per 250 grams; (2) The cost of salt is IDR 1,000 per 125 grams; and (3) The cost of additional ingredients such as fragrant and coloring approximately IDR 5,000. Based on the gross cost, the ingredients need cost around IDR 19,000 for approximately two liters' liquid dish-washing soap.

Afterward, the preparations for making liquid dish-washing soap, including materials, equipment and detailed instructions. The main ingredients were *Aloe vera*, Texapon, salt, water and additional ingredients such as fragrances and coloring. Texapon, a foaming agent, is a substance with surfactant properties that can be used to remove fat and dirt. Texapon is well-known in the manufacturing industry for its cleaning products, which include dishwashing liquid, hand soap, and shampoo. Texapon is a trade name for the chemical compound Sodium Lauryl Sulfate (SLS) (Arwati et al., 2016). In addition, salt or often referred to by its chemical terms Sodium chloride is an ionic compound with the formula NaCl. Salt is most responsible for salinity from the sea and from the extracellular fluids of many organisms as the main ingredient in this edible salt, usually used as a seasoning and food preservative. In the manufacture of liquid soap, its function is as a thickener for soap which is still in the form of water.

Developing a Strategy for Community Organizing

According to a study conducted by Fossen *et al.*, (2013), education is critical and decisive in seizing opportunities, comprehending new knowledge, and resolving problems that arise in business and management. Women entrepreneurs gain business skills, self-confidence, and a positive perception of themselves through education and training. In comparison to male entrepreneurs, female entrepreneurs are more likely to start a business with less formal education and experience (Ramadani., 2015). Thus, the majority of women entrepreneurs in Indonesia are still constrained by a lack of opportunities to acquire entrepreneurial knowledge. Additionally, women's education in the rural area remains relatively low, resulting in limited skills, creativity, and knowledge of current trends. In many societies, women's self-perception is critical for combating the tide of cultural and anti-entrepreneurial attitudes. Moreover, it can inspire other women to overcome their own obstacles to entrepreneurship.

For the most part, women and men are motivated by the same things when it comes to starting businesses or become an entrepreneur including financial and non-financial reasons. For most urban female entrepreneurs, independence, flexibility, success, opportunity, status and leisure are among the most important factors driving them to start their own businesses. However, women in rural area are more likely to start their own businesses for financial reasons. When it comes to starting a business, rural women are most often motivated by the desire to provide for their families' financial needs.

Delivering entrepreneurship knowledge related to the basic principles of entrepreneurship, especially women entrepreneurs. In addition, the basic principles of production, packaging, and product marketing strategies are also explained.

Taking Action to address the Issues

To create knowledge and inspire these rural women to take action by utilizing their surrounding natural resources by three stages: (1) The possibility benefits of natural resources in their environment as women's need products by giving an example to use the easy-to-get and grow plant, for example aloe Vera that easily find the yard to produce a product; (2) How to be a women entrepreneur and analyze the high household daily-needed product (e.g. liquid dish-washing soap); and (3) Demonstrating how to use aloe Vera as one component to produce liquid dish-washing soap. It is common when working with communities necessitates in-depth reflection, analysis, and hands-on participation. Thus, action research as a methodology that integrates theory and practice, bridging the divide between what we know and what we actually do, and achieving both practical and research objectives.

As the first lecture delivered the knowledge about how surrounding natural resources can be utilized as value products. The first lecture gave participants the shocking reality of Indonesia's wealth. Indonesia has a very high level of biodiversity, which is estimated to have 25% of the world's plant species or is the seventh largest country with a total of 20,000 species, 40% of which are endemic plants. Indonesian has an extremely diverse local wisdom (unique culture that explore natural resources) and endemic plant. This biodiversity has an enormous potential to create many products, for example, women's daily needs include personal care, cosmetics, home care, and medical products.

Indonesia is geographically located on the equator, which results in a tropical climate. Because of Indonesia's tropical climate and the abundance of sunlight resulting hot temperature, high level of humidity, and ultraviolet radiation. This circumstance simultaneously elicits the emergence of its problems and solution providers. For instance, this climate has the potential to cause skin and scalp problems such as dry skin, dandruff, and lice. On the same time, the tropical climate provides a variety of plants that can help treat tropical skin.

Indonesians should be able to utilize their vast array of endemic plants found nowhere else on Earth. However, the reality is that Indonesia's exploration and utilization of natural resources, including those used in cosmetics, are still limited. Moreover, imported cosmetics or homecare products have dominated daily use among Indonesian. Therefore, it is necessary to optimize the increase in the use of endemic plants for Indonesian herbal industry.

If we take a look around, we will find a slew of medicinal and therapeutic plants that are endemic to the area and sometimes even considered wild. Consider the cucurbitaceae family, which includes watermelon, melon, cucumber, bitter melon, pumpkin, and Bellagio can be

used as cosmetics and medicine: (1) Cucumber can help slow down the aging process of the skin; (2) Bitter melon can help treat dandruff and acne.

Additionally, one of the diversities of indigenous wisdom that has begun to be overlooked is the culture of using plants for medicinal or cosmetic purposes. A study from Styawan *et al.* (2016) reported that the Malays in Sungai Pinyuh District, Mempawah Regency, use plants as cosmetic ingredients as part of their culture. Another study by Noviantina *et al.*, (2018) highlighted the ethnobotany of natural cosmetic plants of the Dayak Kanayatn community, Sebatih Village, Sengah Temila District, Landak Regency. In this interim conclusion, the first lecture gave participants ideas for their projects creating a business.



(a)



(b)

Figure 3. The lecture activities (a) The first lecture about biodiversity of Indonesian plants; and (b) The second lecture about women's entrepreneur.

The instruments that needed were a container for mixing the ingredients, a stirrer, a measuring cup, and a bottle for product containers. The first step was peeling and cutting the Aloe vera, followed by blending it with water into a smooth gel with a blender. The mixed gel and water volume is approximately two liters. Following that, the next step was mixing 250 grams Texapon with 125 grams' salts in a container while stirring. Then slowly added two liters' liquid-Aloe vera gel to the container until the mixture was homogeneous. Then the last step was to add the desired fragrance and color. To ensure the highest quality, allow the liquid soap suspension to sit for 24 hours until it becomes homogeneous and transparent.



Figure On the spot training of liquid dish-washing soap



Figure 4. (a) End-product of liquid dish-washing soap; and (b) The end-of-activities photo session.

CONCLUSION

According to the results of the evaluation, none of the participants had any prior experience learning about how to create liquid dishwashing soap, about how entrepreneurs operate in Indonesia, or about the biodiversity of Indonesia. After that, as a result of taking part in the activities, the vast majority of participants acquired new information and abilities pertinent to the aim of this participatory action study. The participants' question-asking behavior during the events was indicative of their level of enthusiasm. When it comes to turning native plants into items that may be sold to boost a family's income, there is a wide variety of options available to choose from. Aloe vera is typically included as one of the components of dish soap that comes in liquid form. It is possible to produce dish soap goods at home, either for personal use or for sale. These items can be made for either purpose. The majority of participants have been motivated, based on the process of assessment, to become women entrepreneurs and develop their own products.

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