

Increasing Pregnant Women's Knowledge of Pregnancy Care through Community Based Health Education

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ABSTRACT Pregnancy is a critical period that requires comprehensive knowledge and adequate health care to ensure maternal and fetal well-being. However, many pregnant women, especially in rural or underserved areas, often lack access to accurate information and resources related to pregnancy care. This community service program aims to increase pregnant women's knowledge and awareness regarding essential aspects of prenatal care through community-based health education. The activity was conducted in collaboration with local health centers and involved 30 pregnant women from the X village area in the third trimester. The method used was interactive health education delivered through counselling sessions, visual aids, and discussion forums, facilitated by professional nurses specialising in maternal care. Pre and post-intervention questionnaires were used to measure knowledge improvement. The results showed a significant increase in participants' knowledge, particularly in Nutrition, danger signs during pregnancy, the importance of antenatal visits, and personal hygiene. Participants reported feeling more confident and prepared to manage their pregnancy after the intervention. This program demonstrates that structured, community-based education can empower pregnant women to make informed decisions and adopt healthier behaviours, ultimately reducing maternal and neonatal risks.



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1. INTRODUCTION

Maternal health remains a critical public health concern globally, especially in developing countries where maternal mortality rates are still high (Cnossen et al., 2025). One of the contributing factors to maternal morbidity and mortality is the lack of knowledge among pregnant women regarding proper prenatal care. In many communities, particularly in rural and underserved areas, pregnant women often receive insufficient information about the physiological changes during Pregnancy, signs of complications, nutritional needs, and the importance of regular antenatal checkups (Bragg et al., 2025). Maternal health remains a global health priority, particularly in developing countries where maternal mortality rates are still high. One of the primary contributors to maternal and neonatal complications is the lack of adequate knowledge and awareness among pregnant women regarding proper

pregnancy care (Cahya Mulat & Wang, 2024). Many expectant mothers, especially those living in rural or socioeconomically disadvantaged areas, often face barriers in accessing reliable health information, which can lead to poor health practices and delayed medical attention (Salloum et al., 2025).

Pregnancy care is essential not only for the health of the mother but also for the development and survival of the fetus. The World Health Organisation emphasises community engagement and health education as key strategies to improve maternal health outcomes (Timsin & Wangpitipanit, 2025). Health education empowers women with the knowledge to recognise danger signs, make informed health decisions, and seek timely medical help. Comprehensive prenatal care that includes health education is essential for a safe Pregnancy and delivery (Espejord et al., 2024). Pregnancy care involves routine antenatal checkups, awareness of nutritional needs, identification of danger signs, personal hygiene, and mental health support. However, existing health services in many communities are often insufficient in providing targeted, culturally appropriate educational interventions (Suprpto et al., 2025).

Community-based health education has emerged as an effective approach to bridge the knowledge gap by delivering relevant information directly to the target population in their local setting (Turnip & Kamso, 2024). This method emphasises active participation, peer support, and the use of local health workers or facilitators, making it more accessible and acceptable for community members. This community service initiative addressed the knowledge gap by providing pregnant women with structured, community-based health education. The primary goal is to increase their understanding of pregnancy care, including Nutrition, hygiene, warning signs, and the importance of regular visits to health services. By involving healthcare professionals and utilising interactive learning methods, the program seeks to foster a supportive environment for pregnant women and encourage proactive maternal health behaviour.

2. METHOD

Approach and Design

The community service program employed a participatory, community-based educational approach. The activity was designed as an interactive health education session to increase pregnant women's knowledge regarding comprehensive pregnancy care. A pre-experimental one-group pretest-posttest design was used to evaluate the effectiveness of the intervention.

Location and Participants

The program was conducted in X Village, collaborating with the local Public Health Center (Puskesmas). A total of 30 pregnant women in their second and third trimesters were selected as participants based on recommendations from midwives and health cadres.

Data Collection Tools

A structured questionnaire consisting of 20 multiple-choice questions was developed to assess participants' knowledge on:

Nutrition during Pregnancy. Personal hygiene. Danger signs during Pregnancy. The importance of antenatal care (ANC). Preparation for childbirth

The same questionnaire was administered before and after the educational intervention to measure changes in knowledge.

Educational Intervention

The intervention consisted of:

Health education sessions led by professional nurses and midwives, using flip charts, visual aids, and real-life case discussions. Group discussions and Q&A, to encourage participant engagement and clarify misconceptions. Distribution of educational leaflets summarising key points for continued learning at home. Each session lasted approximately 90 minutes and was held in the community hall with strict adherence to health protocols.

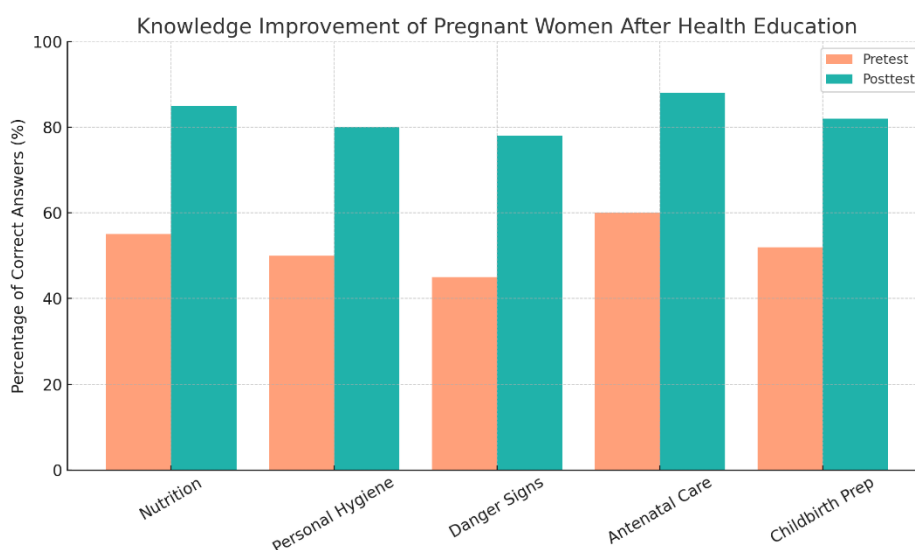
Data Analysis

The data from the pretest and posttest questionnaires were analysed using descriptive statistics to observe the increase in knowledge levels. The results regarding the percentage of correct answers and average score improvement were presented.

3. RESULT AND DISCUSSION

RESULT

The following is a graph of community service results that show an increase in the knowledge of pregnant women before and after being given health education:



Significant Knowledge Gains. The chart demonstrates a substantial increase in knowledge across all assessed categories after the community-based health education. For instance, understanding Danger Signs rose from 45% to 78%, and Nutrition improved from 55% to 85%. Before the intervention, knowledge was generally low, especially in critical areas such as Personal Hygiene and Danger Signs, indicating a clear need for targeted health education. Post-education Improvement. After the sessions, all categories showed improvement of over 25%, with Antenatal Care reaching 88% correctness, suggesting that participants absorbed and retained the information effectively.

The results of this community-based health education program demonstrate a significant improvement in the knowledge of pregnant women regarding essential

aspects of pregnancy care. The structured intervention, which included interactive sessions, visual materials, and facilitated discussions, effectively addressed the knowledge gaps in key areas such as Nutrition, personal hygiene, danger signs during Pregnancy, antenatal care, and childbirth preparation. This program confirms that educational outreach conducted at the community level, especially when delivered engaging and participatory, can greatly empower expectant mothers to make informed decisions about their health. By increasing awareness and understanding, such initiatives are vital in promoting safer pregnancies and reducing maternal and neonatal risks. Future community engagement programs should consider replicating and expanding this approach in other underserved areas, incorporating continuous monitoring and follow-up support to maintain long-term behavioural changes among beneficiaries.

DISCUSSION

The findings of this community service program highlight the effectiveness of community-based health education in improving pregnant women's knowledge across multiple domains of prenatal care. The observed knowledge gains between pretest and posttest scores demonstrate the relevance of the educational content delivered and the value of participatory and localised learning approaches. Before the intervention, participants did not understand crucial areas such as identifying danger signs in pregnancy (45%) and maintaining personal hygiene (50%). These results align with studies in low-resource settings, where limited access to accurate health information contributes to high maternal morbidity and mortality rates. The low baseline also reflects the need for accessible, culturally sensitive education to bridge knowledge gaps for vulnerable populations (Robins et al., 2025).

Implementing interactive methods such as visual media, real-life case discussions, and Q&A sessions enhanced participants' engagement and comprehension. Posttest scores revealed marked improvement, particularly in antenatal care knowledge (from 60% to 88%) and nutrition awareness (from 55% to 85%), suggesting that such methods are more effective than traditional lecture-based sessions. This supports previous research indicating that adult learning is more successful when learners are actively involved. Another noteworthy aspect is the increased confidence and preparedness expressed by participants following the sessions (Burduli et al., 2025). This attitudinal shift is a positive indicator of behavioural change, which, if sustained, could contribute to better health outcomes for mothers and infants (Pico et al., 2024). Furthermore, collaboration with local health centers ensured that the content was aligned with standard maternal care protocols, enhancing the credibility and applicability of the messages conveyed (Amare et al., 2025).

Despite these promising results, there are limitations to consider. The small sample size and short program duration limit the findings' generalizability (Atukunda et al., 2025). Additionally, knowledge improvement does not always guarantee long-

term behaviour change (Sarkodie et al., 2025). Therefore, follow-up studies and continuous community engagement are recommended to assess sustained impact and adapt educational content to evolving community needs. This discussion supports the growing body of evidence advocating for community-based maternal health interventions (Wahyuni et al., 2024). When contextually grounded and participatory, health education initiatives can empower women and improve maternal health indicators (Md Nawawi et al., 2024).

The collaboration with local midwives and health cadres was a key factor in the success of this program. Their familiarity with the community helped build trust and encouraged participation (Gupta et al., 2024). The distributed leaflets also provided a tangible resource for continued learning at home, reinforcing the content beyond the sessions (Mwakawanga et al., 2024). Despite these positive outcomes, the program had limitations, including a relatively small sample size and the short duration of follow-up (Nirmani et al., 2024). Future implementations could benefit from longitudinal assessments to determine whether knowledge gains lead to actual behavioural changes, such as increased antenatal care visits or early recognition of danger signs (Elhage et al., 2024).

4. CONCLUSION

This community-based health education program proved to be an effective strategy for increasing pregnant women's knowledge of pregnancy care. The intervention significantly improved participants' understanding of critical areas such as nutrition, personal hygiene, danger signs during pregnancy, antenatal care, and childbirth preparation. The improvement in posttest scores across all categories indicates that the educational methods, interactive sessions, visual materials, and group discussions successfully facilitated learning and retention. The program highlights the importance of community-level interventions in empowering women to make informed health decisions during Pregnancy. By enhancing maternal knowledge, such initiatives contribute directly to reducing maternal and neonatal health risks, especially in underserved or rural communities. It is recommended that similar programs be implemented regularly and scaled to reach broader populations. Future efforts may include integrating continuous follow-up, family involvement, and digital education tools to sustain and enhance the impact over time.

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CONFLICT OF INTERESTS

All authors declare no conflict of interest in this community service program.

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