



# Education for pregnant women in increasing knowledge about childbirth preparation

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## ABSTRACT

In Indonesia, the maternal mortality rate remains high, encompassing women's health concerns such as pregnancy, childbirth, and the postpartum period. Efforts to mitigate this rate involve the provision of quality services spanning from pregnancy to contraception. Pregnant women experience physical and emotional changes that have the potential to cause anxiety, especially before giving birth. To overcome this problem, Nahdlatul Ulama University in collaboration with RSI A. Yani, Surabaya City held community empowerment activities in the form of educational seminars that focused on preparation for childbirth for pregnant women. The main aim of this seminar is to increase participants' understanding of childbirth preparation. The methodology used included online and offline seminars attended by 20 pregnant women. Analysis of the results of the pre-test and post-test questionnaires showed that there was a significant difference in participants' knowledge regarding childbirth preparation before and after the seminar, with a P-value <0.05. This community empowerment initiative is effective in increasing seminar participants' knowledge regarding childbirth preparation.

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## 1. INTRODUCTION

Maternal health encompasses the well-being of women during pregnancy, childbirth, and the postpartum period. According to WHO (2022), approximately 295,000 women died during and after pregnancy and childbirth in 2017. In Indonesia, maternal mortality rates have been increasing annually, reaching 7,389 deaths in 2021, compared to 4,627 deaths in 2020 (Kemenkes, 2022). Efforts to reduce maternal mortality include facilitating access to quality healthcare from prenatal services to contraception usage.

Pregnancy is the condition of conceiving a fetus in the uterus or elsewhere in the body, culminating in abortion or spontaneous or elective delivery. Pregnancy involves significant changes, necessitating proper care for both the mother and the fetus (Pascual & Langaker, 2021). The period of pregnancy, childbirth, and the postpartum phase is a crucial experience for women, involving the creation of a new

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generation and requiring information about the body and the fetus (Shi et al., 2015). These changes, both physical and emotional, are attributed to hormonal fluctuations since the onset of pregnancy. Pregnant women may also undergo psychological changes leading to anxiety, especially approaching the childbirth process (Setianingsih et al., 2021).

Pregnant women face a high risk of mental health issues such as depression, anxiety, and self-harm, exacerbated by financial and environmental factors (Bedaso et al., 2021). Anxiety can arise during the third trimester of pregnancy and during childbirth, encompassing concerns about the risk of premature birth and miscarriage (Angesti & Febriyana, 2021). This is often due to the unpreparedness of pregnant women who lack experience in pregnancy or childbirth. Readiness is the condition of being physically, mentally, and emotionally prepared (Angesti & Febriyana, 2021). Pregnancy and childbirth require both physical and psychological preparation, as well as support from family or spouses (Arlym & Herawati, 2021).

The readiness for childbirth in mothers is influenced by various factors, including age, parity, experience and education, family support, spousal support, and healthcare provider support (Farida et al., 2019). Preparation for childbirth aims to fulfill all needs during pregnancy and the childbirth process. Unpreparedness for childbirth can be a contributing factor to the high maternal mortality rate. Consequences may include difficulties in determining the birthing location, lack of knowledge about the required expenses, additional preparations for the baby, the childbirth process, and potential risks during childbirth (Agustini, 2021).

Educational interventions for childbirth preparation are crucial in providing information to address the complaints and anxieties of pregnant women. Prenatal education is vital as it facilitates healthcare provision. Such education enhances partner involvement, reduces anxiety about childbirth and delivery, and provides answers to all questions pregnant women may have. This education is particularly important in the third trimester of pregnancy, addressing not only physiological but also psychological changes (BalasoIU et al., 2021). Steps in providing education to pregnant women include identifying the number and age of pregnant women, preparing the venue and facilities, selecting appropriate materials, counseling aids, scheduling, and inviting participants for the education session (Hanafie Das et al., 2022).

The high Maternal Mortality Rate (MMR) is a concern for various stakeholders, including RSI A Yani Surabaya. RSI A Yani Surabaya aims to become a representative and prideful Islamic Hospital in Surabaya, providing promotive, preventive, curative, educative, and rehabilitative efforts for optimal health outcomes for the community, particularly pregnant women. This initiative is prompted by the insufficient knowledge among pregnant women about childbirth preparation. Many pregnant women seeking prenatal care lack adequate preparation for childbirth. The intervention aims to provide education on childbirth preparation to enhance the knowledge of pregnant women. RSI A Yani Surabaya has a prenatal class program, facilitating education that assists pregnant women in preparing for childbirth. Universitas Nahdlatul Ulama Surabaya, in collaboration with RSI A Yani Surabaya, is conducting community service by providing education on childbirth preparation to promote and prevent maternal health.

## 2. METHODS

The partner in this community service is RSI Ahmad Yani Surabaya. This activity was carried out in collaboration with PKRS RSI A Yani Surabaya. Implementation of this activity is carried out in several stages.

## Preparation Stage

The preparation stage is the initial stage before the service program. In this stage there are several things to do, namely: (1) Identification of problems and prioritization of needs related to maternal and child health is conducted through discussions with members and the PKRS RSI A Yani Surabaya team. The issue addressed in this community service activity is associated with childbirth preparation; (2) Coordinate with PKRS RSI A Yani Surabaya in preparing the permit for community service, arranging the venue for the activity, and forming the service team. Permission is obtained by submitting a letter from Universitas Nahdlatul Ulama Surabaya. The PKRS team provides a venue for the activity to be conducted offline at RSI A Yani Surabaya. This community service activity is assisted by several students from the Faculty of Medicine, Universitas Nahdlatul Ulama Surabaya; (3) Determine the target audience for community service, which is pregnant women at RSI A Yani. The target audience for this activity is pregnant women undergoing examinations at the Outpatient Clinic of RSI A Yani Surabaya; (4) Determine the content of the community service activity, which includes educational material covering healthy pregnancy, childbirth preparation, and the role of the husband. The content for this community service activity is prepared in the form of a PowerPoint presentation.

## Implementation Stage

Implementation stage contains some informations such as: (1) This community service activity took place on August 6, 2022, both online and offline. The offline seminar was conducted at RSI A Yani, while the online session was facilitated through the Zoom Meeting application for participants who could not attend in person. Prior to the seminar, participants completed an attendance list. The event commenced with the opening remarks delivered by the event's Master of Ceremony and a welcoming address from RSI A Yani Surabaya; (2) Before the presentation of the main topics, participants underwent a pre-test to assess their knowledge. The substantive part of the seminar focused on the theme of healthy pregnancy. Following the material presentation, participants completed a post-test to evaluate the impact of the information provided. As part of the engagement, door prizes were distributed among the participants through a lucky draw. Both the pre-test and post-test consisted of several questions designed to gauge the knowledge of pregnant women before and after the presentation; (3) The dual-format approach, combining offline and online components, aimed to maximize accessibility for participants, allowing those unable to attend physically to benefit from the educational content remotely. The pre-test and post-test assessments were crucial tools to measure the effectiveness of the educational session in enhancing the knowledge of pregnant women regarding healthy pregnancy practices. The event also incorporated an interactive element through the distribution of door prizes, adding a motivational aspect to encourage active participation.



Figure 1. Opening by MC

Figure 2. Welcome speech by the Director of RSI A Yani Surabaya

Figure 3. Presentation of material regarding healthy pregnancy and preparation for childbirth

**Evaluation Stage**

Evaluation of activities is carried out by looking at the enthusiasm and activeness of participants towards the material presented. Pregnant women ask many questions related to concerns about preparing for a healthy pregnancy. Evaluation was also carried out by analyzing the results of the pre-test and post-test questionnaire on knowledge of childbirth preparation with Wilcoxon. Knowledge is grouped into 3 categories: (1) Good 74%-100%; (2) Sufficient 47%-73%; and (3) Insufficient <47%.



**Figure 4.** Stages of implementing community service in preparation for childbirth at RSI A Yani Surabaya

**3. RESULTS AND DISCUSSION**

**Results**

The community service activity commenced with thorough preparation, including obtaining necessary permits and coordinating the schedule, location, and stages of the service to be implemented. This outreach initiative attracted the participation of 20 pregnant women, specifically those who were undergoing prenatal check-ups at RSI A Yani Surabaya. The event spanned approximately 3 hours, starting from 08:00 until its completion. The characteristics of the seminar participants are describe in Table 1.

**Table 1.** Distribution of participants by age

<b>Age</b>	<b>f</b>	<b>%</b>
26	2	10
27	3	15
28	2	10
29	2	10
31	3	15
32	2	10
33	1	5
34	1	5
35	2	10
36	1	5
41	1	5
<b>Total</b>	<b>20</b>	<b>100</b>

In Table 1, it can be seen that seminar participants range in age from 26 years to 41 years. Most participants were 27 years old at 15% (3 people) and 31 years old at 15% (3 people).

**Table 2.** Distribution of participants by occupation

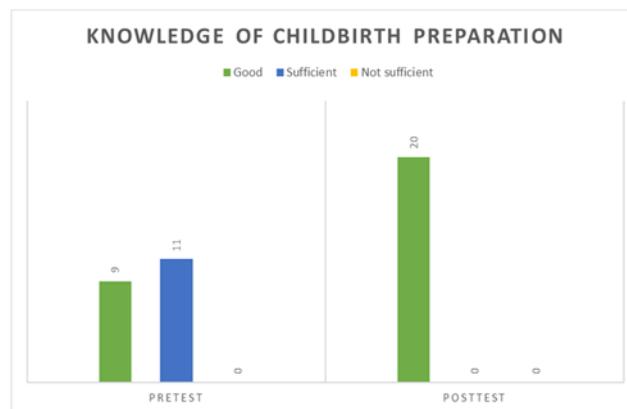
<b>Occupation</b>	<b>f</b>	<b>%</b>
Housewives	6	30
Civil servants (PNS)	3	15
Private sector employee	5	25
Self-employed	6	30
<b>Total</b>	<b>20</b>	<b>100</b>

Based on Table 2, most of the participants in this community service seminar were mostly domestic workers 30% (6 people) and private sector 30% (6 people).

**Table 3.** Distribution of participants by education levels

Education Level	f	%
Junior High School (SMP)	1	5
Senior High School (SMA)	5	25
Diploma/Bachelor Degree (D3/S1)	11	55
Master Degree (S2)	3	15
<b>Total</b>	<b>20</b>	<b>100</b>

Table 3 shows that most of the seminar participants have a D3/S1 degree, 55% (11 people) and a small percentage have a junior high school education, 5% (1 person).



**Figure 2.** Seminar participants' pre-test and post-test results

Based on Figure 1, it shows the results of the pre-test before the seminar, some of the participants had sufficient knowledge, 55% (11 people), and 45% good knowledge (9 people). After the seminar, the post-test results showed that all participants had 100% good knowledge (20 people).

**Table 4.** Analysis of pre-test and post-test knowledge of childbirth preparation

	Mean	p
Pre-test results	0.00	0.001
Post-test results	6.00	

Based on Table 4, statistical results using Wilcoxon show that there is a significant difference in participants' knowledge before and after the birth preparation seminar ( $p < 0.05$ ).

## Discussion

The characteristics analyzed in this community service initiative include the age, education, and occupation of pregnant women. Based on the results of the community service, it is known that the majority of respondents are aged between 27 and 31 years, constituting 15% (3 individuals). The level of knowledge is influenced by factors such as age, education, gestational age, and occupation. Younger

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maternal age may lead to insufficient attention and experience in pregnancy preparation (Fauziah & Rahmawati, 2021). Age stimulates understanding and memory retention. The age at which a person gains experience and knowledge tends to increase. Maternal age falls within the reproductive age range of 20-35 years, indicating increased awareness of family planning and pregnancy from an age perspective (Budiarti et al., 2018). Research by Budiarti et al. (2018) suggests a correlation between age and the level of knowledge about danger signs.

Occupation also affects knowledge about childbirth preparation. Unemployed mothers have more time to seek information and counseling from healthcare professionals, unlike working mothers who may lack time for counseling (Yuliana & Wahyuni, 2020). Education also influences a person's behavior, particularly in acquiring and obtaining information to support their quality of life (Yuliana & Wahyuni, 2020).

Knowledge is a key component of behavioral change. One effective way to enhance knowledge is through health education. Childbirth education aims to provide information and empower women about the childbirth process, pain management, and positive childbirth experiences (Çankaya & Şimşek, 2021). According to Notoatmodjo (2012), knowledge acquisition can be done through traditional or non-scientific methods and modern approaches. In this community service initiative, health education was provided through a childbirth preparation seminar, delivering content on healthy pregnancy and childbirth readiness. The seminar in this community service activity added to the participants' knowledge in preparing for childbirth, helping reduce anxiety as the delivery date approaches. Anxiety often arises in the third trimester until childbirth. Maternal unpreparedness involves physical, mental, and emotional readiness. Factors influencing readiness include education level, parity, employment status, sociocultural factors, family support, and knowledge (Angesti & Febriyana, 2021). The study by Vina et al. (2022) found that maternal knowledge is related to age, education, gravidity, and experience.

According to the pre-test results, the majority of participants had moderate knowledge (55%, 11 individuals). After receiving the material, the post-test results showed that the majority had good knowledge (100%, 20 individuals). According to a lecture by Wulandhari (2021), lectures increase pregnant women's knowledge about childbirth preparation. With maternal readiness for childbirth, anxiety during labor can be reduced, ensuring a calm and comfortable delivery, and the baby is born healthy (Wulandhari, 2022). Maternal knowledge about childbirth preparation is related to maternal readiness for childbirth. Knowledge can be obtained through routine visits to health service centers and maternal classes (Hesti et al., 2022).

Childbirth preparation involves planning by the mother and family members, covering physical, psychological, and material preparation. Physical preparation aims to facilitate labor and lactation, psychological preparation deals with mental resilience, fear, and anxiety, while material preparation supports childbirth from a financial aspect (Dewi & Za, 2017). Maternal anxiety can be caused by low maternal trust, fear, stress, and trauma. After participating in education classes, improvements are observed. Educational classes provide maternal support during childbirth and offer a higher chance of normal and minimally intervened childbirth (Arlym & Herawati, 2021). Childbirth preparation includes estimating delivery dates, delivery assistance, and delivery locations. It is a crucial part of the childbirth process, aiming to enhance optimal health before childbirth, reduce anxiety, and provide a sense of calm to pregnant women.

Based on the analysis of pre-test and post-test results, a p-value of 0.001 was obtained. This result indicates a significant difference before and after the material was presented. This aligns with the study by Sukmawati et al. (2022), which found that knowledge before and after lectures increased significantly with a p-value of 0.00. The study by Hindriati et al. (2022) showed that pre-test and post-

test results increased after lectures and discussions, consistent with the research by [Hardayanti et al. \(2021\)](#), indicating an increase in knowledge about the childbirth process after lectures. Knowledge determines one's ability to comprehend everything they know. Sources of knowledge can be obtained through posters, close relatives, mass media, electronic media, instruction books, health professionals, and personal experiences.

#### **4. CONCLUSION AND RECOMMENDATIONS**

Health promotion for mothers and pregnant women is crucial. Despite facing challenges, the implementation of community service at RSI A Yani was successful with support from UNUSA and the PKRS RSI A Yani Surabaya team. Participants exhibited high enthusiasm, engaging in discussions about concerns related to their pregnancies and childbirth preparations. The analysis of pre-test and post-test results revealed a significant difference before and after the seminar, indicating that the education provided had a positive impact on maternal knowledge.

However, there are some limitations to this activity. Firstly, there is a lack of continuity to ensure that the education provided is truly understood and implemented by pregnant women. Further community service and mentoring are needed, particularly regarding actions that pregnant women can take to prepare for childbirth. Secondly, the media used tends to be conventional, relying on PowerPoint presentations. Thirdly, the number of questions in the pre-test and post-test instruments is limited, suggesting that it could be enhanced for future community service initiatives.

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