



Women, agriculture, and villages: A community of empowerment study to achieve wellbeing and sustainable development

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ABSTRACT

Background: The women farmers play a crucial role in Indonesian villages. It needs the empowerment model for addressing the challenges and opportunities so the women farmers can increase her capacity especially in the agriculture system and family quality. By this condition we conduct research that focuses on the process of empowerment to achieve wellbeing and sustainable development. **Method:** Data drawing on a literature review, best practices, and real-life narratives. **Findings:** The data shows that despite their significant contribution to agriculture, women farmers are facing a lack of resources like land, credit, and information. Social norms build can relegate them to less demanding tasks, while decision-making power frequently resides with men. These persistent gender biases hinder their full potential and limit their agency. The narrative analysis reveals the remarkable resilience of women farmers. They manage their farms efficiently, innovate to adapt to changing circumstances, and find purpose and well-being through their work. The stories showcase their crucial role in rural economies and their capacity to overcome limitations. The research identifies key areas to empower women farmers and achieve sustainable development. **Conclusions:** Investing in their well-being through access to healthcare, childcare, and financial security empowers them to invest in themselves and their families. Promoting sustainable practices through training programs equips them with the tools to nurture the land for future generations. Fostering knowledge sharing and collaboration creates a network for innovation and best practices to flourish. Finally, breaking down gender barriers and promoting women's leadership in agriculture is crucial for achieving true empowerment and a more equitable future. By prioritizing the well-being of women farmers and fostering sustainable practices, we can create a virtuous cycle. Empowered women farmers contribute to a more secure and nourishing future, not just for themselves and their families, but for the entire community and the environment they sustain. Investing in women farmers is an investment in a future where well-being and sustainability go hand in hand. **Novelty/Originality of this Study:** By integrating qualitative data from in-depth interviews and document analysis, it uncovers the intricate interplay between gender, agriculture, and rural development. Ultimately, the research highlights the critical role of tailored empowerment strategies in enhancing the economic, social, and environmental resilience of these women.

KEYWORDS: agriculture; sustainable development; village; wellbeing; women.

1. Introduction

Society is an inseparable sociological and ecological pillar in life patterns. The role of society is very important, especially for women who are called closer to Mother Earth

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because of their feminine nature. In social life, women are also the pillars of life, both in terms of managing family finances and strengthening family psychology (Sajogyo, 1985). This is why women have an important position in the social order, so these women certainly need to be empowered and made independent.

On the other hand, with their strengths and responsibilities, women are very vulnerable to entering the cycle of poverty. Stigma and culture that have been structured for so long have placed women's positions at the bottom, weak, and powerless, even in determining their own lives. A woman will usually be the responsibility of the men around her, namely her father, brother, sister, or husband. This condition also places how women are sometimes even considered a burden and are considered only capable of doing domestic tasks.

Stigmas like this are especially prevalent in rural areas. Rural areas, which are considered to have a slower pace of life than urban areas, make women's jobs stagnant. In addition to domestic matters, women in villages are also usually close to agriculture. Agriculture becomes a commodity in rural areas because rural land is vast and considered more fertile than urban land. Unfortunately, this agriculture is sometimes seen as an element that is sidelined because it is considered an informal job with uncertain results. In fact, this is not the case, agriculture has its own art and rules. Patience and perseverance are required to farm. Although in some places agriculture cannot produce every month, however, when the harvest season arrives, many of these farmers can then fulfill their food supplies, sell them for their livelihood during the dry season, pay for school, and other needs. This is where the role of these female farmers is very large, she must be able to manage the finances from her farming, so that it is enough for the needs and supplies for her family (Andalla & Listyani, 2018).

Women's bargaining power is influenced by their ability to manage finances. Economy here is related to how the financial cash flow is managed by women. In rural cases, there is a tendency for women to be caught in the tradition of daily or weekly credit. This is what makes women only use the money they earn for their families only at that time, so this is where in the future women have the potential to be blamed, in the failure of a family (Hanani, 2013).

These female farmers have two tasks, namely managing their family and managing their farm. For that, these female farmers need more support. Not infrequently they feel drained every day because of the busy tasks they do. For women in villages too, mental health is not fully understood, so all that can be conveyed is emotions that often lead to conflict. Masculinity also makes these women not have the space to feel that their work burden is also large. Women are educated to be able to hide their feelings, their difficulties, and the various sufferings that they have to go through alone.

Therefore, there needs to be a mentoring pattern for women. Women with their various potentials must get forms of appreciation that are also balanced. Empowerment is the key to how the role and position of these women can be elevated. Empowerment is the process of giving power/power to the weak and reducing the power of those who are too powerful to achieve balance (Mamonto et al., 2017). From the understanding of empowerment, in the case of female farmers, empowerment can create a community that is skilled in managing the surrounding environment that can be processed and developed in creativity through the potential contained in the vast forest land (Saiful et al., 2018).

Through the role of empowerment, farmers can increase better productivity. This productivity will also spur an increase in the role and parenting patterns in the family (Said, 2020). Every woman has the initial capital of perseverance, so if she gets the right empowerment pattern, women will no longer be just life partners, but controllers of family economic resilience. Empowered female farmers are also able to provide prosperity to the village where they live. She is able to generate a high flow of production (Meyer & McDowell, 2014), consumption, and distribution of finances, which will then have an impact on the economy and social life of the village community. The existence of empowered female farmers will be an example for the surrounding community regarding the best practices for managing work, family, and how to develop themselves.

Empowerment programs are efforts to improve personal status and role (Hetzer, 2022). This statement explains the efforts to empower women to have equal rights, play a role in solving problems, and actively participate in advancing the role of women in planning, directing, and protecting. In addition to treating women as inferior, other forms of subjugation can hinder women's development (Sibarani & Gulo, 2020).

This can be seen from the development of a paternalistic culture in the Indonesian bureaucracy where women play a small role. Their status is looked down upon in various fields. For female farmers in villages, the existence of associations is also a way for them to be empowered. The practice of *arisan dasawisma*, women's farmer groups, and other associations have succeeded in advancing these female farmers in villages collectively to be able to utilize agricultural resources and increase farmer productivity towards prosperous female farmers in villages. In these associations, the flow of information is very massive so that if it can be optimally utilized, it can encourage increased knowledge, awareness, and innovation in order to increase the yields of land and plants for members and the surrounding community. Through empowerment in the field of socialization of utilization, management, and marketing of agricultural product distribution, these female farmers in villages can avoid falling into a pattern of selling agricultural products haphazardly or below market prices (Bodnár & Varga, 2022).

Beyond economic benefits, the empowerment of village women farmers extends to the social and environmental spheres. Studies have shown that when women have greater control over household income (Mokati et.al, 2024), they are more likely to invest in their children's education and health, leading to a more educated and healthier population. Additionally, women farmers often possess a deep understanding of their local ecosystems and are more inclined towards sustainable practices that preserve soil fertility and biodiversity. However, achieving true empowerment for village women farmers requires addressing the existing challenges. One major obstacle is the deeply ingrained patriarchal structures that limit their access to resources and decision-making power. Cultural norms often dictate that men control land ownership and finances, leaving women with limited bargaining power. This lack of control restricts their ability to invest in better seeds, fertilizers, and irrigation systems, hindering their productivity (Leder-Büttner, 2024).

Another hurdle is the limited access to education and training opportunities specifically designed for women farmers. Salahuddin et al. (2017) stated that the level of farmer knowledge influences farmer motivation in farming. Also the traditional agricultural training programs are often male-dominated and fail to address the specific needs and challenges faced by women. Providing targeted training programs on topics like sustainable farming techniques, financial literacy, and marketing strategies can equip women with the knowledge and skills necessary to improve their yields and navigate the agricultural market more effectively.

Building strong social networks and fostering a sense of community among women farmers can be a powerful tool for empowerment. These networks can provide a platform for knowledge sharing, peer support, and collective action. Farmer cooperatives led by women can negotiate better prices with buyers, access shared resources like machinery, and advocate for policy changes that address their specific needs more.

Government and non-governmental organizations have a crucial role to play in facilitating the empowerment of village women farmers. By allocating resources for targeted training programs, promoting access to credit and land ownership, and supporting the formation of women-led cooperatives, these entities can create an enabling environment where women can thrive. Investing in women farmers is not just about economic growth, it's about building a more just, sustainable, and prosperous future for rural communities (Baysan et. al., 2023).

Based on the above exposure, this study will further discuss the relationship between women, agriculture, and villages. The importance of placing women in the agricultural and village order is used to see the nature of empowerment and to what extent the government, private sector, and NGOs have succeeded in carrying out empowerment patterns, especially those that can then be useful in improving people's welfare. In this

study, the emphasis on the focus of empowerment will be carried out through various analyses of empowerment theories.

This research is important to be carried out considering that agriculture is one of the largest commodities in Indonesia and rural women have a large role in it (Elizabeth, 2007). Therefore, in addition to increasing economic value, through empowerment of female farmers, it can improve the quality of life and human resources (Human Development Index). However, in terms of research, of course this research still has limitations, the limitations that the researchers were able to interpret are around not yet mapping to a specific sub-discipline, the number of informants, and cross-method quantitative and qualitative methods that have not been able to be carried out. For this reason, it is hoped that after this, researchers can use this research as an initial basis so that they can determine a more comprehensive and radical research direction.

Based on this introduction, the author also wants to invite the government, NGOs and local communities to get involved in efforts to empower women farmers. The greater this effort also shows how committed each sector is to the issue of empowerment. Empowerment can be carried out not only in the economic sector, but also in forming social networks and personal strength for female farmers. Apart from fighting poverty, women farmers also fight gender discrimination, access to resources, and the challenges of changing times which require them to adapt, especially in facing changes in behavior and parenting patterns towards children. This is why empowerment must be carried out by every sector, in every field. Because only through a comprehensive empowerment system can the challenges faced by rural women farmers be overcome. So this research has speciality in formulating studies that represent social, economic and agricultural context. The novelty that I can propose is related to the diversity of data, such as data from mapping studies which come from studies published in Scopus and also in-depth interviews conducted with several informants with related and special criteria, namely representing women of various ages and educational backgrounds who then choose farming and living in the village.

2. Methods

This study adopts a qualitative approach to delve into the lived experiences of women farmers in Yogyakarta, Indonesia. Qualitative research prioritizes understanding the complexities of human experience through in-depth exploration of participants' behaviors, perceptions, motivations, and the natural environment that shapes their lives (Moleong, 2017). Unlike quantitative research, which focuses on quantifiable data and large sample sizes, qualitative research values rich, detailed accounts from a smaller group of participants (Creswell & Creswell, 2018). This allows for a deeper understanding of the phenomenon under study, in this case, the empowerment process and its impact on these women farmers. The researcher plays a central role in guiding the research process, ensuring that the inquiry remains focused and the collected data is relevant and meaningful (Sugiyono, 2018).

To comprehensively map the empowerment process and its multifaceted impact on these women, The researcher will employ a multi-pronged data collection strategy. This strategy utilizes two complementary methods: First, document analysis. The researcher will conduct a thorough examination of relevant documents, including regulations governing agricultural practices, popular writings that reflect societal attitudes towards women farmers, news articles that capture contemporary challenges and opportunities, and any other documentary sources that shed light on the context surrounding these women's lives. This document analysis will provide valuable background information and help us understand the broader socio-economic and cultural forces shaping their experiences. To determine the relevance and reliability in data mapping by Vos Viewer, the researcher limited the document by keywords "Woman", "Agriculture", "Villages", and the subject "Social Sciences" and "Agriculture"; Second, informal interviews. The cornerstone of this study will be in-depth, informal interviews with a carefully selected group of

women farmers in Yogyakarta villages. The informal nature of these interviews allows for a more conversational and open-ended approach, fostering trust and rapport with participants. This will enable them to share their experiences, challenges, and perspectives on empowerment in a comfortable and uninhibited way. By delving into their personal narratives, the researcher hopes to gain a rich understanding of their journeys towards empowerment, the strategies they have employed, and the impact it has had on their lives and the lives of their families. By employing these two data collection methods concurrently, the researcher can leverage the strengths of each approach. Document analysis provides a broader context and helps us identify potential themes, while the in-depth interviews offer a nuanced understanding of the women's lived experiences. This triangulation of data strengthens the validity and credibility of our research findings (Bowen, 2009).

For the analysis process, Following the iterative data analysis model proposed by Miles and Huberman (Miles & Huberman, 1994), the researcher will begin analyzing the data concurrently with data collection. This cyclical process involves: Data reduction, The researcher will meticulously organize and categorize the collected data from both document analysis and interviews. This may involve coding the data based on emerging themes and identifying patterns; Data display, the organized data will then be presented in a way that facilitates clear interpretation. This might involve creating tables to summarize key findings from the document analysis or crafting compelling narratives from the interview transcripts; Drawing conclusions and verification, through a continuous process of analysis and reflection, the researcher will identify key themes, patterns, and insights that emerge from the data. This will involve member checking, where the researcher shares preliminary findings with the women farmers to ensure the accuracy and authenticity of our interpretations. Ultimately, this process aims to draw credible and well-supported conclusions about the empowerment process and its impact on the well-being of these women farmers.

Additionally, the researcher will analyze the data through the lens of wellbeing theory to understand how empowerment contributes to a sense of control, purpose, and fulfillment in the lives of these women. This expanded approach strengthens the research method section by providing a more detailed justification for the qualitative approach, elaborating on the specific data collection methods and their rationale, and outlining the data analysis process with greater clarity.

3. Results and Discussion

3.1 Mapping the previous research about woman, agriculture, and village

This study sought to explore the nexus between women, agriculture, and villages. A systematic review was conducted, analyzing relevant peer-reviewed literature published in Scopus, a comprehensive bibliographic database (Burnham, 2006). The inclusion criteria were specifically designed to ensure thematic coherence. Therefore, only journal articles, conference proceedings, and books that explicitly addressed all of the following keywords were selected: "Women," "Education," "Agriculture," and "Villages." This search strategy yielded a total of 686 publications as of June 5th, 2024, with the social sciences domain accounting for the largest portion (n=306).

A bibliometric analysis was subsequently conducted using VOSviewer software. This bibliometric mapping aimed to elucidate trends, patterns, collaboration networks, and the overall knowledge structure within the retrieved literature. The analysis revealed a total of 4415 unique keywords employed by the authors. To refine the analysis and focus on more prominent themes, a minimum keyword occurrence threshold of 5 was implemented, resulting in a set of 479 keywords.

This visual representation depicts a bibliometric network map constructed using VOSviewer software. The network illustrates the thematic interconnectedness within a specific research domain, likely centered on women, agriculture, and villages in developing

countries (based on the presence of these terms within the labels). The element of this visual representation is: Nodes, the circles represent distinct research clusters or subject areas. The size of each circle corresponds to the volume of publications associated with that particular theme. Larger circles signify a greater number of published articles within that specific research area; Labels, the text within the circles denote the keywords or thematic foci of each research cluster. Examples include "India," "agriculture," "women," "developing countries," and "article." These labels provide insight into the prevalent research themes within the broader domain; Links, the lines connecting the circles represent the interconnectedness between various research areas. The thickness of each line indicates the strength of the association between the connected clusters. Thicker lines signify a stronger thematic connection between the linked research areas.

The network map (Fig. 1) encompasses a publication time frame spanning 1957 to 2024. A thematic analysis of the network reveals a prominent part of the research is that agriculture is most related with the subject of females and developing countries. This co-occurrence likely reflects the significant role that agriculture plays in developing economies, where a substantial portion of the population relies on agricultural land for their livelihood. Consequently, the network map encompasses discussions on climate change and environmental degradation, as these factors pose significant challenges for agricultural sustainability in developing nations, particularly Indonesia. Furthermore, the network visualization underscores themes related to employment, family structures, and socio-economic management, reflecting the multifaceted context surrounding women farmers in developing villages. These interconnected themes offer a springboard for researchers seeking to comprehend the intricate challenges and opportunities faced by women in this sector.

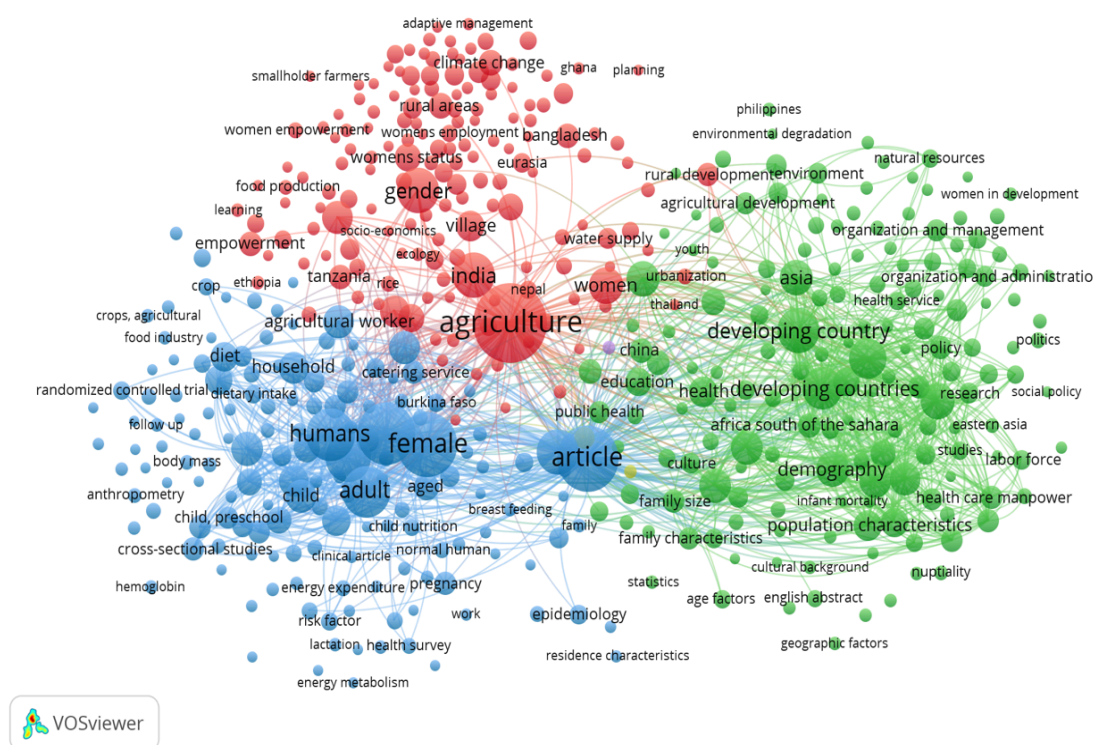


Fig. 1. The most frequent keywords
(Vos Viewer, 2024)

Beyond the network analysis, the author conducted a literature review. This review employed rigorous selection criteria to identify three highly relevant and demonstrably influential articles. These articles provided valuable insights into the complex nexus between women, agriculture, and villages, thereby establishing a robust foundation for further analysis within this research domain. The selection criteria ensured that the

chosen articles directly addressed the research focus and presented established knowledge within the field (Table 1).

Table 1. The most related and influential articles

Authors	Years	Title	Journal	Content
Jost, Kyazze, Naab, Neelromi, Kinyangi, Zoughmore, Aggarwal, Bhatta, Chaudury, Tapio-Bistrom, Nelson, Kristjanson	2016	Understanding gender dimensions of agriculture and climate change in smallholder farming communities	Climate and Development	A study in Uganda, Ghana and Bangladesh investigated how small farmers adapt to climate change. Farmers noticed environmental shifts and adjusted their practices. The study found women facing more challenges due to limited resources, less access to information and adaptation strategies often increasing their workload. An interesting approach uses nearby villages with similar future climates to share successful practices. Forecasts weren't fully trusted due to institutional issues, especially for women. The research provided some understanding of women's challenges, but further studies are needed to better address their specific needs in climate-smart agriculture programs.
Perez, Jones, Kristjanson, Crammer, Thornton, Forch, Barahona	2015	How resilient are farming households and communities to a changing climate in Africa? A gender-based perspective	Global Environmental Change	This study looks at how communities in nine African countries deal with changes like climate shifts and economic shifts. It uses a special dataset combining surveys and focus groups to explore different environments and farming systems. The study finds that population growth, economic changes, resource use policies, and weather are all important factors affecting these communities. It also examines how men and women differ in their farming and daily lives. Women have less access to resources like shared land and money, and the land they do control is often worse quality and not permanently theirs. While women participate in risk-sharing groups and get help from outside social services, official organizations supporting agriculture mostly favor men. The study concludes that policies are needed to address these biases and ensure both men and women can be more resilient in the face of change.
Kesavan, Swaminathan	2008	Strategies and models for agricultural sustainability in developing Asian countries	Philosophical Transactions of the Royal Society B: Biological Sciences	The Green Revolution's success in boosting Asian food production is fading. Intensive farming methods that ignored science and ecology have damaged soil, water, and crop diversity. As cities expand and farmland shrinks, feeding a growing population while protecting the environment becomes even harder. There's another problem: even with enough food produced, millions of poor rural families can't afford it. This is especially true for those who rely on farming, fishing, or have no land at all. In India alone, this affects roughly 200 million people. To address these issues,

the "evergreen revolution" proposes a new approach to agriculture. This eco-friendly system focuses on helping the poor, particularly women. It uses sustainable practices to keep raising food production forever. The plan involves creating "bio villages" that combine eco-friendly farming with small businesses that use local resources responsibly. Modern technology centers in these villages would provide farmers with up-to-date information. This "everyone farms" system aims to achieve both environmental and economic goals, and this paper discusses how it would work.

The contents of the most related and influential articles illuminate the intricate relationship between women, agriculture, and villages in the face of climate change and economic transformations. This analysis dissects the key challenges and potential solutions presented, emphasizing the critical role of women in achieving sustainable agricultural development within village communities. By this condition we can address challenges for women farmers, opportunities for women's empowerment, challenges for villages, opportunities for village-based adaptation.

Challenges for women farmers means that resource Constraints have a significant disparity in access to resources crucial for agricultural production. Article two underscores how women farmers have limited access to land, financial capital, and other essential inputs, hindering their agricultural productivity and overall well-being (Agarwal, 2010); Information Asymmetry: The knowledge gap between genders further disadvantages women. Article one highlights how women often lack access to extension services and information dissemination channels regarding climate-smart agricultural practices; Disproportionate Workload: The burden of adaptation can be unevenly distributed. Article one suggests that existing adaptation strategies may disproportionately increase the workload for women farmers, further exacerbating existing gender inequalities within the agricultural sector sector (Beaman & Dillon, 2018).

Opportunities for women's empowerment means that the "Evergreen Revolution" proposed approach offers a glimmer of hope. Article three outlines the "evergreen revolution," a framework that prioritizes supporting women in sustainable agricultural practices within "bio villages." This concept has the potential to empower women by fostering a supportive environment that addresses their specific needs and challenges.

Challenges for villages related to climate change. Environmental shifts pose a significant threat to traditional agricultural practices in villages. Article one acknowledges how these changes disrupt established routines and necessitate adaptation strategies; Resource Limitations: Beyond climate change, villages contend with additional challenges. Article two highlights how population growth, economic fluctuations, and resource use policies can further strain village resources and limit agricultural productivity; Knowledge Gaps: Limited access to reliable information can hinder adaptation efforts. Article one mentions how villagers, particularly women, may not fully trust or understand weather forecasts due to institutional issues, potentially hampering preparedness for extreme weather events.

Opportunities for village-based adaptation related to knowledge sharing. The "climate analogue approach" offers a promising solution. Article one describes how villages with similar future climates can share successful adaptation strategies, fostering peer-to-peer learning and accelerating adaptation efforts; Technology-Enabled Solutions: Village-based knowledge centers equipped with modern technology can bridge the information gap. Article three mentions the potential of such centers to provide farmers with up-to-date information critical for informed decision-making; The "Evergreen Revolution" for

Villages: The proposed "evergreen revolution" holds promise for villages as well. Article three suggests that the emphasis on sustainable practices could benefit both village ecology and agricultural productivity in the long run.

Therefore we can conclude that while they face significant challenges, the potential for women's empowerment through targeted interventions and supportive frameworks exists. The proposed "evergreen revolution" and the concept of bio villages offer promising avenues for fostering gender equality, promoting sustainable practices, and building resilience in villages confronting environmental and economic challenges. Further research that delves deeper into the specific vulnerabilities and needs of women farmers in diverse village contexts is crucial to inform the development of effective policies and interventions. Additionally, addressing gender biases within agricultural support systems and empowering women through access to resources, information, and technology are essential steps towards building a more equitable and sustainable future for both women farmers and villages as a whole.

3.2 Best practices about empowering villages woman farmers

Community empowerment is a strategy to realize community capacity and independence. The goal of community empowerment is to enable and empower communities, especially from poverty and underdevelopment/inequality/ powerlessness. The principles of community empowerment that must be applied together and sustainably are the principles of equality, participation, self-reliance, and sustainability. Empowerment of rural women farmers must be carried out through social, economic, psychological, and legal empowerment. The stages of community empowerment include: the preparation stage, the assessment stage, the alternative program planning stage, the action plan formulation stage, the implementation stage, the evaluation stage, and the termination stage. Community empowerment is carried out in a participatory manner, meaning that from the planning, implementation, and evaluation stages of development, the village community itself is involved. Empowerment aims to facilitate and encourage communities to become the main actors in utilizing their strategic environment to achieve long-term sustainable development. The strategic environment referred to is the production, economic, social and ecological environment (Mardikanto & Soebiato 2012).

Amidst the crucial issues of food security and sustainable rural development, the empowerment of women in the agricultural sector has become a major focus. Indonesia has regulations in Law Number 19 of 2013 concerning the Protection and Empowerment of Farmers. This law was formed with the aim of a just and prosperous society and to fulfill the basic rights and needs of citizens, the state provides protection and empowerment of the community, especially farmers in a planned, directed and sustainable manner. The reason behind the need for a legal umbrella and reform is due to the increasing trend of climate change, vulnerability to natural disasters and business risks, globalization and global economic turmoil, as well as a market system that is not in favor of farmers, so that farmers need protection and empowerment. In this law, the empowerment of women farmers is included in article 72 which mandates the importance of involving women farmers in the formation of farmer groups. This farmer group must contain women so that women have voting representation and can form associations in agricultural matters.

In Indonesia, women play a vital role in agricultural activities, but many are still marginalized and lack access to resources and information. Cases such as the Mekar Sari Women's Farmer Group/*Kelompok Wanita Tani* (KWT) in Girimulyo Village, Kulon Progo Regency, the Lestari Women's Farmer Group/*Kelompok Wanita Tani* (KWT) in Tlogosari Village, Blitar Regency, and the Sejahtera Women's Farmer Joint Business Group/*Kelompok Usaha Bersama* (KUB) in Cikuya Village, Kuningan Regency, are real examples of the success of women farmers' empowerment.

In-depth analysis reveals the key factors that contribute to their success. Ongoing and contextual training and mentoring provide a foundation for improving the knowledge and skills of women farmers. Easy and affordable access to capital opens up opportunities for

them to develop their businesses and increase their incomes. Effective and efficient marketing, supported by strong and transparent institutional empowerment, is key to ensuring the sustainability of empowerment programs. The adoption of appropriate and environmentally friendly technologies, value-added post-harvest processing, and the development of diversification products, also increase the value of agricultural products and the income of women farmers. The involvement of youth in agricultural activities and partnerships with various parties open up opportunities for collaboration and strengthen empowerment programs in the long term.

The findings of this research confirm that the empowerment of women farmers can be achieved through interconnected strategies. Support from the government, non-governmental organizations, and the private sector in providing access to resources, information, training, and mentoring is key to the success of empowerment programs. Further research is needed to understand the context and specific factors that influence the success of women farmers' empowerment in different regions and cultures. Evaluating the long-term effectiveness of empowerment programs is also important to ensure their sustainability and positive impact.

Empowering women farmers is an important investment in achieving food security and sustainable rural development. By understanding the key factors and implementing the right strategies, we can open up opportunities for women to improve their well-being, food security, and inclusive and sustainable rural development. Empowering women farmers is not just about increasing their capacity and independence, but also about opening up opportunities for them to become agents of change in achieving inclusive and sustainable food security and rural development. With the support and cooperation of various parties, we can create a brighter future for women in the agricultural sector and rural society as a whole.

In addition to the good practices obtained from literature searches, the author has also collected the results of interviews with women farmers living in the village. Interviews were conducted with 5 people with different ages, namely ML (26 years old), BP (58 years old), HS (38 years old), N (55 years old), and SH (86 years old). These informants are farmers who have been working in agriculture for a long time, either as their main source of income or as a side income. These female farmers live in villages scattered throughout the Special Region of Yogyakarta Province, Indonesia. The following are the interview results that were successfully collected.

"This farming is just for entertainment in my old age. I don't say it's serious, I don't say it's not serious either. The farming I do is to turn money around. So that the money doesn't just run out for consumption. But it can also be in the form of savings. If I farm, I'm happy, every time I harvest I can save up to buy gold. So I don't have any trouble saving up to buy gold, I just need to use a little bit from my farming. It so happens that the land is not rented, it is my own inheritance, only the sad thing is that here it is not always possible to farm at all times." - BP

Some women farmers do not always use farming as their main livelihood. Because it is a side business, it is not yet possible to measure the welfare as a result of this economic activity. Therefore, this farming is sometimes not carried out fully with calculations, but only so that money can circulate.

"As a Gen Z who entered the world of agriculture, initially many people saw that this process would not be fruitful. In fact, it all depends on how we innovate in this activity. My background in agribusiness really encouraged me to then decide to take on this job. Agriculture has also become my way to become a content creator which is now my main job. The community that I have is also more often brought together because of content creators." - ML.

Agriculture is sometimes seen as a rough business for women. Therefore, sometimes women are only given jobs that are considered small and are marginalized from the potential that exists. Resource person ML started her farming from home, namely in her yard, through organic farming. This farming has opened the way for her to become a content creator and who is currently working with various elements, both from the private sector and the Ministry of Agriculture.

"I farm after returning from working as a migrant worker. I work on the rice fields from my parents. In my opinion, this farming is enough to live on a daily basis. I also send my children to school from farming. The important thing is to be smart in turning money around so that it runs like not only farming, but also using unused plant waste for livestock. This is so that the results of this agriculture can continue to circulate. I have not joined the farmer's organization, which my husband joined. Here, if you want to make agricultural decisions, it's the men who make them." - HS.

"Because I am a widow, I farm and go to Gapoktan events myself. I have succeeded in sending my children to vocational school from this farming. I'm not like other people who keep the harvest in the barn, I sell it and then buy livestock." - NS.

The results of this agriculture are indeed uncertain, but if managed properly, the informants believe that they can meet their needs. This is what also encourages them to continue farming even though many people have started to switch jobs. Through farming, they become more empowered, although not fully, especially in decision-making because the stigma in the village still places women as a second-class group.

"I am a farmer, I am also active in the community. But here the group is dasawisma. Because many dasawisma members are farmers, when they gather, what they discuss is the farming process. This farming is one of the spirits in my old age so that I don't just stay silent but keep working and producing. If empowerment, yes, in the past there was socialization of fertilization, and from the Bank they offered credit." - SH

Indeed, not all areas have women farmers' groups or usually these KWT are combined from several hamlets. Therefore, they usually use the existing associations. This association then becomes a place for exchanging ideas and new agricultural knowledge. Therefore, it is important in the future to form empowerment not only through activities, but also through archiving data and institutional management. Empowering women farmers requires a comprehensive and inclusive approach that addresses gender barriers and social stigma.

3.3 Narrative analysis: Women farmers, wellbeing, and sustainable development

The provided text paints a nuanced picture of women farmers in Indonesia, highlighting their struggles, successes, and the potential for empowerment. Several themes were explored through narrative analysis in this study. The first theme is diversity and Motivation where the women interviewed represented a range of ages and circumstances. Some, like BP (58), view farming as a supplementary income and a way to manage household finances. Others, like ML (26), leverage their agricultural background for content creation, turning it into a main source of income. This diversity showcases the multifaceted ways women engage with agriculture.

The second theme is challenges and Stigma. The narrative reveals persistent gender biases. Farming is often seen as "rough" work, leading to women being relegated to less demanding tasks (ML). Decision-making power often rests with men (HS). This marginalization hinders women's full potential and limits their agency. Resilience and ingenuity is the third theme. Despite these challenges, the women demonstrate remarkable resilience. They manage their farms efficiently (BP, HS) and find innovative

ways to adapt (ML). N (55), a widow, exemplifies this by utilizing farming to support her family. Their stories showcase the crucial role women play in rural economies and their capacity to overcome limitations.

Impact on Wellbeing and Sustainable development are also an interesting theme. Farming should contribute to a sense of well-being for these women. SH (86) finds purpose and a way to stay active in her old age. HS highlights the financial security farming provides, allowing her to educate her children. This narrative connects agriculture to improved livelihoods and a sense of empowerment. Meanwhile, about sustainable development, the stories suggest that supporting women farmers is key to achieving sustainable development. They manage their resources efficiently (BP, HS), potentially contributing to environmentally friendly practices. Additionally, they often lack access to information and technology (SH). Empowering them can lead to more sustainable and productive agricultural practices.

The last two themes explored are gaps and opportunities; and call to action. The narrative identifies gaps in support structures. While some have benefitted from programs (SH), others lack access to resources like credit (HS). The lack of dedicated women's farmer groups (KWT) in some areas suggests a need for more inclusive organizational structures. Meanwhile, regarding the theme of call to action, the research findings show that the texts end with a call for a comprehensive approach to women farmers' empowerment. The text concludes with a call for a comprehensive approach to women farmer empowerment. This includes structured and sustainable programs (providing consistent training, resources, and access to technology), improved information access (equipping women with the knowledge they need to make informed decisions), market access (facilitating opportunities for women to sell their produce and connect with consumers), and strengthening decision-making power (challenging gender biases and promoting women's leadership roles in agriculture).

By addressing these areas, we can create a future where women farmers thrive, contribute fully to sustainable development, and achieve greater well-being for themselves and their communities. This narrative analysis highlights the importance of recognizing the diverse experiences of women farmers and the need for systemic change to empower them. By supporting their efforts, we can create a more just, sustainable, and prosperous future for rural communities. The narrative reveals a path towards a brighter future where women farmers are not just surviving, but thriving. By nurturing their well-being and fostering sustainable practices, we can unlock a future rich in opportunity. When women farmers have access to healthcare, childcare, and financial security, they are empowered to invest in themselves and their families. This translates to better nutrition, improved education for children, and a stronger sense of community well-being. Additionally, promoting mental health support for women farmers who often shoulder a heavy burden acknowledges the emotional toll of their work.

Investing in training programs on organic farming, soil conservation, and water management can equip women farmers with the tools to nurture the land they depend on. This not only ensures food security for their communities but also fosters a sense of environmental stewardship. Furthermore, promoting knowledge sharing and collaboration amongst women farmers creates a network where best practices and innovations flourish, leading to a more sustainable agricultural ecosystem.

Empowering women farmers has a ripple effect that extends beyond their generation. As they gain economic independence and decision-making power, they become role models for younger girls, inspiring them to pursue careers in agriculture and break traditional gender barriers. This intergenerational shift fosters a future where women are seen as equal partners in building a sustainable food system. By prioritizing the well-being of women farmers and fostering sustainable agricultural practices, we can create a virtuous cycle. Empowered women contribute to a more nourishing future, not just for themselves and their families, but for the entire community and the environment they nurture. Investing in women farmers is an investment in a future where well-being and sustainability go hand in hand.

4. Conclusions

This research delves into the lives of women farmers in Indonesia, weaving a narrative rich in challenges, resilience, and the potential for positive change. The narrative exposes persistent gender biases. Women often face limited access to resources, information, and decision-making power. This marginalization hinders their full potential and well-being.

Despite these hardships, the women interviewed showcase remarkable resilience. They manage their farms efficiently, innovate to adapt, and find purpose and well-being through agriculture. These stories highlight their crucial role in rural economies and their capacity to overcome limitations.

The research identifies key areas to support women farmers and achieve sustainable development: First, investing in wellbeing such as access to healthcare, childcare, and financial security empower women to invest in themselves and their families, leading to improved overall well-being; Second, promoting sustainable practices by make training programs on organic farming and resource management equip women with the tools to nurture the land and create a more sustainable agricultural system. Third, fostering knowledge sharing by encouraging collaboration and knowledge exchange fosters innovation and best practices among women farmers, leading to increased productivity and environmental stewardship; Fourth, breaking gender barriers with challenging gender stereotypes and promoting women's leadership in agriculture is crucial for achieving true empowerment and a more equitable future; Fifth, investing in the future by prioritizing the well-being of women farmers and fostering sustainable practices, we create a virtuous cycle. empowered women contribute to a more secure and nourishing future, not just for themselves and their families, but for the entire community and the environment they sustain. Investing in women farmers is an investment in a future where well-being and sustainability go hand in hand, because women farmers are the determinants of how their family's food security can be met and also determine how they are able to utilize the land while also caring for the environment.

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Author Contribution

A. P. R. D. A. A has been responsible for all the current work, including writing, work plan preparation, defining the bibliographic search, searching the bibliography, selecting the relevant references, coding the references, writing the initial draft, synthesising the manuscript, and revising the final version.

Ethical Review Board Statement

Not applicable.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

No new data is created or unavailable due to privacy or ethical restrictions.

Conflicts of Interest

The authors declare no conflict of interest.

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