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Empowering Traditional Fisherwomen in Makassar's Outer Islands: Enhancing Knowledge and Skills for Sustainable Practices

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ABSTRACT

This research aims to obtain in-depth information about the skills of traditional fisherwomen in processing marine products, and the knowledge of fisherwomen groups is very minimal a reaction of humans to stimuli by the surrounding nature. The type of research is descriptive qualitative with data analysis carried out in four stages; data collection, data reduction, data presentation, and conclusion drawing. Additionally, data triangulation is used to strengthen the findings. The study reveals that to enhance the skills of fisherwomen on both islands in processing seafood, focused training sessions and group assistance are essential. These efforts aim to improve their capacity to utilize fish resources to create products such as shredded fish, fish nuggets, and fish balls, which can serve as a valuable source of supplementary income. Moreover, the limited knowledge of these fisherwomen indicates the need for further support, particularly in introducing techniques for effective product marketing. By facilitating both skill-building and marketing strategies, this research highlights the potential for empowering fisherwomen through initiatives that not only enhance their productivity but also contribute to the economic sustainability of their communities.

INTRODUCTION

Community empowerment efforts in the context of sustainable development have become top priority for many countries, especially in improving the quality of life of vulnerable groups in society. Coastal communities, especially traditional fishing groups, are often marginalized from economic and social progress, despite their important role in the fisheries sector that supports food security. Empowerment programs, as described by Dushkova & Ivlieva (2024), require not only government initiatives but also the involvement and enthusiasm of the community itself to be successful.

Communities that have autonomy in developing local potential tend to be more independent and competitive in facing economic challenges. The government has a role as a facilitator in community empowerment, especially for vulnerable groups such as traditional fishers who often experience powerlessness due to economic uncertainty and social vulnerability (Adam et al., 2021; Stacey et al., 2019). Policies that provide freedom for communities to develop local potential can create positive effects on the regional economy and improve the welfare of their families.

In the context of empowering traditional fishermen, changes in the fisheries sector, both terms of technology and improvements in fish landing, do not necessarily bring significant changes to the welfare of fishermen. According to García-Lorenzo et al. (2015), experience and learning through social interaction play an important role in promoting new awareness and skills in fishing communities. Therefore, relevant skills training is one of the effective strategies to

improve the welfare of fishermen and their families (Asmawati et al., 2020).

The outer islands of Makassar, namely Lajukang Island and Lumu-Lumu Island, are inhabited by traditional fishing communities with low economic levels. These two islands are inhabited by around 450 households, most of whom depend on marine catches. Fishing activities are highly dependent on weather conditions; when the weather is favorable, they can go to sea, but in bad weather, their productive activities stop. This condition makes their income very unstable and increases the risk of poverty in the community (Makassar City in Figures, 2023)

The fisherwomen's groups on both islands face further challenges. The majority of them do not have adequate formal education and do not have the skills to support the family economy. Usually, their role is limited to taking care of the household, so there are no productive activities they can do to help the family economy when the fishermen are not at sea. Therefore, special empowerment initiatives are needed for this group of mothers to cultivate the potential of the sea around them, for example in processing marine catches so that they can be value-added (Torre et al., 2019).

The geographical condition of the two islands located in the Sangkarrang Islands sub-district, Makassar, does provide its challenges in implementing empowerment programs. With access that requires a 2.5-hour trip from Paotere Harbor using a motorboat or "*Jolloro*", the communities on Lajukang Island and Lumu-Lumu Island need assistance in the form of skills and knowledge that can be applied independently. Despite this, the enthusiasm of the local communities is great when given the opportunity and support to develop their skills.

Skill development of fisherwomen can be done through non-formal education based on community empowerment. According to Caesar (20214 and Bausero-Jorcin et al. (2024), skills transformation can encourage openness to new knowledge, which ultimately increases their ability to manage marine resources independently. Empowerment-based training programs also allow for dialogic communication between trainers and participants, which supports a more effective teaching and learning process (Shih, 2018).

Problem identification shows that traditional fisherwomen's skills in processing marine products are still minimal, which is a major obstacle to their productivity outside of household activities. In addition, the limited knowledge of this group makes it difficult for them to develop the available marine potential sustainably. Thus, an empowerment program aimed at developing seafood processing skills is expected to be a solution for improving the economy of fishing families on both islands.

Amid limited access and lack of formal education, empowering fisherwomen in Lajukang Island and Lumu-Lumu Island is key to creating a more independent and competitive community. Over time, empowered traditional fishing groups will be able to utilize marine resources more effectively, which in turn will have a positive impact on the welfare of coastal communities in the region. On that basis, the researcher intends to present the condition of the skills and knowledge of the fishermen of the two islands as a practical step towards community empowerment.

METHODS

The implementation method in this research was carried out on a group of fisherwomen using training with the following stages. During the activity, assistance was provided. The first stage, by conducting an inventory of the types of needs needed in conducting training in processing seafood for groups of traditional fisherwomen. The second stage is to collect data on participants who can take part in the planned training activities. The third stage was to collect data on the learning materials for the women's group. The fourth stage is to determine the time and place of training in processing seafood for traditional fisherwomen, preparing schedules, and determining presenters according to their fields of expertise.

According to Miles et al. (2014), data analysis is carried out in four stages: data collection, data reduction, data presentation, and conclusions. In this study, data validity used source triangulation techniques. Source triangulation is a technique in which researchers collect data from various existing sources because similar data will have better results if extracted from different sources, for example, comparing observations with interviews and documentation. So, in this study, researchers will

compare data from observational research, interviews, and documentation between informants.

RESULTS AND DISCUSSION

The results of this study show that the traditional fisherwomen group on the outer islands of Makassar City, namely Lajukang Island and Lumu-Lumu Island, still face limitations in processing skills of marine products around them. The lack of understanding in processing seafood has limited the group's daily activities to domestic work, namely taking care of their husbands and children. Without adequate productive skills, the opportunity for fisherwomen to contribute to improving the family economy is very limited. This illustrates the low participation of women in the local economic sector based on marine resources, which actually have great potential to be developed to support the welfare of coastal communities.

In addition to the lack of skills, the knowledge of traditional fisherwomen on both islands is also relatively minimal, especially in optimally utilizing the natural resources around them. This limitation is an obstacle for the group of fisherwomen in responding to natural challenges that affect their economic activities. Their awareness and openness to new skills are also low, which may be due to limited access to education and relevant information. Therefore, an empowerment program that involves practical training and education on seafood processing is expected to improve the skills and broaden the horizons of this group of fisherwomen. The program is expected to change their mindset and behavior so that they can play an active role in creating added value from the available marine potential, which in turn will contribute to the improvement of their living standards and family welfare. Both of these will be described as follows.

The Skills of Traditional Fisherwomen's Group in Processing Marine Products

The results showed that the seafood processing skills training for groups of traditional fisherwomen in Lajukang Island and Lumu-Lumu Island succeeded in improving skills in processing fish and other marine products into value-added products, such as fish balls, fish nuggets, shredded fish, and accessories from shellfish waste and fish scales. This training was conducted as part of an empowerment program to improve productive economic skills among fisherwomen who were previously limited to domestic activities. According to Harper et al. (2020), Kawarazuka et al. (2017), these skills have the potential to increase women's participation in the local economic sector and reduce dependence on the income of male fishermen in outer islands.

An interview with one of the people in charge of the group, Sitti Aminah (64 years old), showed that the traditional fisherwomen group members benefited from the program, despite challenges related to limited facilities. Most group members recognized that access to training has opened up opportunities to improve the quality of processed seafood products that they can sell in the local market. This view is in line with the study by Barnett et al. (2020) which emphasizes the importance of infrastructure support for women's economic empowerment in coastal areas to increase the productivity and competitiveness of local products.

From observations and interviews, it is known that around 70-80 percent of the fisherwomen group members who participated in the training have demonstrated the ability to process fish and marine waste into value-added products. These women succeeded in making processed products that are more durable and attractive to consumers, such as shredded fish and fish nuggets (Kontominas et al., 2021). This is in line with the research of Kilinç & Kilinç (2022) which states that product-based training can provide practical skills that increase the competitiveness and selling value of traditional fishing community products.

However, challenges in terms of facilities are still a major obstacle. Wati (46 years old), one of the group members, revealed that although fish raw materials are abundant, the limited production facilities make the processing process less optimal. According to her, the sustainability of this program requires support from the government and other stakeholders to provide adequate processing equipment and marketing facilities. Such support, as described by Gustavsson et al. (2021), is very important in ensuring the success of women's economic empowerment programs in the fisheries sector.

Haji Hamid, the community leader of Lumu-Lumu Island and supervisor of the fisherwomen's group, said that the practice-based training was very

effective in improving the skills of group members. He is optimistic that the skills acquired by the traditional fisherwomen can open opportunities for them to market processed seafood products more widely, both locally and in South Sulawesi Province. A study by Siles et al. (2019) shows that practice-based education has a significant impact on improving women's technical ability and confidence in managing micro-enterprises in fisheries.

Another challenge is the community's lack of understanding about small business management. Therefore, additional education on financial management and marketing is needed so that fisherwomen can manage their income from production independently. According to Marsan & Sey (2021), increasing managerial capacity is an important aspect of empowering women to create a sustainable economy in remote areas.

The results of this service program also show an increase in the welfare of the local community through wider marketing of processed products. Income from the sale of products such as shredded fish and accessories made from marine waste is a new source of income that helps reduce dependence on marine catch income. This finding supports the results of research by Kabeer (2018) which states that increasing women's access to productive economies can reduce economic vulnerability in fishing families.

Furthermore, in the process of producing accessories from marine waste such as shells and fish scales, the creativity of the fisherwomen is instrumental in creating added value to products that were previously considered waste. These products have the potential to be developed as creative economy commodities that can compete in the local market. According to Kar (2020); and Susilowati & Mafruhah (2023), community-based creativity is an important element in building a sustainable creative economy in remote areas.

In conclusion, the skills training provided to groups of fisherwomen on both islands not only succeeded in improving technical skills but also provided opportunities for local economic diversification through processed seafood products and crafts from marine waste. This empowerment program requires continued support from the government and private sector to provide adequate facilities and assist with the wider marketing of the products. The study by Depellegrin et al. (2022) shows that multi-stakeholder collaboration is essential in ensuring the success and sustainability of coastal community economic empowerment programs.

The Knowledge of Traditional Fisherwomen's Group

The empowerment of traditional fisherwomen's groups in the management of local fishery products, such as shredded fish, meatballs, and fish nuggets, has become a concern of the local community. However, one of the main challenges is to optimize the distribution and marketing of these products to have a significant impact on improving the economy of fishing families. According to Barraket et al. (2023), improving skills in processing local resource-based products must be supported by strengthening market networks to effectively increase family income and local business sustainability. This condition is in line with the expectations of the members of the traditional fisherwomen's group in Makassar, who strive to make their products widely known and more profitable.

Sitti Aminah Dg. Kebo, as the person in charge of the group, emphasized the importance of support from Community Service (*PKM*) activities held by Sawerigading University Makassar. This *PKM* program, according to her, is very necessary to introduce handicraft products made from fish meat processing to a wider audience and help fisherwomen improve the welfare of their families. Community Service activities play an important role in fostering and improving the skills of local communities through access to training and resources, especially for marginalized communities such as traditional fishermen on outer islands who have limited market access.

Wati, one of the group members, stated that they currently rely on traditional market days to market their processed products. However, limited access to wider markets is still a major challenge to gaining optimal economic value. This suggests that despite efforts, marketing strategies and distribution outreach need to be improved. According to Prajanti et al. (2023), increasing community capacity in business management and marketing strategies can contribute significantly to economic growth, especially for communities in remote areas.

Haji Hamid, community leader of Lumu-Lumu Island, revealed that fisherwomen have limited

technical knowledge in product management, so the role of training is very important. Support in the form of fishery product processing training allows them to understand better preservation and packaging techniques, which are urgently needed to expand product competitiveness. According to research by Abdillah et al. (2020), practical training focusing on the processing and packaging of locally-based products can increase product selling value and market competitiveness, thus providing greater economic benefits to coastal communities.

In the context of local economic empowerment, structured community service activities can have a significant impact on improving the economy of fisherwomen on outer islands. The function of social institutions in community empowerment creates opportunities for local communities to respond to increasingly complex economic needs. In coastal environments such as Lajukang Island and Lumu-Lumu Island, synergies between educational institutions and local community groups are needed to create sustainable business models that can increase the economic resilience of fishing families.

Optimizing the marketing and distribution of processed fish meat products is also important to face global competition. Based on research by Kadar et al. (2014) and Upe (2023), local economic development requires innovation in various sectors, including digital-based packaging and marketing technology. The adoption of simple technologies that can be implemented by traditional fishing groups will make it easier for them to promote their products to a wider market while increasing the efficiency of the marketing process.

Community empowerment through entrepreneurship training also has a positive impact on increasing productivity. Training that focuses on resource management, marketing skills, and business management can create economically independent communities. Orhan et al. (2019) stated that continuous entrepreneurship training can equip communities with managerial skills that are essential for managing small businesses, especially in utilizing the potential of local resources.

To strengthen the economy of fishing families, there needs to be a collaboration between educational institutions, government, and local communities. According to Carmen et al. (2023), the synergy between various parties in community empowerment helps create a more economically resilient and independent community in the management of the natural resources they have. Through a sustainable Community Service program, groups of fisherwomen can be more confident in managing and developing their products.

Overall, the results of this study show that the empowerment of traditional fisherwomen has a positive impact on the economy of fishing families. However, the success of this empowerment is highly dependent on continued support in the aspects of technical training, market access, and government policy support that encourages local businesses. Thus, capacity building in processing and marketing seafood-based products is urgently needed to improve the competitiveness of this group in local and national markets.

CONCLUSION

Improving the skills of traditional fisherwomen groups in Lajukang and Lumu-Lumu Islands in processing seafood such as fish meat into shredded fish, nuggets and fish balls is an important step in strengthening the economic resilience of fishing families. In this case, continuous training and mentoring are needed so that they are not only able to produce with good quality but also able to optimize the use of local resources. This effort aims to make processed marine products a sustainable source of additional income while overcoming the limitations in technical skills and business management that have been faced by groups of fisherwomen.

In addition, their lack of knowledge about marketing strategies indicates the need for more structured mentoring techniques to introduce effective marketing practices, both through local market networks and digital media. With this assistance, the fisherwomen group is expected to be able to respond to market needs more adaptively and expand the reach of their products. The whole empowerment process emphasizes that in addition to technical expertise in production, marketing skills must also be a focus for long-term economic success to be achieved and the welfare of traditional fisherwomen groups to be significantly improved.

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