

ENHANCING COASTAL WOMEN'S CAPACITY IN MEDAN THROUGH HEALTHY COCONUT BALM PRODUCTION FOR MENSTRUAL PAIN MANAGEMENT AND REPRODUCTIVE HEALTH

Syarifah^{1*}, R. Kintoko Rochadi¹, Henny Sri Wahyuni¹, Nirma Juli Saputri¹,
Mei Thalia Sembiring¹, Viola Agnesya Br Sembiring¹, Nabila Rizqi Lingga¹

¹Universitas Sumatera Utara, Medan, Indonesia

*syarifah_usu@yahoo.com

Abstrak: Perempuan pesisir kerap menghadapi keterbatasan akses informasi dan layanan kesehatan, termasuk dalam penanganan dismenore yang sering dianggap wajar sehingga kurang ditangani optimal. Temuan awal di Kesatuan Perempuan Pesisir Indonesia (KPPI) Medan menunjukkan sebagian besar anggota belum memahami solusi non-farmakologis dan masih bergantung pada obat kimia atau praktik tradisional sederhana. Program pengabdian kepada masyarakat ini bertujuan meningkatkan literasi kesehatan serta membekali keterampilan praktis produksi melalui edukasi partisipatif yang memperkenalkan produk berbahan alam lokal, yaitu Healthy Coconut Balm. Metode pelaksanaan meliputi ceramah, diskusi interaktif, pemutaran video tutorial, pelatihan langsung pembuatan produk, serta pre-test dan post-test untuk menilai efektivitas kegiatan. Hasil menunjukkan peningkatan skor rata-rata pengetahuan dari 19,33 menjadi 27,85 meskipun tidak signifikan secara statistik ($p=0,078$), namun tetap relevan secara praktis. Selain itu, seluruh peserta berhasil mempraktikkan pembuatan produk dengan antusiasme tinggi. Uji organoleptik menunjukkan penerimaan yang cukup baik terhadap aroma, warna, tekstur, dan sensasi hangat balsam. Inisiatif ini tidak hanya meningkatkan kapasitas perempuan pesisir dalam menjaga kesehatan reproduksi secara alami, tetapi juga membuka peluang ekonomi kreatif berbasis bahan lokal. Dalam jangka pendek, kegiatan ini terbukti meningkatkan pengetahuan dan keterampilan produksi sederhana, sementara dalam jangka panjang berpotensi mendorong kemandirian ekonomi melalui komersialisasi produk herbal. Program ini turut mendukung penguatan kapasitas komunitas dan agenda pembangunan berkelanjutan di bidang kesehatan, kesetaraan gender, dan kemandirian ekonomi.

Kata Kunci: Balsem herbal, dismenore, kesehatan reproduksi, pemberdayaan masyarakat, perempuan pesisir

Abstract: Coastal women often face limited access to health information and services, particularly in managing dysmenorrhea, which is frequently considered a normal condition and therefore inadequately addressed. Preliminary findings at the Indonesian Coastal Women's Association (KPPI) in Medan indicate that most members have limited knowledge of non-pharmacological solutions and still rely on chemical medications or simple traditional practices. This community service program aimed to improve health literacy and provide practical production skills through participatory education by introducing a local natural-based product, namely Healthy Coconut Balm. The implementation methods included lectures, interactive discussions, video tutorials, hands-on training in product preparation, and pre-tests and post-tests to evaluate program effectiveness. The results showed an increase in the average knowledge score from 19.33 to 27.85, although it was not statistically significant ($p = 0.078$), it remained practically relevant. In addition, all participants successfully practiced product production with high enthusiasm. Organoleptic tests indicated good acceptance in terms of aroma, color, texture, and warming sensation. This initiative not only enhanced coastal women's capacity to maintain reproductive health through natural approaches but also opened opportunities for creative economic activities based on local resources. In the short term, the program improved participants' knowledge and basic production skills, while in the long term, it has the potential to promote economic independence through the commercialization of herbal products. Furthermore, this program supports community capacity building and sustainable development goals in health, gender equality, and economic empowerment.

Keywords: herbal balm, dysmenorrhea, reproductive health, community empowerment, coastal women

Introduction

Peraturan Pemerintah Republik Indonesia No. 61 Tahun 2014 defines reproductive health as a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity in the reproductive system, its functions, and its processes. Reproductive health is important for the quality of life and well-being of individuals (Fitria et al., 2023). In Indonesia, women's reproductive health is a crucial issue because women play a central role in children's education and family health, so improving women's health services needs special attention (Arfan et al., 2024).

The management of menstrual pain has thus far been dominated by pharmacological drugs, particularly non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, naproxen, and mefenamic acid, which are effective in reducing pain by inhibiting prostaglandin production. However, long-term use carries the risk of side effects, including gastric irritation, digestive disorders, gastrointestinal bleeding, and kidney and liver dysfunction (Hartinah et al., 2023), while access to these drugs is often a challenge in coastal areas. In line with these limitations, various non-pharmacological methods are beginning to be considered as safer and more culturally appropriate alternatives, such as warm compresses, yoga, relaxation, and dysmenorrhoea exercises. Research by Astuti et al. (2021) shows that dysmenorrhea exercises can significantly reduce pain intensity from an average score of 6.73 to 4.67 ($p < 0.05$). This result confirms the effectiveness of non-pharmacological therapy. However, its application is still primarily focused on adolescents and university students in urban areas, and thus has not yet reached coastal women's communities that need herbal-based, non-pharmacological solutions tailored to their needs and local wisdom.

Fishing communities generally view health as a condition in which they are still able to work or go to sea and meet their families' needs. Health is understood as the body's ability to engage in productive activities, while illness is only considered serious if it hinders daily economic activities. With this concept, many health complaints, including menstrual pain, are often not treated optimally because they are perceived as "normal" or "natural" conditions (Afriani et al., 2023).

Coastal women play a dual role, managing household affairs while supporting the family's economic well-being. In Kampung Laut, fishermen's wives have been shown to contribute to household income when their husbands' earnings are insufficient (Subhan et al., 2022), and in Ujong Blang, they are empowered through micro-enterprises based on marine products (Syahputra & Taufiq, 2021). Similarly, women in Pulau Kayu participate in local marine-based enterprises through the "Sepakat" women's business group, which enhances their economic role (Safrida, 2022). However, reproductive health rights are often neglected due to limited access and insufficient resources, so women still rely heavily on traditional practices such as traditional birth attendants (balian) and herbal remedies (Saptandari, 2021). This finding aligns with findings from Pantai Labu, Deli Serdang, that cultural, social, economic, and geographical factors encourage the community to prefer traditional medicine, even though the government has begun providing mobile health clinics and the BPJS programme (Astuti et al., 2025).

The Indonesian Coastal Women's Association (KPPI) is a member of the Indonesian Traditional Fishermen's Association (KNTI) and is independently managed. KPPI Medan is a forum for coastal women committed to fighting for the rights and welfare of fisherwomen through a national and regional network that emphasises gender equality in policy advocacy in the Belawan area. KPPI Medan has 50 members, most of whom are the wives of fishermen or female fishermen themselves. The results of a focus group discussion (FGD) conducted in 2025 with KPPI Medan members showed that most members still experienced menstruation and menstrual pain (dysmenorrhea), which affected their daily activities, including hindering their productivity in carrying out household tasks. Most coastal women said they simply endure the pain or treat it with simple remedies, such as drinking warm water or consuming instant herbal drinks available in their neighbourhood. They also said that teenage girls often experience this complaint, but it is often ignored because it is considered normal and because there is a lack of understanding about the appropriate solution. Based on the results of the FGD, it was found that low knowledge is also a problem, with some participants still misinterpreting the causes of dysmenorrhea as being "related to the consumption of instant foods and sauces". This condition illustrates the gap between the real needs of coastal women in maintaining their reproductive health and the availability of solutions that are safe, affordable, and appropriate to the local socio-cultural context.

The community empowerment approach emphasises the active role of communities in managing their welfare through increasing knowledge, skills, and collective capacity (Lalla, 2024). In this case, Rogers' Diffusion of Innovations theory is relevant to explain how herbal-based health innovations can be accepted and adopted by the community. According to Rogers, an innovation is more easily adopted if it has relative advantages, aligns with local cultural values, is easy to understand, can be tested, and yields results that are readily observable (Rogers, 2003; Rogers & FF, 1971).

The socialisation of the production of herbal balm for menstrual pain is in line with these principles, as this balm offers a natural, safe, and affordable alternative, using local coastal ingredients such as coconut oil, nutmeg oil, lemongrass oil, beeswax, and vaseline, which are known to have anti-inflammatory, muscle relaxation, and warming effects. Thus, the socialisation of Healthy Coconut Balm production is not only relevant from the perspective of women's reproductive health, but also has economic advantages as an independent business opportunity. Through a participatory, communication-based community service approach, this activity has the potential to produce a double impact: improving the quality of life of coastal women and the economic independence of fishing families.

This initiative is also in line with the Sustainable Development Agenda (SDGs), particularly points 3 on health, 5 on gender equality and women's empowerment, and 8 on decent work and economic growth. Furthermore, this activity supports national programmes in maternal and child health (MCH), reproductive health, and community empowerment. Thus, advancing herbal balm production through dissemination as a non-pharmacological intervention is a strategic step toward addressing the reproductive health needs of coastal women while supporting their economic independence. Therefore, this community service program aims to improve

reproductive health literacy and practical skills of coastal women through herbal balm production.

Method

This community service program was conducted at the Indonesian Coastal Women's Union (KPPI) in Medan on 30 July 2025, lasting a full day and involving 27 participants. Prior to the implementation of the programme, most participants lacked adequate knowledge regarding dysmenorrhoea or alternative management of menstrual pain non-pharmacologically, thus still relying on the use of freely available chemical medications. This situation highlights the urgent need for educational interventions that can provide new understanding and practical skills for coastal women. This programme is designed to help participants not only understand the basic concepts of reproductive health and the mechanisms of menstrual pain, but also independently practise making Healthy Coconut Balm as a natural alternative to relieve dysmenorrhoea. Thus, this activity is expected to provide dual benefits: improved health literacy and opportunities for developing locally sourced products with economic value.

The socialisation methods used in this activity included lectures and demonstrations through audiovisual media (videos/slides). Lectures were delivered through presentations to convey conceptual aspects of reproductive health, particularly dysmenorrhoea (menstrual pain caused by uterine muscle contractions triggered by the hormone prostaglandin), which usually occurs before or during menstruation. Symptoms include abdominal cramps and aches, which can interfere with daily activities.

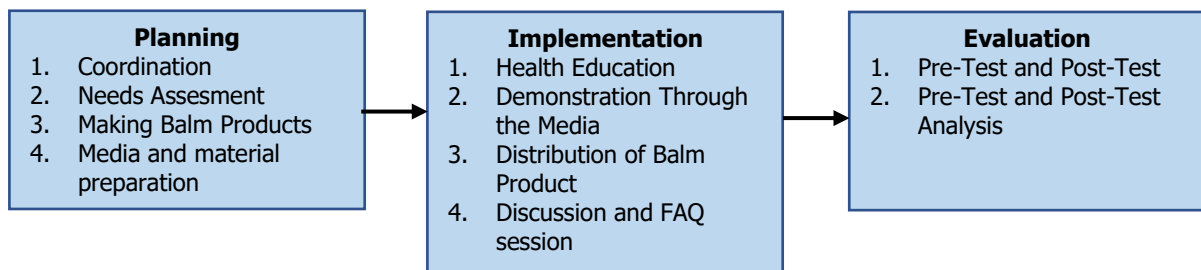
As a solution, Healthy Coconut Balm was introduced to help relieve menstrual pain through the warming effect of a combination of coconut oil, nutmeg, and lemongrass, which have anti-inflammatory properties and can relax muscles. The material also covers the benefits of the product, a list of ingredients and tools for Healthy Coconut Balm, how to make it, and the packaging process. The audiovisual demonstration is designed as a structured video tutorial that shows the detailed stages of production, from preparing the ingredients to processing and packaging, given the limitations of the practical equipment that cannot be brought to the location.

The video design follows the principles of *instructional design*, whereby the material is divided into short segments (5–10 minutes), accompanied by audio narration (definition of dysmenorrhoea, symptoms, introduction to the tools and ingredients for making the balm, how to make the balm, and the steps involved) and explanatory text on the screen. This strategy aims to minimise participants' cognitive load by helping them understand and deepen their knowledge of the material (Navarrete et al., 2025). In addition, the audiovisual presentation is combined with discussion and question-and-answer sessions, so that participants are not just passive viewers but also have the opportunity to clarify and share their experiences, helping the community understand and become skilled at making *Healthy Coconut Balm*.

To measure the effectiveness of the socialisation, pre-tests and post-tests were conducted to assess the increase in participants' knowledge and to evaluate their perceptions

regarding the ease of understanding the material and audiovisual media 'Socialisation of Making Healthy Coconut Balm' as well as its relevance to the activities carried out. This approach follows the method used by Wahyudi et al. (2024), who demonstrated that combining pre- and post-tests with audiovisual techniques effectively enhances participant understanding in community-based interventions. The combination of audiovisual approaches with material presentation and active methods was chosen because research shows that audiovisual media is more effective when combined with interactive activities and can increase participant engagement and understanding in non-formal socialisation (Yusnan & Aminu, 2022; Darlies et al., 2025).

Participants' knowledge of dysmenorrhoea and the production of Healthy Coconut Balm was assessed using a structured pre-test and post-test questionnaire consisting of 20 true–false items. The items covered conceptual understanding of menstrual pain, non-pharmacological management, herbal-based ingredients, and the production process of Healthy Coconut Balm. Each correct answer was scored 1, and each incorrect answer was scored 0, yielding a total score range of 0–20. The pre-test was administered prior to the delivery of the material, and the post-test was administered immediately after the completion of the socialisation programme to measure changes in knowledge. To evaluate the effectiveness of the intervention, the pre-test and post-test scores were analysed using a paired-samples t-test, as the measurements were taken from the same participants at two time points. Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS), with a significance level set at $\alpha = 0.05$. Flowchart 1 outlines the steps for implementing this community service program.



Flowchart 1. The steps of the community service program

Result and Discussion

Implementation of the Socialisation Program

The socialisation activity was held on 30 July 2025 at the KPPI Medan secretariat, attended by 27 participants. The programme was designed as a participatory socialisation consisting of material presentations. The presenters explained the basic concepts of menstrual pain, non-pharmacological treatment options, and the potential of local ingredients such as coconut oil, nutmeg, and lemongrass, which can serve as the basis for making Healthy Coconut Balm.

After presenting the material, the facilitator directly introduced the tools and materials used to make *Healthy Coconut Balm*. The process of making the balm was shown in a tutorial video that explained the stages, from mixing the ingredients to heating and packaging.

Participants remained actively involved through lectures and video tutorials, as evidenced by the many questions during the question-and-answer session. Participants' questions covered the function, ingredients, storage methods, and potential for product development. The socialisation atmosphere became dynamic as the discussion was accompanied by participants sharing their experiences of menstrual pain they experience daily. Photographic documentation of the activity captures the participants' enthusiasm and involvement during the session. As shown in [Figure 1](#), participants engaged in discussion and concluded the programme with a group photo, reflecting positive engagement and a supportive learning atmosphere.

After the activity concluded, participants demonstrated an increased understanding of dysmenorrhoea and practical skills in making *Healthy Coconut Balm*. Some participants even expressed interest in trying to make the product again at home, indicating that the activity not only expanded their knowledge but also fostered confidence and awareness of the importance of using natural ingredients in maintaining reproductive health.



Figure 1. Documentation of a series of socialization activities

Pre-test and post-test results on participants' knowledge of dysmenorrhoea and the process of making *Healthy Coconut Balm*

Table 1. Pre-test and post-test results on participants

No.	N	Mean	SD	Mean Difference	Correlation	Sig.
Pre-Test	27	19,33	4,788	-8,519	-0,344	0,078
Post-Test	27	27,85	1,322			

Based on a *paired sample t-test* of 27 respondents (see [Table 1](#)), the pre-test mean score was 19.33 with a standard deviation of 4.788, while the post-test mean score increased to 27.85 with a standard deviation of 1.322. The average increase was 8.519 points. The correlation between the pre-test and post-test scores was -0.344, indicating a weak negative relationship, suggesting that participants with higher initial scores tended to experience a relatively lower increase in scores. The significance test results showed a *p-value* of 0.078, which was slightly above the 0.05 significance threshold. These findings indicate that the increase in scores after the socialisation did not meet the criteria for statistical significance at a 95% confidence level. [Figure 2](#) shows a trend of increased knowledge and skills among

participants after socialisation, so they remain important in the context of programme implementation.

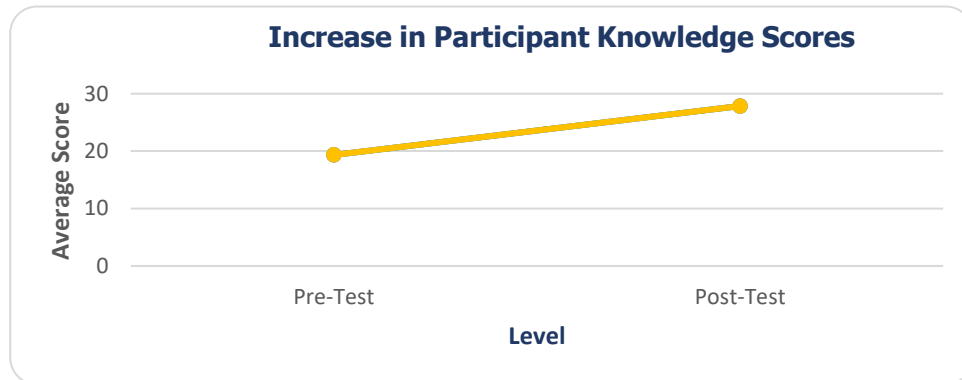


Figure 2. Graph of Increase in Participants' Knowledge Based on Pre-Test and Post-Test

The analysis results show an increase in participants' average knowledge score after being given socialisation on making *Healthy Coconut Balm*. In the pre-test stage, participants' average knowledge score was 19.33; in the post-test stage, it increased to 27.85. Thus, the average increase was 8.52 points. The line graph shows a clear upward trend, indicating that the socialisation provided participants with a deeper understanding of dysmenorrhoea and the use of natural ingredients as a non-pharmacological alternative. This improvement aligns with andragogy theory, which emphasises the effectiveness of practice-based learning in increasing adult knowledge. Although the statistical test results show a p-value of 0.078, indicating that the increase is not yet significant at the $\alpha=0.05$ level, these findings remain relevant in the context of programme implementation. Thus, this socialisation can be said to have improved participants' health literacy and supported the programme's objective of providing safe, nature-based alternatives for treating menstrual pain.

In addition to increasing their knowledge, the participants' skills also improved. All participants were able to make *Healthy Coconut Balm* independently with good organoleptic quality, characterised by colour, aroma, and texture that met the standards. The resulting product had a fresh aroma typical of lemongrass and nutmeg oil, a semi-solid texture that was easy to apply, and a natural light brown colour. Participants demonstrated high enthusiasm throughout the activity, as evidenced by their active involvement in practical sessions, discussions, and plans to utilise the balm in their family environments.

Table 2. Organoleptic Test Results for Warm Sensation Aromatherapy Balm with Nutmeg Oil 1 ml

Category	Number Of People	Color	Aroma	Texture
	n	%	%	%
Like	14	46,6	46,6	46,6
Dislike	13	43,4	43,4	43,4
Do not like	3	3	10	10
Total	30	100	100	100

Table 2 presents the results for warm-sensation aromatherapy balm with 1 ml of Nutmeg oil. In the treatment with the addition of 1 ml of nutmeg oil, the organoleptic test results showed that 14 people liked the warm sensation of 1 ml, and each of these 14 people liked the colour, aroma, and texture, which were relatively acceptable to the panelists with a liking percentage of around 46.6%, 43.4% disliked it, and 10% did not like it. Based on the organoleptic test results and interviews, it was found that the 1 ml nutmeg oil concentration was considered insufficient to provide the expected warm sensation in the anti-inflammatory aromatherapy balm, although the texture and colour were still sufficiently acceptable

Table 3. Results of the Organoleptic Test of Warm Sensation Aromatherapy Balm with 3 ml Nutmeg Oil

Category	Number Of People	Color	Aroma	Texture
	n	%	%	%
Like	22	73,3	73,3	73,3
Dislike	8	26,7	26,7	26,7
Do not like	0	0	0	0
Total	30	100	100	100

Table 3 shows the results for warm-sensation aromatherapy balm with 3 ml of Nutmeg oil. In the treatment with 3 ml of nutmeg oil, the organoleptic test results showed the highest level of acceptance among panelists across all aspects. The 3 ml warm sensation was liked by 22 people, each of whom liked the warmth, colour, and aroma, and was well accepted by the panelists with a liking percentage of 73.3% and a dislike percentage of 26.7%. None of the panelists expressed dislike of the aroma, texture, or warm sensation. Based on the organoleptic test results and interviews, the formulation with 3 ml of nutmeg oil provides an optimal balance between aroma, texture, and a comfortable warm effect, making it more aligned with consumer preferences

Table 4. Results of the Organoleptic Test of Warm Sensation Aromatherapy Balm with 5 ml Nutmeg Oil

Category	Number Of People	Color	Aroma	Texture
	n	%	%	%
Like	18	60	60	60
Dislike	10	33,4	33,4	33,4
Do not like	2	6,6	6,6	6,6
Total	30	100	100	100

Table 4 provides the results for warm-sensation aromatherapy balm with 5 ml of Nutmeg oil. In the treatment with 5 ml of nutmeg oil, the organoleptic test results showed a decrease in acceptance compared to 3 ml. The 5 ml warm sensation was liked by 18 people, each of whom liked the colour, aroma, and texture, which were still quite liked, with a percentage of 60%. Based on organoleptic tests and interviews, it was found that a concentration of 5 ml of nutmeg oil produced a warm sensation that was considered too strong or piercing by most panellists, thereby reducing the comfort of use.

Discussion

This socialisation programme has had a tangible impact on the women of KPPI Medan. In the short term, the programme has increased participants' knowledge and skills in managing natural ingredients to produce simple health products. Participants who were previously unaware of non-pharmacological alternatives for treating menstrual pain now have the practical skills to make *Healthy Coconut Balm*. In addition, the products have undergone patent and trademark registration, giving them sustainability value and potential for further development.

In the long term, these skills have the potential to create creative economic opportunities through partnerships and the commercialisation of local natural ingredients. Coconut oil, nutmeg, and lemongrass are ingredients that are abundantly available in coastal communities, making them easily accessible for sustainable production. This product is not only beneficial for women's reproductive health but can also be developed as a marketable product, supporting the economic empowerment of coastal women. This opportunity aligns with the findings of Subhan et al. (2022) and Syahputra & Taufiq (2021) that coastal women play dual roles, both in the household and in supporting the family economy, so that locally-based innovations can enhance their independence. As shown in Figure 3, the Healthy Coconut Balm produced in this programme is the final product, packaged and ready for use, made with locally available natural ingredients.



Figure 3. Healthy Coconut Balm Product

From a health perspective, this socialisation provides a safe, natural, and non-pharmacological alternative for treating menstrual pain. The socialization's result is important to reduce dependence on chemical drugs that are often used without medical supervision, which in the long term can cause side effects such as stomach irritation and organ dysfunction (Hartinah et al., 2023). The results of this activity are also in line with the research by Astuti et al. (2025), which shows the effectiveness of non-pharmacological methods in reducing the intensity of menstrual pain, and reinforces the findings that lemongrass and nutmeg aromatherapy have anti-inflammatory, muscle-relaxing, and calming effects. Thus, this socialisation is not only relevant to reproductive health but also contributes to public health literacy, especially for coastal communities whose knowledge has been limited.

Findings from the FGD in the background show that most coastal women still consider menstrual pain to be a normal condition and often leave it untreated. Some even misinterpret

the causes, for example, associating them with the consumption of instant foods and sauces. This condition reflects a knowledge gap and limited access to health solutions that are appropriate to the local culture and context. By disseminating information on how to make Healthy Coconut Balm, this gap can be filled through a participatory approach that empowers women with practical knowledge and skills. This finding highlights the importance of culturally appropriate menstrual health education to improve awareness and promote effective self-care practices among coastal women.

Analysis of Participation and Innovation

The active participation of KPPI Medan women was evident throughout the activity. They were not only participants but also actively involved in the practice, discussion, and sharing of personal experiences related to menstrual complaints. The high level of participation supports the successful implementation of innovation in coastal communities. Strong community engagement has been widely recognised as a key factor in ensuring the sustainability of community-based programmes. This program has also successfully drafted a patent proposal for the product as a first step toward protecting intellectual property rights and ensuring business sustainability. In fact, the Chair of KPPI Medan has expressed his commitment to introducing this balm product to the 22 KPPI networks across Indonesia, so that it could become an icon of coastal women's empowerment in Medan. This initiative demonstrates that the innovation has potential not only for health promotion but also for long-term economic development.

When linked to Rogers' Theory of Innovation Diffusion, it can be seen that innovation adoption has been accepted. Rogers emphasises that an innovation is more easily accepted if it offers relative advantages, aligns with local cultural values, is easy to understand, can be tested, and results can be observed (Rogers, 2003). The herbal balm introduced in this activity meets all five criteria: it is made from abundant local ingredients, is easy to make, can be tested immediately by participants, and its benefits are felt immediately. These characteristics increase the likelihood of continued use and wider diffusion of the innovation within the community. This is reflected in the statements of some participants who plan to use Healthy Coconut Balm regularly as part of their personal and family health care. In fact, there is interest in developing this product as a small home-based business. This statement indicates a shift from individual adoption towards potential economic utilisation, in line with community empowerment principles.

Thus, this community service not only provides health benefits but also opens up opportunities for economic empowerment, strengthens the capacity of coastal women, and supports the sustainability of programmes at the community level. This programme is also relevant to the Sustainable Development Goals (SDGs), particularly Goal 3 (health), Goal 5 (gender equality), and Goal 8 (decent work and economic growth).

Conclusion

The socialisation programme on making *Healthy Coconut Balm* at KPPI Medan succeeded in increasing the knowledge and skills of coastal women in treating menstrual pain non-pharmacologically. The pre-test and post-test results showed an increase in the average score from 19.33 to 27.85. Although not statistically significant, this shows a positive trend in practical terms. This activity provided dual benefits: improving reproductive health literacy, opening up opportunities for creative economic activities using readily accessible local materials, and strengthening the independence of coastal women.

The achievement of this programme is primarily supported by the active participation of participants and the existence of the KPPI institution, which has promoted it to the national level and will make the balm the icon of KPPI Medan in the field of health. The Community Service Team is following up on the patent application, prototype of the *Healthy Coconut Balm* product, and commercialisation of the innovation in accordance with Rogers' principles of innovation. For further community empowerment, continuous assistance and the strengthening of partnership networks are needed so that the product can be developed into a Micro, Small, and Medium Enterprise (MSME) to expand the impact of innovation in health, gender equality, and economic independence.

Acknowledgment

This program was made possible thanks to the support of the Kesatuan Perempuan Pesisir Indonesia (KPPI) Medan, chaired by Nilawati, the Head of Belawan II Village, and the Head of Medan Belawan District, who provided assistance during the community empowerment activities. These community empowerment activities were funded by the University of North Sumatra (USU) Non-BNPB Fund in 2025.

References

- Afriani, L., Sandi, W., & Syuhada, K. (2023). Konstruksi Sosial Sehat, Sakit Dan Pemilihan Pengobatan Pada Keluarga Nelayan. *Seminar Nasional Sosiologi Unram*, 4, 2023.
- Arfan, N. A., Novitasari Rista, Fitriana, S. D., & Mardiyah, N. D. D. (2024). Pemberdayaan Perempuan Dalam Kesehatan Reproduksi dan Anak Balita. *Jurnal Masyarakat Mandiri Dan Berdaya*, III, 25–32.
- Astuti, A. D., Nurjanah, A., Ramadhan, M. R., Nafisah, N., Utami, R., & Wasiyem, W. (2025). Aksesibilitas Layanan Kesehatan Modern dan Tradisional di Masyarakat Pantai Putra Serdang, Pantai Labu, Deli Serdang. *Jurnal Medika Nusantara*, 3(1), 78–85. <https://doi.org/10.59680/medika.v3i1.1652>
- Astuti, A., Diah, N. Z., & Septimar, Z. M. (2021). The Effectiveness Of Dymenororic Exercise On The Treatment Of Menstory Pain In Adolescent Women In Alam Jaya Kelurahan, Tangerang City. *Nusantara Hasana Journal*, 1(2), 56–66.
- Darlies, M., Andri, R. C., Oktaviati, R., Juniarti, R., & Bey, S. (2025). Meningkatkan Daya Saing UMKM melalui Pelatihan Produksi Video Promosi di Palembang. *Jurnal Pengabdian Masyarakat Bangsa*, 3(5), 2223–2228. <https://doi.org/10.59837/jpmba.v3i5.2676>
- Fitria, A., Safitri, J., & Nisa, H. (2023). Hubungan Akses Informasi Kesehatan dengan Pengetahuan Kesehatan Reproduksi pada Mahasiswa Universitas Islam Negeri Syarif Hidayatullah Jakarta. *JUMANTIK (Jurnal Ilmiah Penelitian Kesehatan)*, 8(2), 180. <https://doi.org/10.30829/jumantik.v8i2.14256>

- Hartinah, D., Wigati, A., & Maharani, L. V. (2023). Pengaruh Terapi Farmakologi Dan Non-Farmakologi Terhadap Penurunan Nyeri Menstruasi. *Jurnal Ilmu Keperawatan Dan Kebidanan*, *14*(1), 245–252. <https://doi.org/10.26751/jikk.v14i1.1676>
- Kementerian Kesehatan RI. (2024). *Apa itu Dismenorea pada Menstruasi*. Direktorat Jenderal Kesehatan Lanjutan Kementerian Kesehatan RI. https://keslan.kemkes.go.id/view_artikel/3103/apa-itu-dismenorea-pada-menstruasi
- Lalla, N. S. N. (2024). Community empowerment in improving health status. *Jurnal Pengabdian Masyarakat Edukasi Indonesia*, *1*(1), 09-14. <https://doi.org/10.61099/jpmei.v1i1.32>
- Navarrete, E., Nehring, A., Schanze, S., Ewerth, R., & Hoppe, A. (2025). A Closer Look into Recent Video-based Learning Research: A Comprehensive Review of Video Characteristics, Tools, Technologies, and Learning Effectiveness. *International Journal of Artificial Intelligence in Education*.
- Peraturan Pemerintah Republik Indonesia No.61 Tahun 2014 tentang Kesehatan Reproduksi.
- Rogers, E. M. (2003). *Diffusions of Innovations; Fifth Edition*. Simon & Schuster Publisher.
- Rogers, E. M., & FF, S. (1971). *Diffusion of Inovation; Second Edition*. The Free Press, New York.
- Safrida & Safrida, N. (2022). Strategi Pemberdayaan Perempuan Melalui Pengembangan Usaha Berbasis Potensi Lokal di Gampong Pulau Kayu Kecamatan Susoh Kabupaten Aceh Barat Daya. *Transformasi: Jurnal Pengabdian Masyarakat*, *18*(2), 239-252. <https://doi.org/10.20414/transformasi.v18i2.4948>
- Saptandari, P. (2021). Pengetahuan Tradisional tentang Kesehatan dan Pemenuhan Hak Kesehatan Reproduksi Perempuan Bawean. *Antropologi Indonesia*, *41*(2), 10–22.
- Subhan, M., Nofriansyah Saputra, H., & Tarmizi, A. (2022). Peran Istri Nelayan Dalam Meningkatkan Perekonomian Keluarga Di Kampung Laut, Tanjung Jabung Timur. *ILTIZAM Journal of Shariah Economics Research*, *6*(1), 101–116. <https://doi.org/10.30631/iltizam.v6i1.1269>
- Syahputra, A., & Taufiq. (2021). Ekonomi Perempuan Pesisir Gampong Ujong Blang mengetahui keadaan keluar masuknya uang dalam sebuah keluarga . *Jurnal Saree : Research in Gender Studies*. <https://journal.iainlhokseumawe.ac.id/index.php/saree/article/download/562/378/3291>
- Wahyudi, H., Supiani, T., & Atmanto, D. (2024). Pengaruh Pelatihan Tata Rias Wajah (Make Up) Dalam Acara Cantik Bareng NET (NET TV) Terhadap Keterampilan Rias Wajah Sehari-Hari. *Jurnal Adijaya Multidisplin*, *2*(05), 832–849.
- Yusnan, M., & Aminu, N. (2022). Audio Visual Media Learning Guidance using Wondershare Filmora as Elementary School Teacher Professional Development in Batupoaro District Baubau City. *Room of Civil Society Development*, *1*(2), 38–44. <https://doi.org/10.59110/rcsd.13>