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Empowering Health Cadres in Reproductive Health Education through a Community Midwifery Approach

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ABSTRACT

Introduction: Reproductive health remains a significant public health concern, particularly in communities with limited access to accurate information and services. Health cadres play a strategic role in delivering community-based education; however, their capacity in reproductive health education is often inadequate. This program aimed to empower health cadres in reproductive health education through a community midwifery approach.

Methods: A community service program was conducted using a participatory approach with a one-group pretest–posttest design. A total of 25 health cadres participated in structured training sessions facilitated by midwives. The intervention included lectures, group discussions, role-playing, and case-based learning covering adolescent reproductive health, family planning, and prevention of sexually transmitted infections. Data were collected using structured questionnaires and analyzed using descriptive statistics and paired t-tests.

Results: The findings showed a significant improvement in knowledge scores, increasing from a pretest mean of 55% to a posttest mean of 82%, indicating a 27% increase. In addition, cadres demonstrated improved communication and counseling skills during simulation sessions. The involvement of midwives contributed to a deeper understanding and the practical application of reproductive health education.

Conclusion: The community midwifery approach is effective in improving the knowledge and skills of health cadres in reproductive health education. This model has the potential to strengthen community-based health promotion and should be considered for broader implementation.

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INTRODUCTION

Reproductive health remains a critical public health priority globally and nationally, particularly in low- and middle-income countries. According to the World Health Organization (WHO), approximately 295,000 women died due to complications related to pregnancy and childbirth in 2017, with the majority occurring in developing regions. In addition, the United Nations Population Fund (UNFPA) reports that millions of adolescents lack access to accurate and comprehensive reproductive health information, increasing the risks of early pregnancy, sexually transmitted infections (STIs), and unsafe abortion. In Indonesia, the Maternal Mortality Ratio (MMR) remains relatively high compared to regional targets, and adolescent reproductive health challenges continue to be a concern. Data from the Indonesian Demographic and Health Survey (IDHS) indicate that knowledge gaps, cultural barriers, and limited access to health services contribute significantly to these issues (Abebe & Yehualashet, 2025).

At the community level, health cadres play a strategic role as frontline agents in delivering health education and promoting healthy behaviors (Acharya et al., 2026). However, many cadres still face limitations in knowledge, communication skills, and confidence when addressing sensitive topics such as reproductive health (Adnani et al., 2025). These limitations are particularly evident in rural and semi-urban communities, where sociocultural norms often restrict open discussion about reproductive issues (Adoma et al., 2025). As a result, misinformation persists, and preventive health behaviors are not optimally practiced (Aleni et al., 2026).

The urgency of this problem is evident in the partner community targeted by this Community Service Program (PKM). Preliminary observations and informal assessments revealed that health cadres in the area have not received structured training in reproductive health education (Attawet et al., 2025). Most of their activities are limited to general maternal and child health services, with minimal emphasis on adolescent and reproductive health issues (Garti, 2026). Furthermore, there is a lack of standardized educational materials and supportive supervision from health professionals, particularly midwives, who are essential in bridging clinical knowledge with community practices (Ayaz et al., 2026).

A community midwifery approach offers a relevant and sustainable strategy to address these challenges. Midwives are uniquely positioned to provide culturally sensitive, evidence-based reproductive health education while fostering trust within the community (Hughes et al., 2025). Through collaboration between midwives and health cadres, it is possible to strengthen cadres' capacity to deliver accurate information, facilitate discussions, and encourage community participation (Laws et al., 2025). This approach also aligns with the principles of primary health care, emphasizing community empowerment, accessibility, and preventive care (Ku Carbonell et al., 2024).

Therefore, this PKM activity aims to empower health cadres in reproductive health education through a community midwifery approach. Specifically, the objectives are: (1) to improve the knowledge and skills of health cadres regarding reproductive health, including adolescent health, family planning, and prevention of STIs; (2) to enhance cadres' communication and counseling abilities in delivering culturally appropriate education; and (3) to develop sustainable collaboration between midwives and community health cadres to support ongoing health promotion activities. By strengthening cadres' roles as community educators, this program is expected to improve reproductive health awareness and outcomes at the community level.

METHOD

This Community Service Program (PKM) employed a participatory and capacity-building approach to empower health cadres in reproductive health education through a community midwifery framework. The program was implemented in a semi-urban community setting and involved active collaboration between midwives, health cadres, and community stakeholders.

Design and Approach

The program adopted a quasi-experimental one-group pretest–posttest design to assess changes in knowledge and skills among health cadres. A community-based participatory approach was integrated to ensure that the intervention was contextually relevant, culturally sensitive, and sustainable. Midwives acted as facilitators and mentors throughout the program.

Participants and Setting

Participants consisted of 20–30 active community health cadres recruited through purposive sampling in collaboration with local health centers. Inclusion criteria included cadres who were actively involved in community health activities, willing to participate in all sessions, and able to communicate effectively within the community. The program was conducted in a community health post (Posyandu) or village hall to ensure accessibility.

Intervention Procedures

The intervention was conducted in three main phases:

Preparation Phase: A needs assessment was conducted through informal interviews and observations to identify gaps in knowledge and skills related to reproductive health. Educational materials, modules, and training tools were then developed in line with evidence-based guidelines and local context. Implementation Phase: Training sessions were delivered using interactive methods, including lectures, group discussions, role-playing, and case-based learning. Key topics included adolescent reproductive health, family planning, prevention of sexually transmitted infections (STIs), and effective communication strategies. Midwives provided demonstrations and facilitated practice sessions to enhance counseling skills. Evaluation and Follow-up Phase: Evaluation was conducted using pretest and posttest questionnaires to measure knowledge improvement. Skills assessment was performed through observation checklists during role-play sessions. Midwives conducted follow-up mentoring to reinforce learning and support cadres in real community activities.

Data Collection and Analysis

Quantitative data were collected using structured questionnaires administered before and after the intervention. Descriptive statistics (mean and percentage) were used to summarize the data, and paired t-tests were used to determine significant differences in knowledge scores before and after the training. Qualitative feedback from participants was also collected to assess program acceptability and perceived benefits.

Ethical Considerations

This program ensured voluntary participation, informed consent, and confidentiality of all participants. All activities were conducted with respect for local cultural values and norms. Approval and coordination were obtained from local authorities and community leaders before implementation.

Indicators of Success

The success of the program was measured by: (1) an increase in knowledge scores of at least 20% after the intervention; (2) improved communication and counseling skills

as observed during simulations; and (3) active involvement of cadres in delivering reproductive health education within the community after the program. The program's sustainability was supported by ongoing collaboration among midwives and health cadres.

RESULT

The results of this community service program demonstrated a significant improvement in the knowledge of health cadres regarding reproductive health education. Based on the pretest and posttest assessments, the average knowledge score increased from 55% before the intervention to 82% after the training. Figure 1. Improvement in Health Cadres' Knowledge on Reproductive Health Following a Community Midwifery-Based Intervention.

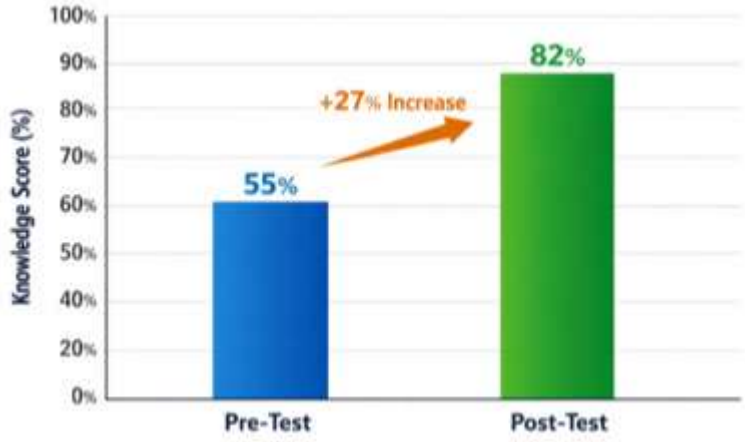

Figure 1. Improvement in Health Cadres' Knowledge on Reproductive Health Following a Community Midwifery-Based Intervention

The bar chart illustrates the comparison of average knowledge scores before (pre-test: 55%) and after (post-test: 82%) the training program. The results indicate a 27-percentage point increase, demonstrating the effectiveness of the intervention in enhancing cadres' understanding of reproductive health topics, including adolescent health, family planning, and the prevention of sexually transmitted infections. This improvement represents a 27 percentage-point gain, reflecting the effectiveness of the community midwifery-based training approach. The bar chart illustrates a clear upward trend in knowledge scores following the intervention.

From a statistical perspective, this increase suggests that the educational intervention successfully enhanced cadres' understanding of key topics, including adolescent reproductive health, family planning, and prevention of sexually transmitted infections. The use of interactive learning methods, such as role-playing and group discussions, improved knowledge retention and engagement among participants. In addition to knowledge improvement, observational assessments during simulation sessions showed that most participants demonstrated enhanced communication and counseling skills. Health cadres were able to convey reproductive health information more confidently and appropriately, particularly when addressing sensitive topics within the community context.

The findings also highlight the importance of the midwifery approach in community-based health education. The involvement of midwives as facilitators provided not only technical knowledge but also practical guidance, enabling cadres to apply what they learned in real-life situations. This collaborative model strengthened the link between health services and the community. Overall, the results suggest that empowering health cadres through structured training and mentorship can significantly improve their capacity as community educators. This has important implications for scaling up similar programs to enhance reproductive health awareness and outcomes at the broader community level.

DISCUSSION

The results of this community service program indicate a marked improvement in the knowledge and practical competencies of health cadres following a structured training intervention grounded in a community midwifery approach. The increase in knowledge scores from pretest to posttest reflects not only cognitive gains but also suggests improved readiness among cadres to function as effective community educators. These findings are consistent with the growing body of evidence emphasizing the pivotal role of community-based health workers in strengthening primary health care systems and promoting preventive health behaviors (Molla et al., 2025).

Globally, reproductive health challenges remain significant, particularly in low- and middle-income countries where access to accurate information and services is often limited (Pangesti et al., 2026). The World Health Organization (WHO) has consistently highlighted that empowering community health workers through training and supervision is a critical strategy to reduce maternal morbidity and improve reproductive health outcomes (Perera et al., 2025). In this context, the improvement observed in this program aligns with WHO recommendations that emphasize capacity building as a cornerstone of effective community health interventions (Pérez-Sánchez et al., 2024).

Previous studies provide strong support for the effectiveness of educational interventions targeting community health workers. For instance, Pratama et al., (2026) reported that structured training programs significantly enhanced knowledge and performance among community health workers, particularly when combined with ongoing supervision. Similarly, Purnat et al., (2025) demonstrated that community-based interventions delivered by trained personnel contributed to improved maternal and neonatal health indicators. These findings corroborate the results of the present program, suggesting that investment in cadre training yields measurable benefits in knowledge acquisition and service delivery (Putu Noviana Sagitarini et al., 2026).

The use of interactive and participatory learning methods in this program likely contributed to the observed outcomes. Adult learning theory suggests that individuals learn more effectively when they are actively engaged in the learning process (Saldanha et al., 2025). Techniques such as role-playing, group discussions, and case-based learning enable participants to contextualize information and apply it in practical scenarios. This is supported by UNESCO, which advocates experiential learning approaches for adult education to enhance retention and behavioral change. In the present study, cadres

demonstrated increased engagement during training sessions, which may explain the substantial improvement in posttest scores (Seeiso & Mhlongo, 2025).

Another key factor contributing to the intervention's success is the integration of a community midwifery approach. Midwives play a crucial role in delivering reproductive health services and are often trusted figures within the community (Suárez-Baquero et al., 2025). According to the International Confederation of Midwives (ICM), midwives are essential providers of comprehensive reproductive health education, including family planning and prevention of sexually transmitted infections (Sylvia Bawilin & Suprapto, 2025). Their involvement in this program ensured that the information delivered was accurate, culturally appropriate, and aligned with current clinical standards. Furthermore, their role as mentors helped build cadres' confidence in communicating sensitive health topics (Temple et al., 2025).

In addition to knowledge gains, improvements in communication and counseling skills were observed during simulation sessions. Effective communication is fundamental in reproductive health education, where topics are often sensitive and influenced by sociocultural norms. Tyarini & Cahya Mulat, (2025) found that communication skills training significantly enhances community health workers' effectiveness in influencing health behaviors. In line with this, cadres in the present program demonstrated increased confidence in delivering messages and engaging with community members, which is likely to improve the reach and impact of health education efforts (Yamaç et al., 2026).

Despite these positive outcomes, several limitations should be acknowledged. The use of a one-group pretest–posttest design limits the ability to establish causal relationships, as external factors may have influenced the results. Additionally, the evaluation focused on short-term outcomes, and it remains unclear whether the observed improvements will be sustained over time. Long-term follow-up studies are needed to assess the durability of knowledge and skills and their impact on community health outcomes.

Cultural context also plays a critical role in the success of reproductive health programs. In many communities, discussions about reproductive health are still considered taboo, which can hinder effective communication. The community midwifery approach used in this program appears to address this challenge by leveraging trusted health professionals and culturally sensitive strategies. This is consistent with evidence suggesting that culturally tailored interventions are more effective in promoting health behavior change and community acceptance.

The implications of these findings are significant for public health practice and policy. Strengthening the capacity of health cadres through structured training and mentorship can serve as a cost-effective strategy to enhance reproductive health education at the community level. Integrating midwives into community-based programs not only improves the quality of education but also fosters collaboration between formal health systems and community networks. This program demonstrates that a community midwifery approach is effective in empowering health cadres and improving reproductive health knowledge and skills. The findings are supported by existing literature and

highlight the importance of participatory, context-sensitive, and evidence-based interventions. Future initiatives should focus on scaling up this model, ensuring sustainability, and evaluating long-term impacts to maximize benefits for community health outcomes.

CONCLUSION

This community service program demonstrated that a structured training intervention using a community midwifery approach effectively improved the knowledge and practical competencies of health cadres in reproductive health education. The significant increase in post-intervention scores indicates that participatory, context-based learning methods can enhance cadres' understanding of key topics, including adolescent reproductive health, family planning, and the prevention of sexually transmitted infections. In addition, the program strengthened cadres' communication and counseling skills, enabling them to deliver health messages more confidently and appropriately within the community. Overall, integrating midwives as facilitators proved a valuable strategy for ensuring the accuracy, cultural relevance, and acceptability of the educational intervention.

To ensure the sustainability and broader impact of this program, several recommendations are proposed. First, continuous capacity-building activities should be implemented through periodic refresher training and mentoring by midwives to maintain and further enhance cadres' competencies. Second, the development of standardized and culturally appropriate educational materials is essential to support consistent and effective health promotion activities. Third, strengthening collaboration between community health centers, midwives, and local stakeholders is necessary to institutionalize the role of health cadres in reproductive health education. Finally, future programs should incorporate long-term monitoring and evaluation to assess the sustained impact of training on community health outcomes and to inform program refinement and scale-up strategies.

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Conflict of Interests

The authors declare that there are no conflicts of interest related to this community service program. The study was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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