

Community-Based Education for Family Health: Leveraging Local Medicinal Plants through Empowerment

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ABSTRACT

The utilization of local medicinal plants remains a common practice within households in coastal areas, including Minaesa Village in North Minahasa Regency. However, such practices are generally based on inter generational experience rather than an adequate understanding of appropriate indications, limitations, and potential risks. This community service initiative aimed to empower the community through a community-based educational approach to enhance family health literacy in the rational and safe use of local medicinal plants. The implementation methods included initial observation and needs assessment, development of evidence-based educational materials tailored to the local context, and delivery of interactive counseling sessions combined with guided discussions. Evaluation was conducted qualitatively through participants' active engagement and reflective responses. The findings indicated improved participants' understanding of fundamental principles for the proper use of medicinal plants, enhanced ability to identify minor conditions that may be managed at the household level, and increased awareness of warning signs requiring medical referral. This approach effectively integrated traditional knowledge with modern health literacy principles, thereby strengthening family capacity to make safer and more responsible health decisions.

Keywords: *health literacy, local medicinal plants, community-based education, family health, community empowerment*

1. INTRODUCTION

Minaesa Village, located in the North Minahasa Regency, is a coastal area inhabited by the Kima Bajo tribe. The community is characterized by strong social bonds and a tradition of passing down knowledge orally through generations. In the context of family health, the community continues to utilize local medicinal plants as a primary measure for managing minor ailments such as fever, coughs, digestive issues, minor wounds, and muscle pain. These practices are rooted in empirical experience and ancestral customs rather than a scientific understanding of active compounds, precise dosages, or indications and contraindications (Rahman, 2024).

The prevalence of self-medication remains high in Indonesian society. Research indicates that the initial decision to manage health complaints is often made through self-treatment before seeking professional medical help. This highlights the family's role as the primary unit in health decision-making. However, public knowledge regarding the rational use of medicine remains relatively low (Jayanti & Arsyad, 2020).

Theoretically, health literacy involves more than just the ability to read health information; it encompasses the ability to access, understand, evaluate, and apply that information to make informed decisions (Nutbeam, 2000). In Minaesa Village, access to validated information remains limited. Health knowledge is often derived from family experiences, informal recommendations, or social media without scientific verification. This orally transmitted empirical knowledge lacks an understanding of proper indications, usage limits, and potential risks. Medicinal plants are often perceived as entirely safe simply because

they are natural, whereas safety actually depends on the method of administration and the individual's condition.

Low health literacy can lead to irrational decision-making in self-medication practices (Jayanti & Arsyad, 2020). This situation risks fostering unsafe practices, including excessive dosing, improper plant combinations, or delays in seeking medical facility care when symptoms worsen. Furthermore, poor health literacy contributes to delays in seeking treatment due to a failure to recognize "red flags"—such as prolonged fever or severe pain—which can exacerbate health outcomes (Rahman, 2025; Srisaknok, T., et al., 2025; Suhaib, M., et al., 2022).

Consequently, while the community possesses social capital in the form of local wisdom regarding medicinal plants, the capacity for family health literacy requires strengthening to ensure practices remain safe and aligned with scientific principles. Therefore, the required approach is not merely informative counseling, but community-based education that reinforces functional, interactive, and critical health literacy.

Objectives and Benefits

This community service project aims to empower the people of Minaesa Village through a community-based educational approach in the rational and safe utilization of local medicinal plants for family health. The education focuses on enhancing the family's ability to understand the basic principles of proper medicinal plant use, identify minor conditions manageable through self-care, and recognize warning signs that require medical referral.

The benefits of this activity include preserving local practices while reconstructing community understanding to be more reflective and responsible in health decision-making. Thus, the contribution of this project is both practical and conceptual, strengthening empowerment models based on health literacy in coastal communities.

2. METHOD

Target Participants

The target participants for this community service activity are the residents of Minaesa Village, North Minahasa Regency, specifically groups of housewives associated with local community organizations. This group was selected due to the central role mothers play in making family health decisions, particularly regarding self-medication practices using local medicinal plants. The family serves as the primary unit within the public health system. Initial decisions regarding the management of minor ailments are generally made at the household level. Therefore, strengthening health literacy among mothers is expected to have a direct impact on the practical use of medicinal plants within the family.

Activity Location

The activity is conducted in Minaesa Village, Wori District, North Minahasa Regency. This location was chosen based on its characteristics as a coastal community that still maintains the traditional practice of utilizing medicinal plants in daily life. The activities take place at the village community hall, considering its accessibility, participant comfort, and the ease of interaction during discussion sessions. Selecting a location at the heart of community activity aims to increase active participation and create an inclusive educational atmosphere.

Implementation Method

The activity is implemented through a community-based educational approach that emphasizes active participant involvement. The process consists of three main stages: field observations and informal discussions with village officials and community representatives; the preparation of evidence-based and locally contextualized educational materials; and the delivery of education through interactive counseling and focus group discussions.

Field observations aim to understand the patterns of medicinal plant use within families,

the information sources utilized, and community perceptions regarding the safety of these plants. The results of these observations serve as the foundation for designing educational materials that are relevant to the local context and the community's real-world experiences. Educational content is developed based on health literacy principles and scientific references concerning the rational use of medicinal plants. The educational model is chosen to encourage active participation and provide a space for participants to reflect on their existing practices.

3. RESULTS AND DISCUSSION

Overview of Activity Implementation

The community-based educational activities were conducted by involving housewives and members of women's community groups in Minaesa Village. The implementation followed the pre-designed stages, beginning with material presentations, followed by interactive discussions, and concluding with a collective reflection on the existing medicinal plant practices within their families.

Participant engagement was highly active, as evidenced by the numerous personal experiences shared regarding the use of medicinal plants for minor ailments such as fever, coughs, muscle pain, minor wounds, and digestive issues. Discussions revealed that while most participants had utilized local plants as a first-line treatment, they did not yet fully grasp the limitations of indications or the potential risks involved.

This finding aligns with research on self-medication, which suggests that communities tend to practice self-treatment based on experience or habit rather than adequate scientific consideration (Jayanti & Arsyad, 2020). This condition underscores the importance of educational interventions that do not merely provide information but also strengthen critical thinking skills in health decision-making.

Improving Understanding of Basic Principles in Medicinal Plant Use

The first objective of this activity was to enhance community understanding of the fundamental principles of proper medicinal plant use, including indications, limitations, and risks. Through interactive counseling and focused discussions, participants began to distinguish between minor complaints that can be managed independently and conditions requiring medical evaluation. Participants also demonstrated an understanding that not all plants are safe for unrestricted use, particularly for children, the elderly, or individuals with specific health conditions.

This shift was evident in participant responses during the reflection sessions, where they realized that ancestral practices are not always synonymous with absolute safety. This awareness serves as an indicator of developing health literacy at both functional and interactive levels, as described in the health literacy framework (Nutbeam, 2000).

Ability to Identify Minor Conditions and Red Flags

The second and third objectives were to improve the participants' ability to identify minor conditions manageable through self-care and recognize "red flags" that require medical referral. In contextual case discussions, participants were able to identify situations that should not be treated solely with medicinal plants, such as fevers lasting more than three days, shortness of breath, or severe pain that does not improve. This understanding signifies the development of critical health literacy—the ability to evaluate situations and make decisions based on risk assessment.

Integration of Traditional Knowledge and Modern Health Literacy

A key achievement of this activity was the creation of a dialogue between traditional knowledge and scientific principles. Participants were not asked to abandon local practices but were encouraged to reflect on and align them with principles of safety and rationality.

This participatory approach is known to be more effective in increasing engagement and the

acceptance of health messages compared to conventional lecture methods (Notoatmodjo, 2003). This activity also demonstrates that community empowerment does not always have to be oriented toward the production or commercialization of health products; strengthening family health literacy is a vital foundation for ensuring that medicinal plant use remains within the scope of safety.

Methodological Limitations

This activity did not utilize a quantitative pre-test and post-test design. Therefore, the achievement of objectives was identified through qualitative indicators, such as active participation, the ability of participants to restate the principles learned, and shifts in perception revealed during discussions. While it did not produce numerical data, this approach remains relevant for community service activities oriented toward raising awareness and conceptual understanding. In the context of health literacy, changes in thinking patterns and reflective abilities are significant early indicators before long-term behavioral changes can be observed (Nutbeam, 2000).

4. CONCLUSION

The community service activities in Minaesa Village demonstrate that strengthening family health literacy can be effectively achieved through community-based educational approaches, participatory dialogue, and the delivery of contextual materials. Participants not only gained an understanding of the fundamental principles for the proper use of medicinal plants but also began to distinguish between minor ailments manageable through self-care and "red flags" that require medical referral. This approach successfully bridged traditional knowledge with scientific principles without diminishing local wisdom, rendering the practice of utilizing medicinal plants more reflective, rational, and safety-oriented.

5. SUGGESTION

It is recommended that similar activities be implemented sustainably, with periodic mentoring to reinforce consistent understanding and encourage long-term behavioral change. Furthermore, collaboration with local healthcare professionals should be enhanced to ensure that family health literacy is integrated with the formal healthcare system. The development of educational modules based on local contexts is also recommended as a replication model for other coastal communities with similar sociocultural characteristics.

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