

Empowerment of Cadres and Pregnant Women Through Education on The Utilization of Herbal Drinks In Managing Hyperemesis Gravidarum

¹Desy Winda*, ¹Fatma Richa Rahmana, ¹Shelly Puspa Anggraini

¹STIKes Pekanbaru Medical Center, Indonesia

*Corresponding author

E-mail: desywinda12@gmail.com

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Abstract

Purpose: This program aimed to improve the knowledge and skills of cadres and pregnant women in utilizing herbal drinks made from ginger and lemongrass as a non-pharmacological alternative to reduce symptoms of hyperemesis gravidarum.

Method: Activities included socialization, education, demonstrations, and hands-on practice, supported by learning media such as leaflets, pocket books, and videos. Evaluation was conducted through pre-test and post-test on 20 participants.

Practical Applications: The training is expected to encourage independent application of herbal drinks at home, strengthen cadres' role in continuous education, and open opportunities for developing herbal products with economic value.

Conclusion: The program successfully increased participants' knowledge from 52.5% to 94.5% and reduced nausea and vomiting complaints after routine consumption. This intervention has the potential to be replicated in other Posyandu to support maternal health and community empowerment.



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Introduction

Posyandu Menjadi Bunga Keluarga is one of the active Integrated Health Service Posts (Posyandu) located in Senapelan District, Pekanbaru City, with approximately 60 pregnant women under its care annually (Winda & Trisnadoli, 2023). Preliminary observations and interviews with local cadres and health workers revealed that about 60% of pregnant women experience symptoms of hyperemesis gravidarum (severe nausea and vomiting) during the first trimester of pregnancy. These symptoms significantly affect the quality of life of pregnant women, particularly in terms of nutritional intake and daily activities.

The management of hyperemesis gravidarum has largely relied on medical treatment, while natural and easily accessible alternative approaches remain less recognized (Hastutid et al, 2024). Meanwhile, the area has abundant local herbal plants, such as ginger and lemongrass, which are widely available and culturally acceptable. Unfortunately, this potential has not been optimally utilized for maternal health due to limited knowledge and skills in their preparation and application. The following image illustrates ginger plants found around the homes of residents in the Posyandu Menjadi Bunga Keluarga area.

Figure 1. Ginger plants cultivated in the home gardens of residents around Posyandu Menjadi Bunga Keluarga



Source: Private Documentation, 2025.

From a geographical perspective, Posyandu Menjadi Bunga Keluarga is located in a semi-urban area with adequate transportation access; however, it lacks training programs on herbal-based health practices, and the community remains highly dependent on information provided by a limited number of primary health care workers.

Figure 2. Posyandu Menjadi Bunga Keluarga



Source: Private Documentation, 2025.

Based on discussions and agreements with the head cadre of Posyandu Menjadi Bunga Keluarga and pregnant women, the community's primary non-productive issue was identified as economic and health-related challenges. The main problem lies in the limited knowledge and skills of pregnant women and posyandu cadres in utilizing herbal drinks as a natural alternative to reduce the symptoms of hyperemesis gravidarum. Several factors contribute to this issue, including the lack of information among pregnant women regarding the causes, impacts, and non-medical management of hyperemesis gravidarum. Most of them are only familiar with medical treatment and are unaware of safe and accessible natural alternatives. In addition, there are no available educational media that provide simple and practical

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explanations about the symptoms and herbal-based management of hyperemesis gravidarum. Practical training on the processing and utilization of local herbal plants into safe drinks for consumption during pregnancy has also not been implemented.

Figure 3. Posyandu Activity



Source: Private Documentation, 2025.

Herbal plants such as ginger and lemongrass are widely available in the surrounding environment; however, the community has limited knowledge regarding proper and hygienic preparation methods, and there is no standardized dosage or simple recipe that pregnant women can follow to independently prepare herbal drinks. Posyandu cadres also lack the capacity to deliver sustained herbal-based education to pregnant women. They have not been involved in training related to herbal drink processing, and there is a shortage of visual-based educational materials such as posters, leaflets, and short videos that could be utilized during posyandu activities. This program is expected to provide sustainable and practical benefits, while also encouraging the development of a healthy, independent community that is aware of and able to optimize local potential in maintaining maternal health.

Method

The implementation of the community service program consisted of several stages. It began with a socialization meeting involving the community service team, the head cadre of Posyandu Menjadi Bunga Keluarga, Senapelan Health Center staff, and the head of Kampung Baru Village. During this meeting, previous studies highlighting the bioactive compounds in ginger and lemongrass as potential remedies for hyperemesis gravidarum were discussed, leading to a joint agreement to conduct training and education for cadres and pregnant women. The plan was then formalized for execution.

Table 1. Schedule of Community Service Activities.

No	Date	Activity	Stage
1	Tuesday, July 1, 2025	Program socialization / preliminary survey	Preparation
2	Wednesday, August 13, 2025	Training and implementation	Execution
3	Friday, September 5, 2025	Assistance and evaluation	Monitoring
4	Monday, October 13, 2025	Program sustainability follow-up	Continuation

Source: Author's Work, 2025.

The training stage took place on August 13, 2025, with 20 participants, including posyandu cadres and pregnant women. Activities began with a pre-test, followed by education on hyperemesis gravidarum and the use of herbal drinks (ginger and lemongrass) as a safe and natural option to alleviate excessive nausea and vomiting during pregnancy. To support the program, simple technological innovations were introduced, such as tutorial videos accessible via smartphones, pocketbooks, leaflets, and standardized measuring tools distributed to participants. Training equipment included stoves, pots, strainers, scales, gloves, aprons, and glasses, while the main ingredients consisted of fresh ginger, lemongrass, and palm sugar or honey. Assistance and evaluation were provided continuously to help cadres

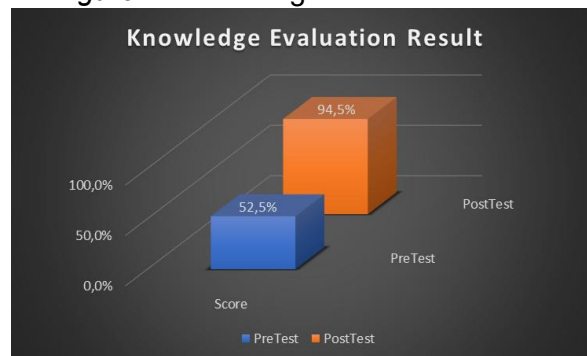
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prepare herbal drinks for pregnant women at the posyandu. Two evaluation sessions were conducted to measure the effectiveness of the herbal drinks and improvements in participants' knowledge and practices. Finally, program sustainability was addressed by planning the development of homemade herbal products if community interest grows. Posyandu Menjadi Bunga Keluarga will also be equipped with long-term educational media, such as posters, leaflets, and digital files, to support routine activities.

Result

The socialization activity was conducted on July 1, 2025, beginning with introductions between the community service team members and the partners, namely the cadres of Posyandu Menjadi Bunga Keluarga and the participating pregnant women. The session was initiated with the distribution of a preliminary questionnaire (pre-test) to assess participants' baseline knowledge regarding hyperemesis gravidarum. The pre-test was designed to evaluate the level of understanding among both the cadres and pregnant women attending the activity. A total of 20 participants were involved. The results indicated an increase in knowledge following the intervention, demonstrating the effectiveness of the socialization and training activities at Posyandu Menjadi Bunga Keluarga. The findings are presented as follows:

Figure 4. Knowledge Evaluation Result



Source: Author's Work, 2025.

The results of the knowledge assessment indicated that the average pre-test score among participants was 52.5%, reflecting limited understanding of hyperemesis gravidarum and the role of herbal drinks in its management. After the educational session, which provided information on the occurrence of hyperemesis gravidarum in early pregnancy and introduced ginger and lemongrass drinks as a complementary approach, the average post-test score increased to 94.5%. This represents a 42% improvement compared to the pre-test results. These findings demonstrate that the education program was highly effective in enhancing the knowledge of pregnant women and posyandu cadres regarding the safe preparation and utilization of herbal remedies to reduce symptoms of hyperemesis gravidarum.

Figure 4. Education session on the management of Hyperemesis Gravidarum for pregnant women and posyandu cadres



Source: Private Documentation, 2025.

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On August 13, 2025, a training session was conducted for posyandu cadres and pregnant women on the safe preparation of herbal drinks for managing hyperemesis gravidarum. The training was facilitated by the community service team from STIKes Pekanbaru Medical Center. The activity is illustrated in Figure 5 below.

Figure 5. Training session on the preparation of herbal drinks for cadres and pregnant women at Posyandu Menjadi Bunga Keluarga



Source: Private Documentation, 2025.

This activity also represents one of the implementations of the Tri Dharma of Higher Education in achieving Key Performance Indicators (KPI), namely: lecturers engaging in activities outside the campus (KPI 3) and students gaining off-campus experience (KPI 2), as the program involved the active participation of students. Following the training and demonstration, cadres were asked to practice the preparation of herbal drinks using ginger and lemongrass, with appropriate and safe dosage standards. Technology was also applied through the provision of video tutorials accessible via smartphones, leaflets, and pocketbooks that could be utilized by cadres and pregnant women at Posyandu Menjadi Bunga Keluarga.

On September 5, 2025, the team conducted mentoring and evaluation with pregnant women experiencing hyperemesis gravidarum, including monitoring of herbal drink consumption. Interviews revealed that after consuming the herbal drink routinely for seven days, symptoms of nausea and vomiting were significantly reduced—from more than eight episodes per day to only mild nausea. For program sustainability, a small team of trained herbal educator cadres was established to conduct internal training and continued education. The posyandu was also equipped with long-term educational media, including posters, leaflets, and video tutorials on herbal drink preparation.

Discussion

The implementation of community service at Posyandu Menjadi Bunga Keluarga demonstrated a significant impact on improving maternal knowledge and cadre capacity regarding the use of herbal drinks, specifically ginger (*Zingiber officinale*) and lemongrass (*Cymbopogon citratus*), to reduce symptoms of hyperemesis gravidarum (HG). The knowledge assessment revealed that the average pre-test score was 52.5%, which increased to 94.5% in the post-test, reflecting a 42% improvement. This substantial increase indicates that the educational intervention effectively addressed knowledge gaps and enhanced participants' awareness of safe, affordable, and accessible complementary strategies for managing nausea and vomiting during early pregnancy. These findings are in line with previous studies reporting that structured health education interventions can significantly improve maternal knowledge and behavior change in pregnancy care (Rahmawati et al., 2022; World Health Organization, 2023).

The training sessions also proved effective in empowering posyandu cadres. By engaging them in hands-on practice of herbal drink preparation, cadres not only developed technical competencies but also improved their confidence in providing continuous education to pregnant women. This outcome supports the long-term sustainability of the program, particularly with the establishment of a cadre-based “herbal educator” team. Similar

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community-based empowerment approaches have been shown to strengthen local health systems and enhance maternal health outcomes (Hastuty et al., 2024; Herien & Saputro, 2023). The integration of educational media, including video tutorials, pocket books, and leaflets, further reinforced knowledge retention and served as practical tools for ongoing use, consistent with findings that blended educational methods improve the effectiveness of health promotion (Kementerian Kesehatan RI, 2023).

From a clinical perspective, mentoring and evaluation activities confirmed the practical benefits of the intervention. Pregnant women who consumed the herbal drink regularly for seven days reported a substantial reduction in vomiting episodes, from more than eight times per day to mild nausea only. These findings are consistent with a growing body of evidence on the antiemetic properties of ginger and lemongrass, which have been widely studied as safe, culturally acceptable, and accessible complementary therapies in pregnancy (Viljoen et al., 2022; Ensiyeh & Sakineh, 2021). Beyond the direct health benefits, the program contributed to the achievement of higher education performance indicators (IKU), such as lecturer engagement in off-campus service (IKU 3) and student participation in community-based learning (IKU 2). Thus, the intervention not only benefited the community but also advanced institutional goals by aligning with national higher education policies.

Nevertheless, several limitations of this program should be acknowledged. First, the intervention was conducted within a relatively short duration (seven days), which limits the ability to assess long-term adherence and sustained health outcomes. Second, the absence of a control group reduces the strength of causal inference regarding the effectiveness of the herbal intervention. Third, the sample was limited to a single Posyandu within one subdistrict, restricting generalizability to broader populations. These limitations suggest that future programs should incorporate longer follow-up periods, more rigorous quasi-experimental or randomized designs, and broader community involvement to validate and strengthen the findings. In conclusion, the program successfully achieved its objectives: enhancing maternal knowledge, strengthening cadre capacity, reducing maternal discomfort, and developing sustainable health education strategies. To ensure continuity, this initiative is recommended to be further developed into a home-based herbal product that provides both health and economic value for the community. Moreover, replication of similar programs in other Posyandu is strongly encouraged as a strategic recommendation for local health policy, supporting broader maternal health promotion and community empowerment across regions.

Conclusion

This community service program at Posyandu Menjadi Bunga Keluarga successfully improved maternal knowledge and cadre capacity in utilizing herbal drinks made from ginger (*Zingiber officinale*) and lemongrass (*Cymbopogon citratus*) to reduce hyperemesis gravidarum symptoms. The intervention not only increased maternal knowledge and reduced nausea and vomiting but also strengthened cadres' confidence in health education and supported higher education performance indicators (IKU). To ensure sustainability, the program is recommended to be developed into a standardized home-based herbal product that provides both health and economic benefits. Replication in other Posyandu and integration into local health policy are also encouraged. Future work should include product development, larger-scale research, and collaboration with local stakeholders to ensure long-term impact and broader community empowerment.

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