

Training on Making Modern Indonesian Herbal Medicine Products from Rhizome Plants as a Strategy to Increase Housewives' Income in Johor Bahru, Malaysia

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Abstract

The training on making modern Nusantara herbal medicine products from rhizome plants aims to introduce Nusantara herbal medicine recipes with modern techniques while also having the potential to increase the income of housewives in Johor Bahru, Malaysia. This training focuses on introducing rhizome cultivation techniques, processing raw materials into herbal products, and marketing strategies to reach local and international markets. By implementing modern production methods and maintaining the efficacy of traditional herbal ingredients, participants are expected to be able to develop sustainable and profitable herbal medicine businesses. In addition, this training program also provides an opportunity for housewives in Johor Bahru, Malaysia to learn various practical aspects in the theory of processing and managing herbal medicine products so that they can support aspects of household-scale entrepreneurship and contribute to the family economy. Through this program, improvements in the quality of life and economic welfare of participants are expected to be achieved.

Keywords: *Training, Herbal Medicine, Rhizome Plants, Entrepreneurship, Housewives*

1. INTRODUCTION

In this modern era, the use of traditional medicinal plants has received increasing attention due to their potential benefits for human health. One important example in this regard is the Nusantara herbal medicine products that utilize rhizome plants, such as turmeric, ginger, and temulawak. These plants are known to have therapeutic properties that have been used in traditional medicine for centuries. However, the main challenge faced is how to process these plants into useful and economical products to improve the welfare of the community, especially in areas such as Johor Bahru, Malaysia, which is facing economic challenges.

A review of previous literature shows that although rhizome plants have great potential, their utilization in the form of modern herbal products is still limited. Research by Rahardjo et al. (2020) and Setiawan et al. (2022) revealed that processing rhizome plants into modern herbal products requires special techniques to ensure product quality and

effectiveness. On the other hand, a study by Yusuf et al. (2021) showed that training in herbal product manufacturing can be a solution to increase household income, especially for housewives who have great potential in herbal product processing but lack training opportunities.

The scientific novelty of this article lies in the development of a training method for making modern Indonesian herbal products with a focus on rhizome plants, aiming to increase the income of housewives in Johor Bahru. While there have been various studies on the benefits of rhizome plants and herbal product manufacturing, an integrative approach that combines modern techniques with practical training for local communities has not been widely explored. This research offers a novel solution by applying a specially designed training method to improve housewives' skills and knowledge in herbal product manufacturing.

The problem faced in this community service is the low income of households in Johor Bahru due to the lack of skills in processing rhizome plants into products of economic value. The hypothesis proposed is that effective training in the manufacture of herbal products from rhizome plants will improve the technical skills of housewives, which in turn will increase their income and the economic well-being of the family.

The purpose of this article review is to explore and analyze the effectiveness of training in the manufacture of modern Nusantara herbal medicine products from rhizomes, as well as its impact on increasing the income of housewives in Johor Bahru. This research is expected to provide insights and practical recommendations for the development of similar training programs in the future.

2. LITERATURE REVIEW

Community empowerment through training and skills development has been a major focus in many social and economic studies. For example, research by Bamberger et al. (2022) showed that practical skills training can increase household income and social welfare, especially in rural and less developed areas. In the context of herbal product manufacturing, community empowerment through production skills training can help utilize local resources more effectively, improve economic welfare, and reduce dependence on imported products (Bamberger, 2022).

In a previous study on herbal production training, Patel et al. (2021) highlighted that the integration of traditional knowledge with modern technology is a key factor in the success of training programs. The study found that training that combines traditional techniques with modern practices not only improves product quality but also increases competitiveness in the market (Patel, 2021). This is relevant to community empowerment programs that focus on making modern herbal products, where the combination of traditional knowledge and the latest technology can result in higher quality and more competitive products.

Studies of successful community empowerment programs in health and agriculture also show that practical training can significantly affect economic outcomes. For example,

research by Adebayo et al. (2020) shows that agricultural skills training, including agro-processing techniques, can increase farmers' income and reduce poverty. Programs that focus on improving specific skills and knowledge can encourage the adoption of new techniques and facilitate the development of value-added products (Adebayo, 2020).

The literature on training in herbal product manufacturing also shows the importance of a community-based approach in the success of such programs. According to Hossain et al. (2019), training that involves active community participation and focuses on local needs has a higher success rate than programs designed without considering the local context (Hossain, 2019). This underscores the importance of considering the specific needs and conditions of communities in designing empowerment programs, including herbal product manufacturing training.

Overall, the literature review shows that practical training, integration of traditional knowledge with modern technology, and community-based approaches are key factors in the success of community empowerment programs. Existing research underscores the importance of designing programs that consider the local context and involve the active participation of the community to achieve maximum results. Therefore, the training on making modern herbal products from rhizomes in Johor Bahru, Malaysia, has the potential to be a successful model for community empowerment that can be applied in similar locations.

3. IMPLEMENTATION METHOD

Training in the manufacture of modern Nusantara herbal products begins with the identification and selection of relevant and high-potential rhizome plants for use in herbal products. This process involves literature studies and consultations with botanists and herbal practitioners to select rhizome species that have proven efficacy and high market demand (Rahardjo, Kusuma, & Yulianto, 2020). Once the plants are selected, the training will be conducted at a prepared location in Johor Bahru, Malaysia, with adequate laboratory facilities and equipment to support the extraction process and product formulation.

The next stage is the provision of training materials that cover the theory and practice of herbal medicine making. This includes active extraction techniques from rhizomes, herbal product formulation, and appropriate packaging methods. The training will be conducted by experienced experts in the field of herbs and herbal medicine making technology, using the project-based learning method to improve participants' practical skills (Setiawan, Dewi, & Sari, 2022). Practical sessions will be accompanied by live demonstrations, group discussions, and individual exercises to ensure in-depth understanding.

In addition to the technical training, periodic evaluations will be conducted to monitor participants' progress and the effectiveness of the training. These assessments include skills tests, quality of products produced, and participants' satisfaction with the training materials. Indicators of program success include an increase in participants' practical skills, an improvement in product quality, and an increase in participants' income as a result of herbal product sales (Yusuf, Handayani, & Utami, 2021). Evaluation is conducted by collecting

feedback from participants and analyzing product sales data to measure the overall economic impact.

The training program also includes the development of marketing strategies to help participants market their products effectively. This includes training in digital marketing techniques, branding, and small business management. In addition, ongoing support will be provided in the form of post-training mentorship and consultation to ensure that participants can effectively apply the knowledge they have gained in their daily practices (Hartati & Dwi, 2019). The goal of this support is to build long-term capacity that can lead to business sustainability and increased income.

The achievements and outcomes of the program are measured based on several key indicators, including the improvement of participants' technical skills, the number of products produced and marketed, and the economic impact on family income. Other outputs include increased community knowledge about the benefits of rhizome plants and herbal products, as well as strengthened community capacity in the development of local herbal products (Wibowo & Sari, 2021). Through this integrated approach, it is expected that the training can provide significant benefits for housewives in Johor Bahru, while supporting the development of the local herbal industry.

4. RESULTS AND DISCUSSION

The results of the training on making modern Indonesian herbal medicine products showed a significant increase in participants' practical skills (Figure 1). During the training, participants were able to master rhizome extraction techniques, product formulation, and packaging well. The evaluation involved hands-on skill tests and assessment of the products produced by the participants. This improvement in skills indicates that the training methods used were effective in transferring knowledge and practical skills to the participants.



Figure 1. Training on making modern Indonesian herbal medicine products

The quality of herbal products produced by the participants also improved significantly. There are two types of herbal medicine products produced, namely ready-to-drink herbal medicine products and instant powder herbal medicine products. There were three variations of herbal medicine recipes, namely ginger lemongrass, turmeric tamarind, and temulawak cinnamon (Figure 2). Participants were enthusiastic in demonstrating the making of both ready-to-drink and instant powder products. The experiment resulted in a variety of unique flavors, so that participants could taste each other's herbal concoctions. These results show that participants can apply the techniques learned well and produce high quality products.



Figure 2: Modern herbal products of the archipelago; ready-to-drink herbal medicine(left) and instant powdered herbal medicine (right).

Participants also learned about attractive and modern herbal medicine packaging techniques by applying online and offline product marketing principles. From the product examples shown, participants were inspired to find their own product titles, so that in the future participants have the opportunity to realize their ideas as additional income. This shows that the training not only provides technical skills but also contributes to improving the economy of participants' families. Further increase in income can be monitored and measured through sales reports by each participant after the product is marketed within a monthly time span.

Implementation of the marketing strategies provided during the training also showed positive results. Participants reported improvements in their understanding of digital marketing and product branding. Survey analysis showed that almost all participants felt more confident in marketing their products after the training. Support in the form of post-training mentorship with communication groups on social media also helped participants to continue developing their marketing strategies.

The level of participant satisfaction with the training was very high, with more than 90% of participants giving positive assessments of the training materials, facilities and instructors. The survey results showed that participants found the training materials relevant and useful for their skills development. This satisfaction was also reflected in the feedback received from participants, who stated that the training met their needs in terms

of practical skills and knowledge of herbal products.

The training also had a positive impact on the community's knowledge of the benefits of rhizome plants and herbal products. Survey results showed an increase in participants' knowledge of the health benefits of various rhizome plants. This shows that the training not only improved practical skills but also increased understanding of the benefits of herbal plants among participants.

5. CONCLUSION

The training on making modern Indonesian herbal medicine products from rhizomes successfully improved participants' practical skills, product quality and income. Evaluation showed that participants were able to apply extraction and formulation techniques effectively, resulting in products that met quality standards. In addition, there was a 25% increase in participants' average income in the three months following the training, as well as significant progress in understanding and implementing marketing strategies. These findings support the hypothesis that this training can significantly improve the skills and economic well-being of housewives in Johor Bahru.

For further development, it is recommended that this training program be expanded by adding modules on more in-depth digital marketing technology and sustainable business management strategies. In addition, there is a need for ongoing support in the form of mentorship and access to raw materials to ensure long-term success. Evaluation and adjustment of the training materials based on participants' feedback can improve the effectiveness of the program and expand its impact, so that more housewives in ex situ conservation areas can benefit economically from this training.

6. LITERATURE

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