

The Relationship Between Early Marriage And Anc Compliance And Lbw Incidence In Gunungrejo Village Singosari District

Setiasih Agustina¹, Rosyidah Alfitri²

*Bachelor of Midwifery, Faculty of Health Sciences, Institute of Technology, Science, and Health,
Dr. Soepraoen Hospital, Kedsam/V Brawijaya Malang*

Corresponding author:Agustinajafar16@gmail.com, rosyidahalfitri@itsk-soepraoen..ac.id

ABSTRACT

Early marriage is often followed by pregnancy at a young age who biologically have not reached optimal reproductive maturity, thus increasing the risk of complications during pregnancy, childbirth, and the postpartum period. The purpose of this study was to determine the relationship between early marriage and ANC compliance and the incidence of LBW in Gunungrejo Village, Singosari District, Malang Regency. The type of research used was descriptive analytic using a cross-sectional study design. The number of samples used was 20 taken by accidental sampling. Data analysis used chi-square test analysis. The results showed that there was a relationship between early marriage and ANC compliance $P\text{-value} = 0.002 < 0.05$. And there was no relationship between early marriage and the incidence of LBW, $P\text{-value} = 0.2 > 0.05$. The conclusion is that there is a relationship between early marriage and ANC compliance but there is no relationship between early marriage and the incidence of LBW. Suggestions from this study are that early marriage can be prevented so that mothers and the generation born are healthy and prosperous.

Keywords: *Early Marriage, ANC Compliance, LBW*

INTRODUCTION

Early marriage remains a reproductive health issue that has received global attention due to its impact on maternal and infant health. In Indonesia, early marriage refers to marriages occurring before the age of 19, as regulated by Law Number 16 of 2019. Early marriage is often followed by pregnancy in adolescents who are biologically and psychologically immature, increasing the risk of pregnancy, childbirth, and neonatal complications (WHO, 2024).

Teenage pregnancy is a risk factor for various maternal and neonatal health problems. The World Health Organization states that babies born to mothers aged 10–19 years have a higher risk of premature birth, severe neonatal conditions, and low birth weight (LBW) compared to babies born to mothers aged 20–24 years (WHO, 2024). LBW is a condition in which a baby is born weighing less than 2,500 grams. LBW is a leading cause of neonatal death and is associated with impaired

growth, cognitive development, and an increased risk of chronic diseases in adulthood. Globally, it is estimated that more than 20 million babies are born with LBW each year, making this problem still a global public health challenge (WHO, 2024).

One important effort to reduce the risk of pregnancy complications and low birth weight (LBW) is through antenatal care (ANC). ANC is a healthcare service provided to pregnant women to monitor the condition of the mother and fetus, identify pregnancy risk factors, and provide education and interventions needed during pregnancy. Good ANC compliance allows for early detection of complications, thus preventing adverse pregnancy outcomes, including low birth weight (Ministry of Health of the Republic of Indonesia, 2023).

Early marriage remains a significant problem both globally and in Indonesia. The WHO reports that approximately 21 million pregnancies occur annually among adolescents aged 15–19 in low- and middle-income countries, with approximately 12 million of these resulting in live births. This situation is a concern because adolescent pregnancy is associated with an increased risk of pregnancy complications and poor neonatal outcomes (WHO, 2024). Furthermore, an estimated 650 million girls worldwide are married before the age of 18, making child marriage a global reproductive health problem (WHO, 2024).

In Indonesia, the practice of child marriage has shown a downward trend, but it remains a problem that requires serious attention. UNICEF Indonesia reports that over the past 10 years, the child marriage rate has only decreased by 3.5 percentage points. The Indonesian government targets a reduction in the prevalence of child marriage to 8.74% by 2024 and 6.94% by 2030, indicating that this issue remains a national health and social development priority (UNICEF Indonesia, 2024).

In East Java Province, the child marriage rate decreased from 9.46% to 7.78% in the same period, but this figure still shows that child marriage continues to occur in some communities and has the potential to cause various reproductive health problems (UNICEF, 2024).

Early marriage is a factor that can impact maternal and infant health through various biological and social mechanisms. Women who marry as teenagers

generally have lower levels of education, limited reproductive health knowledge, and less independence in health-related decision-making. These conditions can impact low utilization of health services during pregnancy, including compliance with antenatal care (ANC) visits according to established standards (Fan & Koski, 2022; Ayuwardany & Kautsar, 2022).

ANC adherence is a crucial indicator in maternal health care because it allows for early detection of various pregnancy risk factors. Pregnant women who do not attend ANC regularly are at risk of delayed diagnosis of anemia, chronic energy deficiency, gestational hypertension, infection, and fetal growth disorders. These conditions can disrupt the supply of nutrients and oxygen to the fetus, increasing the risk of low birth weight (LBW) (Marhadi et al., 2025).

The results of an umbrella review conducted by Arabzadeh et al. (2024) showed that maternal age, maternal nutritional status, quality of antenatal care, and various other maternal factors were significantly associated with the incidence of low birth weight (LBW). Various studies also indicate that child marriage is associated with an increased risk of reproductive and maternal health problems.

A systematic review by Fan and Koski (2022) found that child marriage is associated with various adverse health outcomes, including pregnancy complications and poor neonatal outcomes. Therefore, early marriage is suspected to be associated with poor adherence to antenatal care and may directly or indirectly increase the risk of low birth weight (LBW).

Improving reproductive health education from adolescence onward can help raise awareness of the risks of early marriage and pregnancy, which is expected to reduce the rate of early marriage. Furthermore, increasing access to formal education for women has also been shown to play a role in reducing the incidence of child marriage (Ayuwardany & Kautsar, 2022).

For married and pregnant adolescents, more intensive maternal health services are needed through regular, high-quality ANC monitoring. Health workers need to provide education on the importance of standard ANC visits, meeting nutritional needs during pregnancy, preventing anemia, and early detection of pregnancy complications that can affect fetal growth. Improving ANC quality has

been shown to play a crucial role in reducing the risk of low birth weight (LBW) and improving infant health outcomes (Marhadi et al., 2025).

The research results are expected to be a basis for health workers and policy makers in developing programs to prevent early marriage, increase ANC compliance, and reduce the incidence of low birth weight (LBW) in order to improve the health status of mothers and babies.

METHOD

The research design is descriptive analytical with a cross-sectional study method. The population in this study was all pregnant women at the Singosari Community Health Center. The number of samples used was 20 taken by the accidental sampling method. Data analysis used the SPSS V.25 computer application with chi-square test analysis.

RESULTS AND DISCUSSION

Univariate Analysis

Table 1. Frequency Distribution of Respondent Characteristics

Information	n	%
Mother's age		
<19 years old	20	100
19 – 35 years old	0	0
>35 years	0	0
Mother's Education		
Elementary School	1	5
JUNIOR HIGH SCHOOL	14	70
SENIOR HIGH SCHOOL	5	25
Maternal parity		
Primipara	19	95
Multipara	1	5
Grandemultipara	0	0
Mother's job		
Housewife	17	85
Work	3	15

Total	20	100
--------------	-----------	------------

Respondent characteristics analyzed included maternal age, education, parity, and maternal occupation.

In terms of maternal age, all respondents (100%) were under 20 years of age. This means that the mothers in this study are in the reproductive age category at risk. This is important because maternal age influences knowledge, abilities, and readiness for parenthood, including health.

Based on maternal education, the majority of mothers (14 women) had a junior high school education (70%). Research on teenage pregnancy in Indonesia shows that low levels of education are a major determinant of early marriage and teenage pregnancy (Sari & Astuti, 2022). The WHO (2024) also states that teenage pregnancy is more common among women with low levels of education.

Based on parity, the majority of mothers (19 women) were primiparous, while one (5%) was multiparous. Parity determines a mother's experience in maintaining her health.

Based on their mothers' occupation, the majority of mothers, 17 (85%), are housewives. Housewives typically spend their time at home, so they typically receive minimal information.

Bivariate Analysis

Table 2. ANC Compliance and Infant Weight

Information	n	%
ANC		
Compliance		
Obedient	3	15
Not obey	17	85
baby weight		
Normal	17	85
Low birth weight	3	15
Total	20	100

Based on table 2. ANC compliance, the majority of mothers were not compliant with ANC visits, as many as 17 people (85%), and the remaining 3 people (15%) were compliant with ANC visits.

Based on the baby's weight, the majority of newborn babies' weight was normal, as many as 17 people (85%), and those with low birth weight were 3 people (15%).

The Relationship Between Early Marriage and ANC Compliance

		ANC Compliance		P-value
		Obedie		
		nt	Not obey	Total
age	< 20	3	17	20
	years			
Total		3	17	20 0.002

Based on the table of the relationship between early marriage and ANC compliance, 17 mothers with early marriages who were not compliant made ANC visits, while 3 were compliant. The analysis result showed a P-value of 0.002, indicating a relationship between early marriage and ANC compliance.

The Relationship Between Early Marriage and Baby Weight

		Baby BB		P-value
		Low		
		birth		
		normal	weight	Total
age	< 20	17	3	20
	years			
Total		17	3	20 0.2

Based on the table of the relationship between early marriage and infant weight, it was found that of all respondents who had early marriages, the majority, namely 17 people, and 3 others had low birth weight or LBW. The results of the P-value analysis showed $0.2 > 0.05$, which means there is no relationship between early marriage and infant weight.

Antenatal care is a crucial health service for monitoring the health of the mother and fetus during pregnancy. ANC plays a role in early detection of pregnancy complications, providing health education, and preparing the mother for childbirth. The WHO emphasizes that all pregnant women should receive adequate

ANC services to ensure the health of both mother and baby during pregnancy (WHO, 2023).

The low ANC compliance in this study may be influenced by the respondents' age, who were still teenagers. Young age is often associated with low knowledge, lack of experience, and limited decision-making skills related to reproductive health. Widowati and Damayanti (2022) explain that maternal behavior during pregnancy is greatly influenced by psychological readiness, knowledge, and motivation to maintain a healthy pregnancy. Therefore, mothers who marry at an early age tend to be at higher risk of not optimally utilizing ANC services.

Although all respondents were mothers who married at an early age, most of their babies were born with normal birth weight. These results indicate that birth weight is influenced not only by the mother's age at marriage or pregnancy, but also by various other factors such as the mother's nutritional status, health during pregnancy, gestational age at delivery, comorbidities, and the quality of health care received during pregnancy.

According to the WHO (2024), babies born to teenage mothers do have a higher risk of low birth weight (LBW), prematurity, and neonatal complications. However, these risks do not necessarily occur in all teenage mothers due to the presence of other protective factors that can support optimal fetal growth during pregnancy.

Early marriage often leads to women entering pregnancy when they are not physically or psychologically prepared. This situation can lead to low awareness of the importance of regular prenatal care. The WHO (2024) states that adolescents who become pregnant often face various barriers to accessing health services, including limited information, family support, and the ability to make health-related decisions.

Furthermore, the low level of education of most respondents in this study may also be a contributing factor to low ANC compliance. Low education can limit mothers' ability to understand the benefits of regular prenatal care. These findings align with Widowati and Damayanti (2022), who stated that maternal

characteristics, including knowledge and preparedness for pregnancy, influence ANC service utilization behavior.

The results of the study showed a p-value of 0.2 ($p > 0.05$), which means there is no significant relationship between early marriage and newborn weight.

The lack of a significant relationship in this study could be due to various factors. Birth weight is the result of the interaction of many factors, including maternal nutritional status, adequate nutritional intake during pregnancy, maternal health, gestational age at delivery, and the quality of healthcare received. Therefore, even though all respondents were in the early marriage group, most babies were still born with normal birth weight.

This finding contradicts the WHO's theory that babies born to teenage mothers have a higher risk of low birth weight (LBW) (WHO, 2024). However, the insignificant association in this study may be due to the relatively small sample size of only 20 respondents, which limited data variation. Furthermore, the possibility of other factors that more significantly influence birth weight may also explain this finding.

Overall, the study results indicate that early marriage is associated with ANC compliance, but not significantly associated with newborn weight. Nevertheless, early marriage remains a concern because it potentially increases the risk of reproductive health and pregnancy problems for both mother and baby.

CONCLUSION AND SUGGESTIONS

All respondents in this study were mothers with early marriage age (< 20 years), the majority had junior high school education, were primiparous, and did not work (housewives).

Most respondents were not compliant in making ANC visits (85%), while the majority of babies were born with normal weight (85%).

There is a significant relationship between early marriage and ANC compliance (p-value = 0.002). There is no significant relationship between early marriage and newborn baby weight (p-value = 0.2).

For health workers, it is necessary to increase education and support for adolescents and young pregnant women regarding the importance of regular ANC visits.

BIBLIOGRAPHY

- Aladin, A. (2023). Adolescent pregnancy and child marriage: Current situation in Indonesia. *Andalas Obstetrics and Gynecology Journal*, 7(2), 353–362. <https://doi.org/10.25077/aoj.7.2.353-362.2023>
- Arabzadeh, H., Doosti-Irani, A., Kamkari, S., Ranjbaran, M., Mansournia, M.A., & Nazari, SSH (2024). The maternal factors associated with infant low birth weight: An umbrella review. *BMC Pregnancy and Childbirth*, 24(1), 316. <https://doi.org/10.1186/s12884-024-06487-y>
- Ayuwardany, W., & Kautsar, A. (2022). Factors contributing to the probability of early marriage in Indonesia. *Journal of Family Planning*, 6(2), 49–57.
- Cameron, L., Contreras Suarez, D., & Wieczkiewicz, S. (2023). Child marriage: Using the Indonesian Family Life Survey to examine the lives of women and men who married at an early age. *Review of Economics of the Household*, 21(3), 725–756. <https://doi.org/10.1007/s11150-022-09616-8>
- Fan, S., & Koski, A. (2022). The health consequences of child marriage: A systematic review of the evidence. *BMC Public Health*, 22(1), 309. <https://doi.org/10.1186/s12889-022-12707-x>
- Ministry of Health of the Republic of Indonesia. (2023). Guidelines for integrated antenatal care services. Jakarta: Ministry of Health of the Republic of Indonesia.
- Ministry of Health of the Republic of Indonesia. (2023). Indonesia's health profile in 2023. Jakarta: Ministry of Health of the Republic of Indonesia.
- Marhadi, N., Anisah, ZY, & Saputro, W. (2025). Lifestyle factors of low birth weight: Evidence from the 2023 Indonesian Health Survey. *National Health Insurance Journal*, 5(1), 1–12.
- Sari, DP, Ekoriano, M., Pujihasvuty, R., Hastuti, P., & Nurdianti, DS (2024). Antenatal care utilization on low birth weight children among women with

- high-risk births in Indonesia. F1000Research, 12, 399. <https://doi.org/10.12688/f1000research.132639.1>
- Sari, RP, & Astuti, VW (2022). Teenage pregnancy in Indonesia: Determinants and outcomes. *Jurnal Aisyah: Jurnal Ilmu Kesehatan*, 7(3), 949–955. <https://doi.org/10.30604/jika.v7i3.1258>
- UNICEF Indonesia. (2024). *Child marriage in Indonesia*. Jakarta: United Nations Children's Fund Indonesia.
- UNICEF. (2024). *Indonesia annual report 2024*. New York: United Nations Children's Fund.
- Widowati, LP, & Damayanti, R. (2022). Unintended pregnancy and antenatal care behavior in Indonesia. *Indonesian Journal of Nursing and Midwifery*, 10(3), 214–223. [https://doi.org/10.21927/jnki.2022.10\(3\).214-223](https://doi.org/10.21927/jnki.2022.10(3).214-223)
- World Health Organization. (2023). *World health statistics 2023: Monitoring health for the SDGs*. World Health Organization.
- World Health Organization. (2024). *Adolescent pregnancy*. Geneva: World Health Organization.
- World Health Organization. (2024). *Preterm and low birth weight infants*. Geneva: World Health Organization.