Social Dynamics and Peer Perceptions: Early Marriage and Premarital Pregnancy Among Adolescents in Tana Toraja

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ABSTRACT

The issue of early marriage and premarital pregnancy among adolescents has become a critically important topic, attracting serious attention at global, national, and local levels. This study aims to (i) explore peer dynamics in shaping adolescents' perceptions of early marriage and premarital pregnancy and (ii) analyze the influence of peers on adolescent decision-making regarding early marriage, premarital pregnancy, prevention, and education. This research employs a mixed-method approach (qualitative-quantitative). The study was conducted in Tana Toraja Regency in 2024. The population and sample consist of female adolescents aged 15–18 years. A stratified random sampling technique was used to select 168 respondents. Meanwhile, for the qualitative phase, 20 young women under the age of 18 were interviewed as affected individuals, examining the health, educational, and social impacts of early marriage and premarital pregnancy. Qualitative data collection was conducted through interviews and focus group discussions, whereas quantitative data were gathered via the distribution of questionnaires. Data analysis was conducted qualitative analysis through Nvivo software and quantitative analysis using Pearson correlation test and multiple linear regression. The findings indicate that peer influence plays a significant role in shaping adolescents' perceptions of early marriage and premarital pregnancy. Statistical analysis using Pearson's correlation test revealed a positive correlation between peer influence and adolescents' perceptions of early marriage (r = 0,71) and premarital pregnancy (r = 0,73). Further analysis using multiple linear regression showed an R^2 value of 0,504, suggesting that approximately 50,4% of the variance in peer influence can be explained by the variables studied, indicating a substantial impact, particularly on perceptions of early marriage and premarital pregnancy. Overall, peer influence is significantly shaped by perceptions of early marriage and premarital pregnancy, underscoring the importance of social factors in shaping adolescent decisions regarding social and educational issues.

Key Messages:

- Therefore, there is a pressing need to develop and enhance reproductive health education programs that involve peers as agents of change while integrating family and social environments into reproductive health education initiatives.
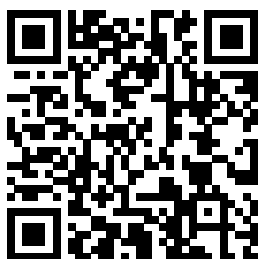
GRAPICHAL ABSTRACT

PEER SOCIAL DYNAMICS AND PERCEPTIONS OF EARLY MARRIAGE: PREMARITAL PREGNANCY AMONG ADOLESCENTS

The Ministry of Health, Education, and the National Population and Family Planning Board (BKKBN) must swiftly join forces to weave comprehensive youth reproductive health education – involving family and community – into curricula and extracurriculars. Furthermore, the Ministry of Health and BKKBN should urgently boost campaigns on the risks of early marriage and premarital pregnancy, and widen access to empowering life skills training for youngsters

- Peer Influence
- Early Marriage
- Premarital Pregnancy
- Adolescents

Premarital Pregnancy Among Adolescents

Recommendations:
- Adolescent Sexual and Reproductive Health Education Program
- Peer, Family, and Social Engagement

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INTRODUCTION

Adolescence is a crucial developmental stage in human life. During this period, individuals experience significant physical, emotional, cognitive, and social changes. Adolescents begin to search for their identity, form social values, and develop the necessary skills to transition into adulthood (1,2). Adolescents are often exposed to complex social issues, one of which is early marriage and premarital pregnancy (3,4). These two phenomena are not only local issues but also global concerns that have serious implications for the physical, mental, and social development of adolescents (5–7).

Early marriage and premarital pregnancy have become major concerns in many countries, including Indonesia. According to UNICEF data, approximately 12 million girls worldwide marry before reaching the age of 18, and an estimated 13% of adolescent girls and young women give birth before turning 18. Specifically, in Southeast Asia, around 47 out of 1,000 girls give birth. Indonesia ranks seventh among countries with the highest absolute number of child marriages (6,8). Data analysis on child marriage considers women aged 20-24 who were married before turning 15 or 18. Over the past decade, there has been only a slight decline of 3.5% in child marriage rates in Indonesia, meaning that one in nine girls still marries at a young age (9,10).

The Indonesian government has set a national target to reduce the child marriage rate to 8.74% by 2024. However, most regions in Indonesia have yet to reach this target (9). One such region is South Sulawesi Province, which ranks 14th in Indonesia with an early marriage rate of 9.33% (11). At the local level, Tana Toraja Regency ranks third in South Sulawesi, with an early marriage rate of 19.49% (12). This figure is still far from the national target, highlighting that early marriage remains a significant challenge in various parts of Indonesia.

This phenomenon has significant consequences for adolescent lives, particularly in terms of health and education. Early marriage significantly increases the risk of complications during pregnancy, childbirth, and postpartum for both mother and child (13,14). Adolescent girls who become pregnant at a young age are at higher risk of health issues such as anaemia, high blood pressure, bleeding, abortion, sepsis, premature birth, and postpartum mental health disorders (15–17). These factors can endanger maternal and infant health, increasing the risk of maternal and neonatal mortality (16,18–20). Studies show that teenage pregnancies with complications have a 7.4 times higher risk of neonatal death and a 4.5 times higher risk of infant mortality compared to pregnancies among women aged 20-34 without complications. Additionally, adolescent pregnancies contribute to higher birth rates and increased cases of stunting (21–23).

Beyond health risks, early marriage and premarital pregnancy also contribute to high school dropout rates among adolescent girls (24). The social stigma surrounding premarital pregnancy and a lack of support for continuing education lead many adolescent girls to lose opportunities for higher education. It exacerbates gender inequality and reinforces cycles of poverty by limiting their potential for personal development and future economic security.

In Indonesia, the causes of early marriage are complex and involve various social, cultural, and economic dimensions (25,26). One of the key factors influencing early marriage is peer influence. Peers often serve as the primary reference point in shaping adolescent attitudes and life perspectives, including perceptions of early marriage. Peer groups can influence adolescent decision-making, acting either as agents of change or as catalysts for risky behaviours, including decisions to marry young (27,28).

This dynamic operates in two ways. On the one hand, peers can encourage adolescents to make healthy decisions. On the other hand, they can promote risky behaviours, such as premarital sexual activity leading to unintended pregnancy, which in turn triggers early marriage (29). Peer influence on adolescent sexuality, pregnancy, and marriage decisions is often stronger than the influence of family or formal education, primarily because adolescents spend more time with their peers and seek validation from them (30). Additionally, adolescent perceptions of early marriage are heavily influenced by their surrounding social and cultural contexts, particularly in rural areas (5,31).). Traditional norms often dictate that early marriage is a natural transition to adulthood. Many adolescents feel pressured to marry due to societal and cultural expectations without fully considering the long-term impact on their education and well-being (32).

Research on peer influence in shaping adolescent behaviour regarding early marriage and premarital pregnancy remains limited. While many studies have examined the consequences of early marriage and adolescent pregnancy, there is still a gap in research on the role of peer dynamics in shaping adolescent perceptions of these issues. Previous studies tend to focus on the negative consequences of early marriage on health and education without exploring the social factors influencing adolescent decisions to marry early or avoid premarital pregnancy (13,14,25,26,28,32). Most existing studies focus on individual or family-related factors (33), while in-depth analysis of peer social dynamics often receives less attention.

The novelty of this research lies in its focus on the role of peer influence in shaping adolescent perceptions of early marriage and premarital pregnancy. By exploring peer dynamics and their influence on adolescent attitudes and behaviours, this study does not merely view peers as influencers of adolescent behaviour but also as potential agents of change that can be involved in interventions to prevent early marriage and premarital pregnancy. If equipped with adequate knowledge and support, peers can play a significant role in changing social perceptions and adolescent behaviours. Specifically, this study aims to answer the following research questions: (i) How do peer dynamics shape adolescent perceptions of early marriage and premarital pregnancy?; (ii) Is there an influence of peer groups on adolescent decision-making related to early marriage, premarital pregnancy, prevention, and education?.

This research provides significant contributions to understanding how peer groups influence social dynamics and adolescent perceptions of early marriage. The findings are expected to offer practical recommendations for policymakers and institutions involved in preventing early marriage and premarital pregnancy. Through peer-based intervention programs, a more supportive environment can be created for adolescents to delay marriage and focus on personal development and education. By emphasizing social factors, this study aims to provide new insights into strategies for addressing early marriage in Indonesia, particularly in Tana Toraja Regency, South Sulawesi Province, and to help shape a more empowered and hopeful younger generation.

METHODS

The research design used is a mixed method (qualitative-quantitative). The qualitative approach explores the dynamics of peer influence in shaping adolescents' perceptions of early marriage and premarital pregnancy. The quantitative approach, through a survey (observational study), analyzes the relationship between the studied variables, namely the influence of peers on adolescents' perceptions of

early marriage and premarital pregnancy (34,35). This research was conducted in Tana Toraja Regency, South Sulawesi, which ranks third in terms of the highest child marriage and premarital pregnancy rates. The study was conducted from June to October 2024. The population and sample in this study consist of adolescent girls aged 15-18 years residing in Tana Toraja Regency. This age range represents the period when adolescents begin to form strong social interactions with peers, seek self-identity, and become more vulnerable to social environmental influences, including early marriage and premarital pregnancy. The study includes adolescents who are still attending junior high school (SMP) or senior high school/vocational school (SMA/SMK), as well as those who are not in school but remain within the adolescent social environment. Participants must have heard of or witnessed cases of early marriage or premarital pregnancy in their surroundings to ensure they have an understanding of the phenomenon being studied.

Quantitative sampling was conducted using a stratified random sampling technique, with strata based on residential areas. The stratification was informed by the demographic profile of Tana Toraja Regency, which is distinctly divided into rural and urban areas. This approach ensured proportional representation of both population segments in the sample, thereby enhancing the accuracy and generalizability of the research findings. Due to the uncertain total population, the sample size was determined using the normal distribution method. With a confidence level of 93% and a margin of error of 7%, the required sample size was 168 respondents. Meanwhile, in the qualitative phase of the study, sampling was conducted using a purposive sampling technique. A total of 20 female adolescents under the age of 18, who had been affected by early marriage and premarital pregnancy in terms of health, education, and social aspects, were selected as informants. Data collection methods involve primary data obtained through the distribution of research instruments to 168 respondents and interviews with 20 informants. The research instruments include questionnaires and interview guidelines. The questionnaire contains questions/statements regarding respondents' demographic data, peer influence, perceptions of early marriage, premarital pregnancy, and attitudes toward preventing early marriage and premarital pregnancy. The interview guidelines cover perceptions of early marriage, peer dynamics, premarital pregnancy, and prevention factors. The research instrument underwent a comprehensive validation process to ensure data accuracy and consistency. Validity testing was conducted using the Pearson Product-Moment correlation, while reliability was assessed through Cronbach's Alpha coefficient. The results indicated that all items for each variable in the instrument were both valid and reliable. In addition to statistical testing, the instrument was also subjected to an expert review by specialists in reproductive health and educational psychology. This review provided critical feedback on language clarity, item relevance, and potential bias, ensuring that the instrument was not only statistically sound but also contextually appropriate and meaningful. Additionally, secondary data collection includes supporting data such as child marriage incidence rates and associated health impacts. The data analysis in this study employs two approaches: 1) qualitative analysis using the NVivo application to identify key themes, understand data patterns and enhance transparency in qualitative analysis, and 2) Quantitative data were analyzed using SPSS version 26.0. Bivariate analysis was conducted using Pearson correlation to examine the relationship between peer influence and perceptions of early marriage and premarital pregnancy. In addition, multivariate analysis was performed using multiple linear regression to determine whether peer influence could predict perceptions of early marriage or premarital pregnancy. A 95% confidence level was used to determine statistical significance.

CODE OF HEALTH ETHICS

This study has received ethical approval under number 17/KEP/III.3.AU/F/2024 from the Research and Community Service Institute (LPPM) of Universitas Muhammadiyah Palopo.

RESULTS
Peer dynamics shape adolescent perceptions of early marriage and premarital pregnancy

Based on data obtained through in-depth interviews and Focus Group Discussions (FGDs), the findings indicate that peer influence, as the closest social group to adolescents, plays a significant role in

shaping their perceptions of early marriage and premarital pregnancy. The process of interaction and exchange of views among peers serves as a crucial factor in forming adolescents' attitudes and decisions regarding these two critical issues. The research findings are presented in the form of a Mind Map to visually organize the information and establish a hierarchical structure that illustrates causal relationships. The research results are depicted in Figure 1 below;
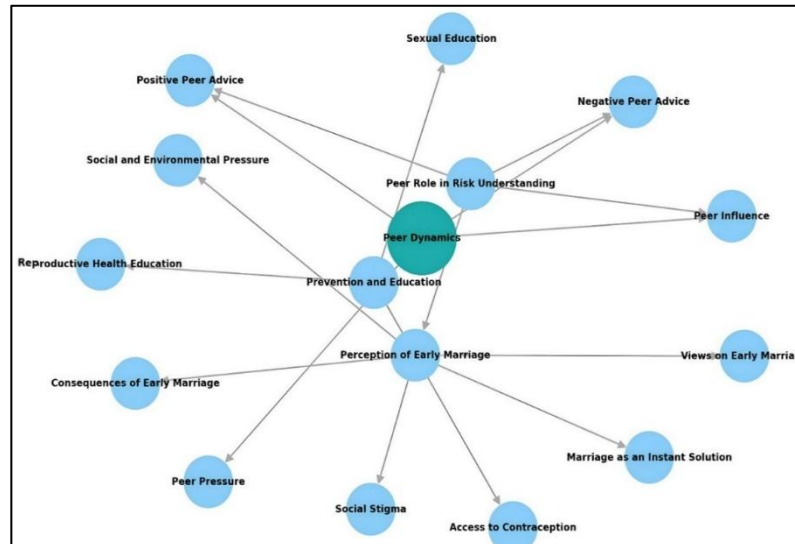
Figure 1. Dynamic Relationship Between Themes and Sub-themes in Interview Data

Figure 1. illustrates that peer dynamics significantly influence adolescents' decisions regarding relationships and early marriage, either through support or pressure including suggestions to marry as a solution to premarital pregnancy. Adolescents' perceptions of early marriage are also shaped by social norms and environmental pressures (from peers, family, and the community), often viewing early marriage as an escape from premarital pregnancy despite a lack of readiness. Social pressure from family and the community encourages early marriage in cases of premarital pregnancy to avoid stigma. Therefore, comprehensive education on reproductive health and premarital pregnancy prevention is crucial to help adolescents make informed decisions and reduce external pressure. Although peers may contribute to adolescents' understanding of risks, their perspectives are often inaccurate. These various factors interact in shaping adolescent decisions, highlighting the importance of educational and family support in fostering more mature perspectives.

Additionally, the study findings are visually represented using a Word Cloud to depict key themes in the qualitative research, as shown in **Figure 2.**

Figure 2. **Word Cloud from Interview Text**

Figure 2. Illustrates the most frequently occurring words in the interview results regarding peer dynamics and adolescent perceptions of early marriage and premarital pregnancy. The size of each word represents its frequency in the interviews, with larger words indicating higher occurrence. Dominant words such as "peer dynamics," "friends," "pregnancy," "adolescents," "marriage," "early," and "education" highlight the primary themes of the interviews, emphasizing the influence of peer groups on adolescents' decisions related to early marriage and premarital pregnancy. Additionally, the word "pressure" reflects the significance of social influences and peer or environmental pressure in shaping adolescents' perceptions of these issues.

The Influence of Peers on Adolescents' Decisions Regarding Early Marriage, Premarital Pregnancy, Prevention, and Education

This study employs quantitative analysis using two statistical tests Pearson Correlation Test and Simple Linear Regression Test to examine the influence of peers on adolescents' decisions regarding early marriage, premarital pregnancy, prevention, and education. The results of the Pearson correlation test are presented in Table 1 below;

Table 1. Results of Pearson Correlation Test (n=168)

Variable	P-Value	Pearson Correlation (r)
Peer Influence vs Perception of Early Marriage	0,000	0,71
Peer Influence vs Perception of Premarital Pregnancy	0,000	0,73
Peer Influence vs Attitude Toward Preventing Early Marriage and Premarital Pregnancy	0,000	0,62
Peer Influence vs Educational Decision-Making	0,000	0,71

As shown in Table 1, the results of the Pearson correlation analysis indicate a significant and positive relationship between peer influence and various related variables: (i) peer influence vs. perceptions of early marriage (r = 0,71); (ii) peer influence vs. perceptions of premarital pregnancy (r = 0,73); (iii) peer influence vs. attitudes toward the prevention of early marriage and premarital pregnancy (r = 0,62); and (iv) peer influence vs. educational decision-making (r = 0,71). Furthermore, analysis of the variable on attitudes toward the prevention of early marriage and premarital pregnancy revealed that 60% of respondents supported sex education, 70% trusted peers as a source of information, 50% expressed optimism about reducing peer pressure through education, and 55% showed interest and openness in actively discussing the importance of delaying marriage and avoiding premarital pregnancy in social settings. The underlying assumption of this study is that the greater the influence of peers whether in the form of support, advice, or pressure the more likely adolescents are to develop perceptions or make decisions that align with that peer influence.

Furthermore, a multiple linear regression analysis was conducted to examine the influence of peer groups on adolescents' educational decisions. The results of the multiple linear regression test are presented in Table 2 below:

Table 2. Results of Multiple Linear Regression Test

Variable	Coeficcient	p-value	95% CI (Min-Max)	RR
Perception of Early Marriage	0,4512	0,000	0,338 – 0,565	0,504
Perception of Premarital Pregnancy	0,5133	0,000	0,457 – 0,565	
Educational Decision-Making	-0,1355	0,074	0,013 – 0, 115	

Based on table 2, the results of the multiple linear regression analysis indicate that the R-Square value is 0,504. The coefficients and significance values the perception of early marriage is 0,4512 (significant, p-value = 0,000), the perception of premarital pregnancy is 0,5113 (significant, p-value = 0,000), and the decision on education is -0,1355 (p-value = 0,074). These findings suggest that the perception of early

marriage and the perception of premarital pregnancy have a significant influence on peer influence. Meanwhile, the variable of educational decision-making did not show a statistically significant effect. The regression model explains 50.4% of the variance in peer influence, indicating a strong relationship. However, it also suggests the presence of multicollinearity among independent variables, particularly between the perception of early marriage and the perception of premarital pregnancy. Overall, the findings confirm that peer influence is significantly shaped by perceptions of early marriage and premarital pregnancy, highlighting the importance of social factors in influencing adolescent decisions regarding social issues and education.

DISCUSSION

This study explores the dynamics of peer influence in shaping adolescents' perceptions of early marriage and premarital pregnancy Using a mixed-methods approach. Additionally, it analyzes the impact of peer influence on adolescents' decisions regarding early marriage, premarital pregnancy, prevention, and education. The qualitative findings reveal that peers play a highly significant role in shaping adolescents' perceptions of early marriage and premarital pregnancy. Based on in-depth interviews and Focus Group Discussions (FGDs), the study finds that peers often serve as the primary source in shaping adolescents' views and decisions regarding these two issues. Most adolescents perceive their peers as highly influential figures in their lives, providing both support and pressure regarding the decisions they make, including those related to early marriage or premarital pregnancy. Peer interactions strongly influence adolescents' perspectives on social issues. This finding aligns with previous research indicating that peer influence significantly affects the likelihood of adolescent pregnancy, as demonstrated by a 10% increase in peer pregnancy rates correlating with a 2-5% increase in individual pregnancy rates. Peer norms and social behaviours influence decisions regarding sexual activity and pregnancy (36,37).

These results are consistent with social influence theory, which posits that individuals are inclined to be influenced by their closest social groups. Adolescents tend to conform to the prevailing norms within their peer groups. Suppose a peer group holds perceptions that accept or even encourage early marriage and premarital pregnancy. In that case, individuals within that group may feel pressured to adopt similar behaviours, even if such behaviours deviate from broader societal norms. Peers shape individuals' views on marriage and pregnancy by sharing experiences, stories, or opinions that may reinforce or weaken their perceptions of these matters. If peers perceive early marriage or premarital pregnancy as commonplace or even prestigious, individuals within that group are more likely to view them as acceptable or desirable. Peers often provide strong emotional support, which can reinforce decision-making and offer social validation, making individuals feel more secure or accepted (38–40).

This study also finds that some peers advise adolescents to marry as a solution to premarital pregnancy, even when they are not emotionally or financially prepared. This finding underscores the role of peers as social agents who influence adolescents' major life decisions, even when they lack sufficient understanding of the consequences of early marriage. It aligns with the findings of (41) which indicate that experiencing peer pregnancy encourages adolescents to modify their sexual behaviours, making them more likely to avoid engaging in sexual activities.

Furthermore, this study highlights how adolescents' perceptions of early marriage are shaped by social pressures from their surroundings, including family and the community. Some adolescents view early marriage as an escape from the challenges posed by premarital pregnancy, even when they are not yet prepared. This phenomenon illustrates the significant influence of social and cultural norms in shaping adolescents' perspectives on early marriage, a finding consistent with previous studies demonstrating that social environments significantly impact adolescents' marriage decisions. Societal and familial pressures often compel adolescents to make choices they perceive as solutions, even when they may not be sufficiently mature to handle the responsibilities that come with such decisions (42–44).

This finding aligns with the results of the quantitative approach. Statistical analysis using Pearson correlation revealed a significant relationship between peer influence and adolescents' perceptions of early marriage and premarital pregnancy. The positive correlation coefficients between peer influence and perceptions of early marriage (r = 0.71), premarital pregnancy (r = 0.73), and educational decision-making

(r = 0.62) confirm that peers indeed have an influence on adolescents' views regarding these issues. Furthermore, the results of multiple linear regression analysis indicated that perceptions of early marriage and premarital pregnancy significantly predicted peer influence. The regression model explained nearly 50% of the variation in peer influence, suggesting that adolescents' perceptions of early marriage and premarital pregnancy substantially contribute to the influence exerted by peers. These findings highlight the critical role of social factors—particularly peer relationships—in shaping adolescents' decisions related to social and educational matters.

Consistent with previous research, peer influence and adolescents' perceptions of early marriage can be crucial factors influencing the likelihood of premarital pregnancy, which ultimately contributes to school dropout rates. Negative peer influences within certain groups can lead to risky sexual behaviours (45–47). The importance of education in preventing premarital pregnancy and early marriage is also one of the key findings of this study. The results indicate that adequate education on reproductive health and the prevention of premarital pregnancy plays a crucial role in helping adolescents make more informed decisions. This finding aligns with the Health Belief Model, which posits that awareness of health risks can motivate individuals to take preventive actions. In this context, holistic and comprehensive education can mitigate the influence of social pressure and help adolescents understand the risks and consequences of early marriage and premarital pregnancy. Consequently, they can make more mature and informed choices (48–51).

Overall, this study's findings highlight that peer dynamics play a significant role in shaping adolescents' perceptions and decisions, particularly regarding early marriage and premarital pregnancy. Peers exert substantial influence by providing guidance, either in the form of support or pressure, which ultimately impacts the social and educational choices adolescents make.

Based on the findings of this study, it is highly recommended that prevention programs for early marriage and premarital pregnancy actively involve peers as agents of change. This involvement can be realized through two main approaches: (i) empowering peers as facilitators of information and support by training adolescents to deliver accurate, evidence-based reproductive health information. Additionally, adolescents will be equipped with the skills to support their peers in making healthy decisions, including how to identify and resist negative peer pressure that may lead to risky behaviors; (ii) developing peer-led life skills programs. Given the significant social pressure from peers, families, and communities, trained peers can lead sessions focused on developing essential skills such as critical decision-making, negotiation, and building resilience against pressure. In this way, adolescents will be empowered to make appropriate choices despite facing complex environmental challenges.

CONCLUSION

Based on the findings obtained through both qualitative and quantitative approaches, this study concludes that peer dynamics significantly and strongly influence adolescents' perceptions of early marriage and premarital pregnancy. Qualitative findings indicate that some adolescents follow their peers' suggestions to marry as a solution to premarital pregnancy, even though they acknowledge that this decision may not be entirely appropriate. These findings also highlight the critical role of social pressure from peers, family, and the community in shaping adolescents' perceptions of these issues.

Quantitative results, as evidenced by Pearson correlation tests, reveal a significant relationship between peer influence and adolescents' perceptions of early marriage and premarital pregnancy. It suggests that peers play a crucial role in shaping adolescents' views on these two issues. Furthermore, multiple linear regression analysis indicates that perceptions of early marriage and premarital pregnancy have a significant positive influence on peer influence. However, educational decisions exhibit a negative but insignificant impact on peer influence, suggesting that peers do not directly influence educational factors.

Based on the findings of this study, it is highly recommended that early marriage and premarital pregnancy prevention programs actively involve peers as agents of change. This involvement can be realized through two main approaches: (i) empowering peers as facilitators of information and support, by training adolescents to deliver accurate and evidence-based reproductive health information. In addition,

they should be equipped with the skills to support their peers in making healthy decisions, including identifying and resisting negative peer pressure that may lead to risky behavior; (ii) developing peer-led life skills programs. Given the significant social pressure exerted by peers, families, and communities, trained peer educators can lead sessions focusing on the development of critical skills such as decision-making, negotiation, and building resilience to social pressure. In this way, adolescents can be empowered to make informed choices despite the complex environmental challenges they face.

In summary, this study makes a significant contribution and strongly underscores that peer dynamics are one of the key determinants in shaping adolescents' views on early marriage and premarital pregnancy. By integrating in-depth qualitative evidence with robust quantitative analysis, this research highlights the urgency of peer-centered intervention approaches. Utilizing peers as strategic and effective agents of change offers a promising path toward preventing these two critical issues. Furthermore, future research is necessary to explore other influential factors beyond peer dynamics such as the roles of family, societal norms, and media exposure in adolescent decision-making related to early marriage and premarital pregnancy. Acknowledging that adolescent decisions are shaped by a multitude of factors, more comprehensive studies are essential to gain a clearer understanding of the complex interactions among these social influences. Such insights will, in turn, inform the design of more holistic, integrated, and sustainable prevention programs.

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CONFLICTS OF INTEREST

We declare no known conflicts of interest, whether financial or personal, that might have appeared to influence the work presented in this paper.

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