

# Optimizing Pregnancy Outcomes: The Importance of Pre-Marital and Preconception Care

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**Abstract.** Premarital and preconception care are essential components in improving maternal and newborn health outcomes. This community service aims to evaluate the importance of premarital and preconception counseling, with a focus on its role in reducing the risks associated with unplanned pregnancy, complications during pregnancy, and adverse neonatal outcomes. Although the benefits of premarital and preconception care are clear, access and awareness are still limited in Indonesia, especially among couples planning to marry. This community service was carried out through a national webinar attended by midwifery students, midwives and midwifery/health lecturers. The number of participants was 815 people. Based on the questionnaire that we gave to the midwives, only a few received preconception visits even though the implementation of premarital and preconception care can significantly improve reproductive health outcomes, reduce maternal and infant mortality, and help prospective couples plan a healthy pregnancy. The results of this activity identified barriers to accessing these services, including lack of awareness and education. The hope from this activity is that midwives can expand health education programs aimed at increasing community awareness of the benefits of premarital and preconception care in creating healthier family planning outcomes.

**Keywords:** Midwifery, Preconception, Pre-marital, Pregnancy Outcome

## 1 Introduction

About 50% of the 200 million pregnancies that occur each year are unplanned pregnancies [1]. In 2020, about 800 women died every day from various preventable causes related to pregnancy and childbirth throughout 2020-2024 maternal deaths occurred every two minutes, and 95% of these deaths occurred in low- and lower-middle-income countries[2]. Efforts to reduce maternal and infant mortality rates involve various nurturing since the pregnancy occurred. Pre-conception counseling is one of the important factors for every woman to be able to plan a healthy and optimal pregnancy. Premarital and pre-conception care has a very important role in improving the quality of reproductive and family health, especially in Indonesia, where the rate of unplanned pregnancies and pregnancy complications is still a serious challenge. Lack of knowledge about reproductive health before marriage and conception can contribute to maternal and newborn health problems [3], [4]. This care provides comprehensive information on reproductive health, pregnancy planning, and prevention of sexually transmitted diseases, which is very important for prospective married couples [5]. Education about pre-marital and pre-conception care can increase awareness about the importance of physical and mental preparation before starting family life. This preparation includes health checks, immunizations, and the implementation of a healthy lifestyle, such as maintaining a diet and avoiding the habit of smoking or consuming alcohol[6]. Without adequate education, prospective spouses are at risk of developing reproductive health problems that can affect their family's quality of life in the future. Pre-marital and pre-conception care support also has the potential to reduce the rate of child marriage and pregnancy in adolescents, as well as pregnancy complications that often occur at a young age. By providing the right information, prospective couples can be better prepared in planning the desired and healthy pregnancy[7]. In addition, this intervention can reduce the social and economic burden of unplanned pregnancies, especially for couples who are not economically stable [8]. Although the benefits of pre-marital and pre-conception care are clear, its implementation in Indonesia is still limited. Many prospective couples have not received enough access or

information related to this program. Therefore, this study aims to examine the importance of pre-marital and pre-conception care, as well as how these interventions can be developed more widely through sustainable health education programs. The program is expected to increase public awareness about the importance of preparing for reproductive health before marriage and conception, in order to create a healthier and better quality generation [9]

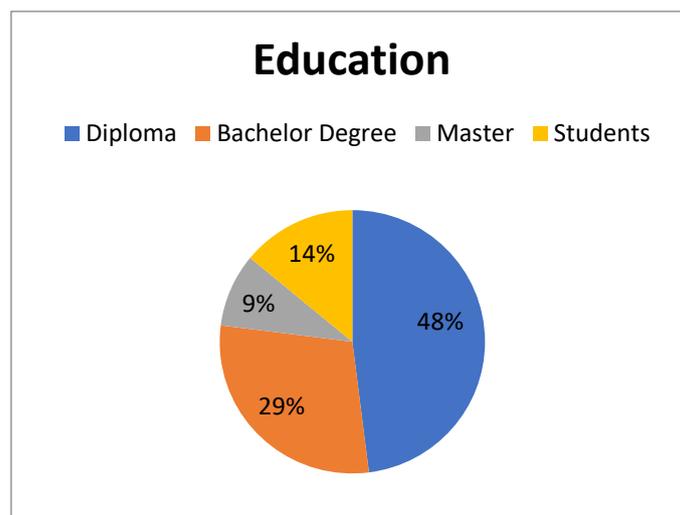
Preconception counseling consists of health promotion, risk assessment, and health education provided to women before pregnancy [10]. There are many women who do not plan their pregnancies, and if they do, many of them are too late to get adequate early pregnancy care. The Indonesian government through health policy has required every woman to get access to pre-marriage services, so every woman who plans to get married must go to the Health Center to get a pre-marriage examination. However, not all married women go to health care sites for pre-conception care, even though health workers have the skills to provide pre-conception care[11]. Pre-conception care is a primary strategy to prevent adverse pregnancy outcomes, but only 17% of pregnant women are aware of it. Midwives are pivotal in providing preconception care, which includes educating women on optimal body mass index, lifestyle, and diet to improve neonatal outcomes[12]. Based on this background, we conduct community service in the form of a national webinar which is attended by midwifery students, midwives and midwifery lecturers. The main benefit of the implementation of community service carried out online is that it can reach many participants and give a lot of good impact nationally because it is attended by participants from all over Indonesia.

## 2 Methods

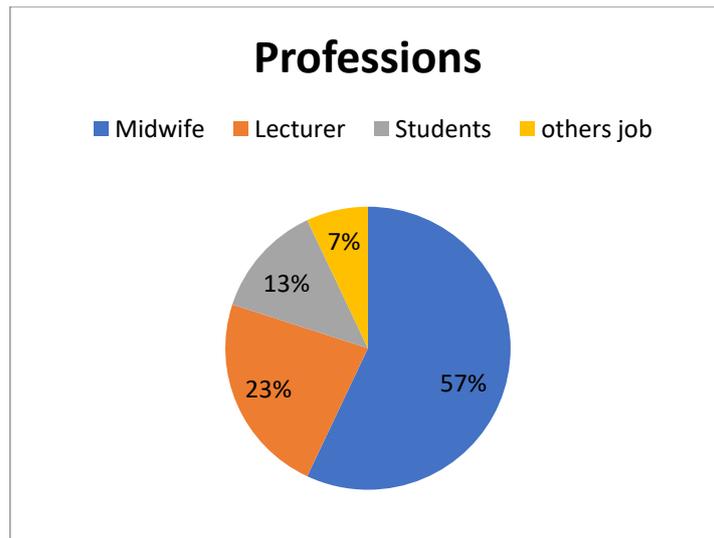
This method of community service is to conduct a national webinar, which will be held on March 30, 2022. The webinar consisted of 4 speakers who discussed women's reproductive health and began with the topic of premarital care and preconception for a healthy pregnancy. This webinar event was attended by 815 participants consisting of 470 participants who are midwives who have worked and as many as 345 participants are midwifery students both at the D3 Midwifery, Bachelor and Midwife Profession levels. The implementation of the national webinar uses the independent costs of all implementing components. The implementation of this webinar is a collaboration of resource persons from lecturers from Stikes of the Jombang Regency Government, Stikes Ngudia Husada Madura and Muhammadiyah Lamongan University as well as practitioners of obstetric and gynecology specialists from the Hospital

## 3 Results and Discussion

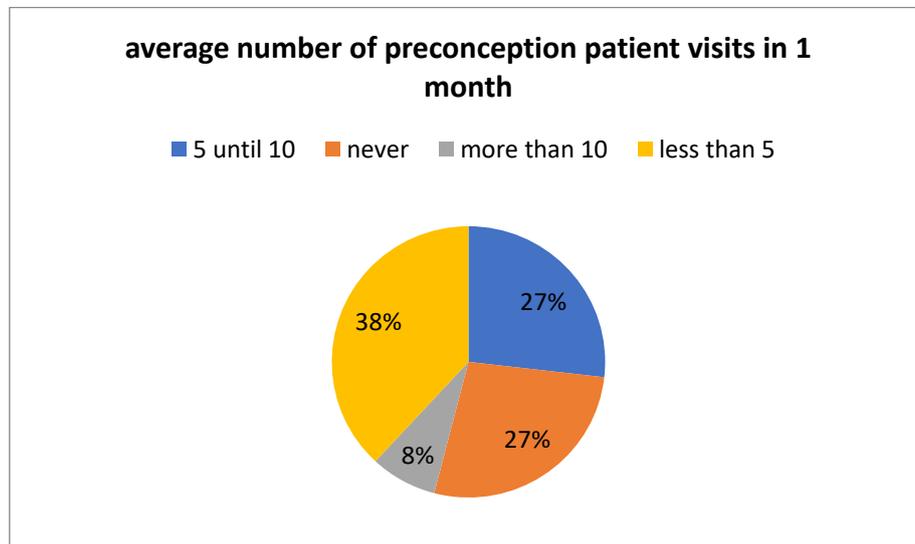
Based on the questionnaire given to the participants, information was obtained that of the 815 participants, there were 48% with a background in Diploma III Midwifery Education.



**Figure 1.** Education Background of Participants



**Figure 2.** Profession of Webinar Participants



**Figure 3.** Average Number of Pre-Conception Patient Visits (for practitioners)

From the diagram above, it is known that practitioners who receive pre-marital visits are less than 5 people per month as many as 27%, as well as the same process, information is obtained that there has never been a pre-marital visit. While only 8% received pre-conception visits of more than 10 patients per month, 38% received fewer than 5 visits. This provides information that not many people access services at health workers for planning before pregnancy occurs. Knowing the condition of women and their husbands before pregnancy is an important effort to get a healthy pregnancy, the low access to health workers for pre-conception care cannot be separated from education and lack of public knowledge about the issue.

Pre-marital and preconception care are critical elements in improving pregnancy outcomes by identifying and addressing risk factors before conception. Many women enter pregnancy without prior health optimization, which can exacerbate issues like chronic illnesses, nutritional deficiencies, or unhealthy lifestyle habits, thus increasing the likelihood of complications such as preterm birth, low birth weight, and congenital anomalies. Research indicates that early interventions can help mitigate these risks and promote better maternal and neonatal health outcomes, especially when they occur before conception or in the early stages of pregnancy. For instance, preconception counseling has been linked to increased adoption of health-promoting behaviors, such as folic acid supplementation and lifestyle modifications, which are essential for a healthy pregnancy trajectory [13]. The problem of violence against women that often occurs is one of the important issues that must be conveyed to premarital couples. The fact that violence against women occurs a lot even when women are pregnant and gender inequality factors in the family require commitments that are mutually agreed upon by premarital couples, this is because such violence can have a bad impact on women's reproductive health[14].

Pre-marital and pre-conception care (PCC) are critical components of maternal and child health that significantly influence health outcomes for women and their children. The importance of PCC lies in its ability to identify and mitigate potential health risks before conception, thereby promoting healthier pregnancies and reducing complications. Evidence suggests that effective PCC can lead to improved maternal health, better pregnancy outcomes, and reduced healthcare costs associated with complications arising from unaddressed health issues prior to conception [15]. Midwives play a pivotal role in delivering pre-conception care by providing education, counseling, and support to women and couples planning for pregnancy. They are often the first point of contact for women seeking information about reproductive health and pregnancy planning. Midwives can facilitate discussions about lifestyle modifications, such as nutrition, physical activity, and the importance of folic acid supplementation, which are essential for optimizing pre-conception health [16], [17]. Furthermore, midwives can help identify individual risk factors, such as pre-existing medical conditions (e.g., diabetes, obesity), and guide women in managing these conditions effectively before conception [18], [19]. The impact of midwifery-led PCC is particularly evident in populations with specific health challenges.

For instance, women with diabetes benefit from tailored pre-conception counseling that addresses glycemic control and medication management, which are crucial for minimizing risks of congenital malformations and other pregnancy complications. Studies have shown that women who engage in pre-conception care are more likely to utilize antenatal services early and consistently, which is associated with better health outcomes for both mothers and infants [17]. Moreover, midwives can foster a supportive environment that encourages women to seek pre-conception care, addressing barriers such as lack of awareness or misconceptions about its importance [20]. By building trusting relationships, midwives can empower women to take proactive steps in their reproductive health, ultimately leading to healthier pregnancies and improved maternal and child health outcomes [21].

Midwives play a critical role in preconception care, which is essential for improving maternal and neonatal health outcomes. Midwife-led models of care are effective in reducing preterm births and interventions during labor, and they are cost-effective. However, there is a need for better service planning, professional development, and policy support to enhance the delivery of preconception care. Additionally, women undergoing assisted reproductive techniques may require specialized care to address their unique needs and reduce anxiety.

## 4 Conclusion

Pre-marital and preconception care are crucial interventions that can greatly enhance reproductive health outcomes, yet their access and implementation in Indonesia remain limited. Many couples are unaware of the importance of health preparation before pregnancy, which contributes to unplanned pregnancies and various pregnancy complications. The research concludes that early counseling and intervention significantly improve the health of both mothers and infants, leading to reduced maternal and neonatal mortality rates.

It is necessary to carry out health promotion to increase public awareness about the importance of pre-conception care, with the existence of care that includes health education and also screening for various diseases, it is hoped that women will get pregnant in a ready and healthy condition.

- a. Health Promotion Campaigns: To improve public awareness of pre-marital and preconception care, there is a need for widespread health promotion campaigns. These campaigns should target couples planning to marry, emphasizing the importance of reproductive health preparation.
- b. Enhanced Access to Healthcare Services: The government should ensure that pre-marital and preconception care services are readily available and easily accessible in all regions, including rural areas.
- c. Increased Training for Healthcare Providers: Midwives and healthcare workers should receive additional training to deliver comprehensive pre-marital and preconception care, ensuring they can effectively counsel couples on reproductive health and pregnancy planning.
- d. Collaboration with Educational Institutions: Schools and universities could incorporate reproductive health education into their curriculums, helping to foster awareness from a young age about the importance of preconception care for future family planning.

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