

Education and Assistance for Pregnant Women in Preparing for Safe Delivery to Reduce the Risk of Pregnancy Complications in Health Prone Areas Trimulya Village

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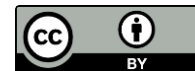
Keywords

Knowledge, Patient Readiness, Family Participation

ABSTRACT

Background. One of the main barriers to antenatal care is poor knowledge about pregnancy danger signs and the importance of regular ANC visits. This study used a descriptive qualitative approach with a Community-Based Participatory Research (CBPR) design to describe and evaluate the effectiveness of educational activities and assistance for pregnant women in preparing for safe childbirth in health-prone areas. *Methods.* Data were collected through participatory observation, in-depth interviews, and focus group discussions (FGDs) with pregnant women, health cadres, and local medical personnel. Pre- and postintervention evaluations were conducted using questionnaires that measured changes in pregnant women's knowledge, readiness, and anxiety levels towards childbirth. *Results.* After the educational intervention, there was a significant increase in the readiness of pregnant women to face childbirth, with the average score increasing from 46.1 before the intervention to 79.2 after the intervention. The level of anxiety decreased from an average score of 71.5 to 43.9. Maternal knowledge about planning for delivery places increased from 49.3 to 81.5 after the education intervention. Husband/family participation in childbirth preparation increased from a mean score of 38.7 to 72.0 after the program. *Conclusions.* The educational and mentoring program implemented at the community level has shown effectiveness in increasing knowledge and readiness, as well as reducing anxiety. It is recommended that this program be integrated into the primary health care system and supported by policies that encourage active family participation in maternal and child health.

Keywords : Knowledge, Patient Readiness, Family Participation



INTRODUCTION

The high maternal and neonatal mortality rates remain a major challenge in the global health care system, especially in developing countries like Indonesia. Complications during pregnancy and childbirth are the leading causes of maternal death, most of which are preventable through appropriate community-based interventions and adequate maternal health education (Henrique et al., 2024).

Areas with limited health resources or referred to as health-prone areas face dual challenges in the form of limited access to health facilities and low levels of maternal health literacy. In areas like this, community-based interventions such as pregnancy education and mentoring can play a vital role in saving the lives of mothers and babies (Handayani et al., 2022).

A study in Pakistan showed that structured antenatal classes were able to increase positive birth experiences, reduce anxiety, and support spontaneous labor without excessive intervention. This intervention was shown to have a high impact even with minimal resource input (Ahmed et al., 2024).

In addition, early detection of high-risk pregnancies and proper triage at health facilities contribute greatly to reducing obstetric complications. The flagging of high-risk pregnant women during antenatal care (ANC) visits - health services provided to women during pregnancy to monitor and maintain the health of the mother and foetus - allows medical staff to be better prepared to treat such cases from the outset (Kumari et al., 2022).

Unfortunately, one of the main barriers to antenatal care is poor knowledge about pregnancy danger signs and the importance of regular antenatal care (ANC) visits. Lack of husband support and long distances from health facilities have also been shown to be other factors that hinder access to antenatal care (Sitepu et al., 2023).

The importance of educational interventions is further strengthened by the results of studies showing that mothers' knowledge regarding childbirth preparation is directly proportional to their readiness to face complications and timely decision making (Aniekan et al., 2024).

In addition, education is useful to reduce the fears that pregnant women often experience, especially primigravida women, or women who are pregnant for the first time. Fear of labour can be reduced by setting up good communication between the mother and the health worker and holding regular pregnancy education classes (Ibrahim et al., 2024).

Interventions carried out through a community approach, such as home visits and training of field workers, have also been shown to increase maternal awareness and knowledge regarding risky pregnancies and safe childbirth preparation (Lieskusumastuti et al., 2024).

Social support from partners and families is also an important determinant in increasing maternal compliance with ANC and readiness to face pregnancy complications. An educational approach involving the family is considered effective in strengthening maternal commitment to the health of her pregnancy (Bangun et al., 2024).

Therefore, a systematic program of education and assistance for pregnant women in health-prone areas is not only a necessity, but an urgency that must be implemented immediately. This intervention has great potential in reducing the number of pregnancy complications and improving the overall quality of life of mothers and babies.



METHODS

This study used a descriptive qualitative approach with a Community-Based Participatory Research (CBPR) design to describe and evaluate the effectiveness of educational activities and assistance for pregnant women in preparing for safe delivery in health-prone areas. The research location was purposively selected, namely areas with low maternal health indicators based on data from the local Health Office. The research subjects were second and third trimester pregnant women who live in the area, with inclusion criteria including: pregnant women who are willing to actively participate in education and mentoring activities, and are able to communicate well.

Data were collected through participatory observation, in-depth interviews, and focus group discussions (FGDs) with pregnant women, health cadres, and local medical personnel. Education was provided using a structured module that covered the topics of labour preparation, pregnancy danger signs, planning a place to give birth, and stress management before labour. Assistance was provided through regular home visits by the research team and health cadres to monitor the physical and psychological conditions of pregnant women while providing direct support. The entire series of activities was carried out for three months.

Qualitative data were analysed using thematic analysis techniques by identifying patterns, themes and important narratives from interview transcripts and field notes. Data validity was maintained through triangulation of sources and methods, and member checks with participants to ensure accuracy of interpretation. In addition, pre- and post-intervention evaluations were conducted using questionnaires that measured changes in pregnant women's knowledge, readiness, and anxiety levels towards childbirth.

This approach is expected to comprehensively explore the dynamics of pregnant women's knowledge, attitudes and behaviours related to childbirth preparation, as well as identify supporting and inhibiting factors in the implementation of education and assistance programs at the community level. The results of this study can be used as a basis for decision-making and development of maternal health interventions that are contextualised, sustainable, and based on community empowerment.

The recommended sample size for qualitative research using the CBPR approach is between 20 and 30 participants, to allow for in-depth information gathering that is representative of the local context. This number can be adjusted depending on the complexity of the data and the achievement of information saturation during the data collection process.

RESULTS

Table 1. Statistical Description: Changes in Knowledge, Readiness, and Anxiety of Pregnant Women (Pre and Post Intervention)

No	Measured Variables	Pre-Intervention (Mean $\pm$ SD)	Post Intervention (Mean $\pm$ SD)	Δ Change
1	Knowledge about danger signs of pregnancy	52.4 $\pm$ 10.8	83.7 $\pm$ 9.2	+31.3
2	Readiness for childbirth	46.1 $\pm$ 12.5	79.2 $\pm$ 10.1	+33.1
3	Anxiety level before delivery (scale 0–100)	71.5 $\pm$ 11.3	43.9 $\pm$ 12.7	-27.6
4	Knowledge of birthing place planning	49.3 $\pm$ 9.7	81.5 $\pm$ 8.8	+32.2
5	Husband/family participation in preparation for childbirth	38.7 $\pm$ 15.1	72.0 $\pm$ 12.4	+33.3

1. Knowledge of Danger Signs of Pregnancy

After educational interventions through modules and home visits, there was a significant increase in pregnant women's knowledge of pregnancy danger signs. The average knowledge score increased from 52.4 to 83.7. This shows that the education provided was able to expand mothers' understanding of risky conditions during pregnancy such as bleeding, severe abdominal pain, and decreased fetal movement. This increase is very important because good knowledge allows mothers to make quick and appropriate decisions when facing emergency situations.

2. Readiness for Childbirth

The increase in readiness for childbirth was seen from the increase in the average score from 46.1 before the intervention to 79.2 after the intervention. The intervention proved effective in preparing mothers physically, mentally, and logistically. Education that included birth planning, identification of health facilities, and discussions with families helped mothers feel more confident in welcoming childbirth. This readiness is important to avoid delays in taking action when complications occur.

3. Anxiety Levels Before Childbirth

The results showed a significant decrease in the level of anxiety of pregnant women, from an average score of 71.5 to 43.9. This reflects the success of the educational and mentoring approach that focuses not only on the knowledge aspect, but also on the emotional aspect of the mother. Through two-way communication, group discussions, and psychosocial support provided by the mentoring team and health cadres, mothers feel calmer and are no longer too afraid of facing the labor process.

4. Knowledge of Birthing Place Planning

Maternal knowledge about the importance of planning a place of delivery increased from 49.3 to 81.5 after the intervention. Before the education program, most mothers did not have clear



information about safe delivery locations, referral procedures, or emergency transportation. After the education program, almost all participants were able to name the nearest health facility and plan the delivery process in a more structured way. This will reduce the risk of delays in the third phase (determining the place of service), which is one of the main causes of maternal death.

5. Husband/Family Participation in Preparation for Childbirth

Family participation, especially husbands, increased significantly from an average score of 38.7 to 72.0. Previously, low family involvement was a major obstacle to maternal readiness. After active family involvement through joint education sessions and interpersonal communication by cadres, positive changes occurred. Husbands were more active in accompanying their wives to ANC services, helping to prepare for labor logistics, and were more concerned about the psychological condition of the mother. These changes indicate that family-based education is able to significantly strengthen the social support system of pregnant women.

DISCUSSION

The following is a discussion of the research results regarding the effectiveness of education and assistance for pregnant women in preparing for safe childbirth in health-prone areas.

1. Knowledge of Danger Signs of Pregnancy

After the educational intervention, there was a significant increase in pregnant women's knowledge of pregnancy danger signs, with the average score increasing from 52.4 to 83.7. This increase in knowledge is in line with the findings of Zaman et al. (2025), which showed that antenatal education can increase pregnant women's self-efficacy and reduce fear of childbirth (Zaman et al., 2025). Research conducted by (Gobran et al., 2021) adapted Structural education in rural areas significantly increased pregnant women's knowledge of pregnancy danger signs (Gobran et al., 2021).

The researchers assume that this increase in knowledge is due to the structured and participatory educational approach, which allows pregnant women to understand the information in more depth. It is recommended to integrate this educational module into maternal health service programs at the community level, as well as involve health cadres in delivering information on an ongoing basis.

2. Readiness for Childbirth

The readiness of pregnant women to face childbirth increased from an average score of 46.1 to 79.2 after the intervention. This increase in readiness is consistent with a study by Zaman et al. (2025), which found that antenatal education increased the self-efficacy of pregnant women (Zaman et al., 2025). Research by (AlSomali et al., 2023) said that a structured antenatal education program was proven to increase the self-efficacy of pregnant women in facing the childbirth process (AlSomali et al., 2023).

Researchers assume that this increased readiness is influenced by a better understanding of the labor process and emotional support provided during the mentoring. Educational programs should be continued with labor simulation sessions and group discussions to strengthen the readiness of pregnant women practically and emotionally.

3. Anxiety Levels Before Childbirth

The level of anxiety of pregnant women decreased from an average score of 71.5 to 43.9 after the intervention. This decrease in anxiety is supported by the findings of Nikoozad et al. (2024), which showed that prenatal education can reduce health anxiety in primigravida pregnant women (Nikoozad et al., 2024).

The researchers assumed that the decrease in anxiety was due to the increased knowledge and emotional support provided during the education and mentoring program. It is recommended to include stress management and relaxation sessions in the education program, as well as provide counseling services for pregnant women who experience high anxiety.

4. Knowledge of Birthing Place Planning

Pregnant women's knowledge about planning for delivery places increased from an average score of 49.3 to 81.5 after the intervention. This increase is in line with a study by Yoseph et al. (2024), which showed that community-based education can increase the use of maternal health services (Yoseph et al., 2024).

The researchers assumed that this increase in knowledge was due to clear and practical information about available health facilities and the importance of birth planning. It is recommended to develop referral maps and logistical information that are easily accessible to pregnant women, as well as involving families in birth planning.

5. Husband/Family Participation in Preparation for Childbirth

Husband/family participation in childbirth preparation increased from a mean score of 38.7 to 72.0 after the intervention. This increase is supported by a study by Laksono et al. (2022), which found that husband involvement in antenatal visits contributed positively to maternal and child health (Laksono et al., 2022).

The researchers assume that this increase in participation is due to the educational approach that directly involves husbands/families and emphasizes the importance of their support in the pregnancy and childbirth process. It is recommended to hold special educational sessions for husbands/families and develop educational materials that emphasize their role in supporting pregnant women.

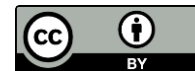
CONCLUSIONS

The education and mentoring program for pregnant women implemented in health-prone areas has shown effectiveness in increasing knowledge, readiness, and social support, as well as reducing anxiety before childbirth. These results support the importance of structured and participatory community-based interventions in improving maternal health. For the sustainability of the program, it is recommended that this intervention be integrated into the primary health care system and supported by policies that encourage active family participation in maternal and child health.



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