

The Effect of Peer Education on Adolescent Community Empowerment in Efforts to Prevent Early Marriage Among Vulnerable Adolescents

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Abstract. Early marriage remains a significant social issue in Indonesia, particularly among vulnerable adolescents who are at risk of engaging in dating and premarital sexual behaviors. This study aimed to examine the effect of peer education on community empowerment in preventing early marriage among vulnerable adolescents in Bandung Regency. A quasi-experimental design with a pretest-posttest approach was employed, involving 82 adolescents divided equally into intervention (peer education) and control (lecture) groups. Data were collected using validated questionnaires measuring knowledge of early marriage and analyzed using paired *t*-tests. The findings showed a significant increase in knowledge scores in the intervention group from 58.2 ± 10.5 to 78.6 ± 9.3 ($p < 0.001$), while the control group showed a smaller increase from 57.9 ± 11.2 to 63.4 ± 10.1 ($p = 0.032$). These results indicate that peer education effectively enhances adolescents' knowledge and empowerment, facilitating behavioral changes that contribute to the prevention of early marriage. The study highlights the importance of adolescent-centered interventions and peer-led programs in promoting reproductive health awareness and delaying marriage among at-risk youth. Implementing peer education as part of community-based programs can strengthen adolescent empowerment and reduce the prevalence of early marriage in the region.

Keywords: peer education, adolescent empowerment, early marriage, reproductive health, community-based intervention

1. INTRODUCTION

Early marriage in Indonesia has become a national phenomenon, with culture playing a significant role in shaping societal life patterns, including early marriage practices. Marriages across various ethnic groups indicate that the issue of early marriage requires serious attention. Indonesia ranks 37th globally in terms of the highest number of underage marriages and 2nd in Southeast Asia. This is not a point of pride, as it impacts population density and contributes to high birth rates (Muntamah et al., 2019).

Child marriage refers to adolescent marriage where the age of the individuals is still insufficient. According to Law No. 16 of 2006, the maximum age for young marriage, for both males and females, is 19 years (Pradana et al., 2022). Hanifah et al. (2022) define vulnerable adolescents as those at risk of engaging in deviant behaviors such as premarital sex, which may lead to early marriage. Vulnerable adolescents include those who are dating, with dating adolescents being at higher risk of premarital sexual behavior, further exacerbated by negative peer influence and low self-efficacy regarding sexual behavior.

Miswanto et al. (2021) state that early marriage occurs due to insufficient knowledge among parents and adolescents about reproductive health and the consequences of free sexual behavior. This problem is compounded by regional and ethnic cultural practices, where some ethnic groups view early marriage as an ancestral tradition and feel proud when their children marry at a younger age, which ultimately contributes to higher maternal and infant mortality rates in Indonesia.

The World Health Organization (WHO) classifies adolescents as individuals aged 10–19 years. According to Article 7, Paragraph 1 of Law No. 1 of 1974 concerning Marriage, the minimum age for marriage is 16 for females and 19 for males (Arisjulyanto et al., 2019). Based on United Nations Children's Fund (UNICEF) data (2021), Indonesia has 46 million adolescents, with 51% aged 10–14 years and 49% aged 15–19 years. The highest proportion of adolescents is in Java (60%), with the provinces of West Java (20%), East Java (16%), and Central Java (14%) having the largest adolescent populations.

According to West Java Statistics Bureau (BPS) data (2023), the adolescent population in Bandung Regency increased by 0.22%, from 7.32% in 2021 to 7.54% in 2023. This indicates a relatively high adolescent growth rate, posing challenges for the government in addressing adolescent issues, including early marriage. Data show that in West Java in 2022, there were 5,523 early marriages, with 46% of all marriages in Bandung Regency being underage.

Several factors influence early marriage, including prevailing cultural and social norms, economic status, and education level. Cultural and social norms, including ancestral beliefs, significantly affect the age at which females marry. Economic status also plays a role, especially in rural areas, where poverty and limited education may lead to perceptions that marriage protects girls and the family's reputation. Other contributing factors include social norms, religious laws permitting early marriage, and weak state legal regulations regarding early marriage (Marcelina et al., 2021).

Reproductive health issues often associated with social and clinical risks for adolescents include free sexual behavior and unwanted pregnancies, which contribute to early marriage, as well as limited knowledge of reproductive health (Kusmiran, 2014; Rosdarni et al., 2015; Umaroh, 2015). According to Rosamali & Arisjulyanto (2020), early marriage occurs due to adolescents' lack of understanding and knowledge of reproductive health and the risks of early marriage. This low awareness leads to higher rates of premarital sexual behavior, which directly contributes to unintended pregnancies and early marriage.

The impacts of early marriage affect maternal and child health, including maternal nutrition before and during pregnancy, fetal growth, and the risk of stunting. Pregnancies and

deliveries among adolescents are considered high-risk. Mothers under 20 are at higher risk of giving birth to low birth weight (LBW) babies, who account for approximately 20% of stunting cases. Therefore, education and empowerment programs for adolescents are crucial to increase awareness of reproductive health and the dangers of early marriage (Ministry of Health RI, 2018).

Muhajarah & Fitriani (2022) emphasize the importance of preventing early marriage through community empowerment programs to enhance adolescents' knowledge about early marriage and age-appropriate marriage, aiming to prevent early marriage in society. Arisjulyanto et al. (2021) found that adolescent empowerment significantly improves adolescents' knowledge and attitudes toward premarital sexual behavior, as adolescents actively serve as change agents providing education directly to their peers.

Marcelina et al. (2021) note that empowerment activities on adolescent reproductive health are essential, as increased knowledge enables adolescents to serve as health educators and peer information sources. Widiyanti et al. (2021) stress that behavior change is the most important outcome of increased knowledge and attitude. Kadafi et al. (2022) report that peer education enhances adolescents' knowledge of early marriage because peer-to-peer education facilitates two-way communication, ensuring the message is effectively received. Peer education is also an innovative and effective approach for changing adolescent behavior, as adolescents are directly involved in the program, positively influencing behavioral outcomes (Yusuf & Ilmiyani, 2023).

Based on the background above, the researcher considers it important to conduct a study entitled: "The Effect of Peer Education on Adolescent Community Empowerment in Efforts to Prevent Early Marriage Among Vulnerable Adolescents"

2. METHODE

This study is a Quasi-Experimental research using a Pretest-Posttest Design aimed at examining the effect of peer education on adolescents' knowledge regarding early marriage. Observations were conducted twice, before (pretest) and after (posttest) the intervention. During the pretest, respondents completed a questionnaire to assess their knowledge and attitudes toward early marriage. Subsequently, the intervention group received community empowerment through peer education, while the control group received conventional lectures. The study population consisted of all adolescents at a senior high school in Bandung Regency, who were vulnerable to early marriage, totaling 480 individuals. A sample of 82 respondents was selected using simple random sampling, divided into 41 participants in the intervention

group and 41 in the control group. Inclusion criteria included adolescents who were dating, enrolled at the school, and willing to participate, while exclusion criteria included adolescents who were ill, absent, or did not complete the questionnaire.

The research variables consisted of the independent variable, peer education, and the dependent variable, knowledge of early marriage, measured using an interval scale and categorized as good (>75%), adequate (60–75%), or poor (<60%). Primary data were collected through validated and reliable questionnaires. Data analysis was performed univariately to describe respondents' characteristics and bivariately using a Paired t-test to compare pretest and posttest scores, assuming normally distributed and paired data. If the data were not normally distributed, an alternative test such as the Wilcoxon Signed-Rank Test was applied. This design enables a systematic evaluation of the effectiveness of peer education in increasing adolescents' knowledge regarding early marriage prevention.

3. RESULT AND DISCUSSION

a. Result

1) Respondent Characteristics

Table 1. Respondent Characteristics

Characteristics	Intervention Group (n=41)	Control Group (n=41)	Total (n=82)	Percentage (%)
Gender				
Male	20	22	42	51.2
Female	21	19	40	48.8
Age (years)				
15–16	18	17	35	42.7
17–18	23	24	47	57.3
Dating Status				
Currently Dating	41	41	82	100

Table 1 presents the characteristics of the respondents in both the intervention and control groups. Of the total 82 respondents, 42 (51.2%) were male and 40 (48.8%) were female, indicating a nearly balanced gender distribution. Regarding age, 35 respondents (42.7%) were between 15 and 16 years old, while 47 respondents (57.3%) were between 17 and 18 years old, showing that the majority of participants were in the older adolescent group.

All respondents (100%) reported that they were currently dating, which aligns with the inclusion criteria for vulnerability to early marriage. Both groups—the intervention group (n=41) and the control group (n=41)—had the same proportion of dating adolescents, ensuring homogeneity between the groups in terms of relationship

status. This demographic information provides context for understanding the sample population and supports the interpretation of the subsequent analysis on the effectiveness of peer education in increasing knowledge about early marriage prevention.

2) Pretest and Posttest Knowledge Scores on Early Marriage by Group

Tabel. 2 Pretest and Posttest Knowledge Scores on Early Marriage by Group

Group	n	Pretest Mean \pm SD	Posttest Mean \pm SD	P Value
Intervention (Peer Education)	41	58.2 \pm 10.5	78.6 \pm 9.3	<0.001
Control (Lecture)	41	57.9 \pm 11.2	63.4 \pm 10.1	0.032

Table 1 shows the mean knowledge scores on early marriage for both the intervention and control groups before and after the intervention. In the intervention group (n=41), the pretest mean score was 58.2 \pm 10.5, which increased to 78.6 \pm 9.3 in the posttest, indicating a significant improvement in knowledge after receiving peer education ($p < 0.001$). In the control group (n=41), the pretest mean score was 57.9 \pm 11.2, which increased to 63.4 \pm 10.1 after the lecture-based intervention, showing a smaller but statistically significant increase ($p = 0.032$).

These results suggest that peer education was more effective than conventional lectures in improving adolescents' knowledge regarding early marriage prevention. The larger increase in the intervention group highlights the potential of peer-led programs as an engaging and impactful educational strategy for vulnerable adolescents.

b. Discussion

The results of this study indicate that peer education significantly improves adolescents' knowledge about early marriage. The intervention group, which received peer-led education, showed a higher increase in knowledge scores compared to the control group, which only received conventional lectures. This finding aligns with Arisjulyanto (2019), who emphasized that peer education is effective in increasing adolescents' knowledge about early marriage through group discussions facilitated by trained peer educators.

Peer education has been widely recognized as an effective strategy to promote healthy behaviors among adolescents. Hull (2004) noted that peer education allows for two-way communication among adolescents, making educational messages more effective and relatable. The increase in knowledge observed in this study shows that adolescents are

more receptive to information delivered by their peers, which may also reduce the influence of social barriers or cultural norms that support early marriage.

The high prevalence of adolescents currently dating in both groups (100%) indicates that participants were at potential risk of early marriage, consistent with the definition of vulnerable adolescents provided by Wahyuningsih (2025). This finding highlights the importance of targeting at-risk youth in reproductive health programs. By providing knowledge about the consequences of early marriage, including risks to maternal and child health, peer education can empower adolescents to make informed decisions regarding their relationships and future marriage.

Cultural and societal factors have been identified as significant contributors to early marriage in Indonesia. Wibowo (2021) found that differences in perception between adolescents and parents regarding child marriage indicate strong cultural and social influences on early marriage decisions. The positive impact of peer education observed in this study suggests that educational interventions can partially overcome these social pressures by increasing awareness and providing factual knowledge on reproductive health and the risks associated with early marriage.

This study also confirms that conventional lecture-based methods, although somewhat effective, are less impactful than peer education. The control group showed a smaller increase in knowledge, consistent with Adilanisa (2022), who reported that active engagement and peer participation enhance learning outcomes more effectively than passive information delivery. This suggests that traditional methods alone may not be sufficient to change adolescents' understanding and attitudes toward early marriage.

From a public health perspective, increasing knowledge among adolescents about early marriage has significant implications for reducing maternal and child morbidity and mortality. Early marriage is often associated with increased risks of low birth weight, stunting, and maternal complications (Kementerian Kesehatan Republik Indonesia, 2018). By improving awareness through peer education, adolescents are more likely to delay marriage and pregnancy, contributing to healthier reproductive outcomes and overall well-being.

Moreover, empowerment approaches such as peer education align with the concept of adolescents as active participants in their communities (Juariah, 2024). Involving adolescents in educational programs not only benefits the participants but also creates ripple effects, as these peers can disseminate information to other adolescents in their

social circles. This community-level impact enhances the sustainability of interventions and fosters a culture of informed decision-making among youth.

In conclusion, this study demonstrates that peer education is an effective strategy to increase knowledge and empower vulnerable adolescents to prevent early marriage. Educational programs that actively engage adolescents as peer educators can overcome cultural and social barriers while promoting reproductive health literacy. Policymakers and educators are encouraged to incorporate peer-led interventions into school and community programs as a complement to conventional reproductive health education.

4. CONCLUSION

Based on the results of this study, peer conformity among high school students in Yogyakarta is predominantly low. Of the 116 respondents, 0% exhibited high conformity, 28.4% exhibited moderate conformity, and 71.6% exhibited low conformity. Similarly, the level of cyberbullying was largely low, with 0.9% of students classified as high, 26.7% as moderate, and 72.4% as low. Correlation analysis revealed a significant positive relationship between peer conformity and cyberbullying, with a correlation coefficient of 0.778**, indicating that higher levels of peer conformity are associated with higher levels of cyberbullying, and vice versa. Determination analysis showed that peer conformity contributed 60.5% to the variance in cyberbullying, while the remaining 39.5% was influenced by other factors not examined in this study, such as parenting style, emotional maturity, and individual characteristics. Gender-based analysis revealed differences in the contribution of peer conformity to cyberbullying, with 57.6% for male students and 68.0% for female students, indicating that peer conformity has a greater influence on cyberbullying among female students compared to male students, considering the role of females as future educators of the next generation

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