

DEVELOPMENT OF ADHA SUPPLEMENT INNOVATION (MORINGA LEAF ANTI-FATIGUE NATURAL HERBAL) AS A SUPERIOR PRODUCT OF NUSA TOURISM VILLAGE

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Abstract

The Community Partnership Empowerment (PKM) program involves Family Welfare Movement (PKK) group partners. Preparation for the program began in June 2025, beginning with a visit by the implementation team to Gampong Nusa to conduct a survey to assess community conditions. During the subsequent visit, the team submitted a PKM implementation permit from LPPM UNAYA and briefly presented the PKM program. The team explained the stages of the program, the implementation schedule, and other details. Counseling and training were held on September 20, 2025, followed by mentoring in the production of ADHA products, including moringa tea, moringa powder, moringa sachets, and moringa capsules. Following the mentoring, the best and fastest group in producing ADHA products was selected. Subsequently, on September 21, 2025, the community service team planted 250 moringa cuttings in several locations in Gampong Nusa..

Keywords: *ADHA products, Moringa folium, Counseling, Training, Mentoring*

INTRODUCTION

Fatigue can reduce work efficiency, trigger workplace accidents, and cause anxiety, heart disease, diabetes, and high blood pressure, all of which are triggered by oxidative stress (T. D. Santi 2019; Candra et al. 2024). The International Labor Organization (ILO) states that 2 million people die from work-related problems, one of which is fatigue (International Labor Organization 2020). Furthermore, 97% of workers experience fatigue in the workplace, and 13% are injured or even die (National Safety Council 2017). Tourism is an industrial sector at risk of work accidents due to fatigue, both for workers and tourists (Tahara Dilla Santi 2015). Fatigue is also experienced by sharia tourism workers in Gampong Nusa, Aceh. This tourist destination is based on ecotourism principles and is managed independently by the community (swakelola) (Kemenparekraf 2024), causing most residents to often experience fatigue after work. An initial survey of the Nusa tourist location found that this area is located in the highlands or hills. This condition causes lower oxygen levels and atmospheric pressure, so workers experience fatigue more quickly (Ruggiero et al. 2022; Shi et al. 2024; T. D. Santi 2019) and is overcome only by resting and taking stamina-boosting medication. Long-term use of medication is not recommended and can have negative effects on health (Luo et al. 2019; Yu et al. 2023; Marini et al. 2018; Tahara Dilla Santi et al. 2023). Therefore, preventive measures against work fatigue are needed, one of which is by utilizing Moringa leaves which are processed into anti-fatigue supplements.

METHOD

The method used in this empowerment is active participation including counseling, training and mentoring in making ADHA supplement products for the PKK Gampong Nusa mothers' group. The stages or steps in the social community aspect began with an audience with the Head of the PKK group. The proposing head requested the PKK group's willingness to become a partner in the PKM activity. The proposing team, together with the partner, established a schedule and mechanism for the activity implementation. The team discussed required correspondence,

logistical needs, and the schedule for outreach and training. The proposing team prepared outreach materials and booklets that were distributed during the outreach activity. On the day of the activity, the proposing team provided outreach on moringa leaves, tourism worker fatigue, and the negative impacts of fatigue. The booklets distributed to participants covered moringa leaves, their anti-fatigue properties, and the steps for making ADHA supplements. The head of the proposing team then explained four types of ADHA supplement products. Proposing member 2 assembled a simple oven and grinder for ADHA supplement production. Students assisted member 2 in preparing the ingredients and working with the equipment. Next, team member 1 assisted in preparing fresh moringa leaves, while students assisted in preparing plastic containers, measuring the wet weight, and sorting the wet weight. The leaves were then dried in an oven, and students reweighed the dried leaves. They were ground using a grinder to produce moringa leaf powder (Tahara Dilla Santi and Candra 2023; Candra et al. 2023; Tahara Dilla Santi et al. 2022, 2025). In terms of production, the activities included outreach to provide partners with knowledge about the four types of ADHA supplements to be produced. They also explained the use and dosage of each product. Training was then provided to the Gampong Nusa Family Welfare Movement (PKK) group on preparing four types of moringa leaf products. The training began with preparing the leaf powder, which was then processed into moringa tea, moringa sachets, moringa powder, and moringa capsules.

RESULTS AND DISCUSSION

The Community Service Program (PKM) program ran from June 20 to September 22, 2025. The implementation team visited Gampong Nusa eight times (one area survey and one partner condition survey, one PKM letter submission, one audience, one ToR presentation by the team, one PKM activity preparation (schedule, location, and administration), one socialization and training activity, one Moringa cuttings planting, and one subsequent document processing). The team's preparations included making tea simplicia, Moringa leaf powder, and fresh Moringa leaves, preparing PowerPoint presentations, booklets, printing banners, and preparing the tools and materials needed for the PKM program in Gampong Nusa. The PKM program in Gampong Nusa lasted two days, September 20 and 21, 2025. On the first day, the team conducted outreach through counseling about the Moringa plant, its benefits, and nutritional content. This workshop explained the stages of preparing moringa leaf extract. Before the workshop, 66 participants, members of the Family Welfare Movement (PKK), completed a pre-test and then a post-test to assess their knowledge. The team also introduced booklets and ADHA products, including moringa tea, moringa powder, moringa sachets, and moringa capsules.



Figure 1. The service team provides health education

Next, the community service team provided training to the PKK mothers including techniques for selecting fresh moringa leaves, wet sorting, washing, chopping, drying, dry sorting, storage, product making and even packaging. After being given training, the PKK mothers made ADHA products in their groups and the community service team accompanied them. After that, 1 best group was selected from 4 groups and all were very enthusiastic in participating in the PKM activities. The community service team handed over the assets of the grinder, oven, ADHA products and packaging. During the PKM activities, the community service team brewed moringa tea and then enjoyed the tea with partners.



Figure 2. PKM Training and Mentoring

The Community Service Program (PKM) activity on September 21, 2025, involved planting superior moringa cuttings at several locations in Gampong Nusa. These planting locations included the PKK hall, residents' yards, the meunasah (small garden), and the riverbank.



Figure 3. Planting Superior Moringa Cuttings

The technology used in this empowerment program includes chopping dried moringa leaves using a grinder and drying them in an oven. Partners are also trained to produce moringa tea, moringa powder, moringa sachets, and moringa leaf capsules. In the Community Service Program (PKM) activities, the social aspect is that partners have implemented technology and are able to produce ADHA products that play a role in preventing fatigue. The long-term goal is to prevent work fatigue among PKK mothers specifically and the Gampong Nusa community in general, as the tourist destination requires more tourism activities. Production will be increased by planting superior, high-quality moringa cuttings on community land and in several other locations (Tahara Dilla Santi, Candra, and Zakaria 2023). The team hopes that residents will participate in preserving the moringa plants, which will later be used to create anti-fatigue products.

CLOSING Conclusion

The community service team provided education and distributed booklets detailing the benefits of moringa leaves and the steps involved in preparing them into ADHA supplements. The PKK women produced a variety of products, ensuring that ADHA supplements could be consumed according to the preferences of Nusa tourism workers and be practical to use. The four types of ADHA supplement product innovations were developed: ADHA tea, ADHA powder, ADHA sachets, and ADHA capsules.

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