

ANALYSIS OF PREMARITAL SEX PREVENTION BEHAVIOR AS AN EFFORT TO AVOID EARLY MARRIAGE AMONG ADOLESCENTS IN SERANG REGENCY

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Abstract

Objective: This study aims to analyze preventive behaviors against premarital sex as an effort to avoid early marriage among adolescents in Serang Regency, as well as to identify the factors influencing such behaviors.

Methods: The research employed a quantitative approach with a cross-sectional design. The sample consisted of 282 adolescents aged 15–19 years, selected through stratified random sampling from various public health center areas. Data were collected using structured questionnaires. Data analysis was conducted using univariate, bivariate, and multivariate tests, with PLS-SEM applied to examine the relationships among variables.

Results: The findings revealed that nearly all internal variables (knowledge, perception, attitude, motivation, self-efficacy) and external variables (religiosity, parental support, social norms, social media exposure) were at high levels, indicating adolescents' cognitive, affective, and social readiness to face the risks of premarital sex and to delay early marriage. Bivariate analysis showed a significant positive relationship between both internal and external factors with preventive behaviors against premarital sex, whereas peer pressure demonstrated a negative effect. A significant negative relationship between preventive behaviors and intention of early marriage ($\beta = -0.680$) indicated that stronger protective behaviors contribute to delaying early marriage. Multivariate analysis using PLS-SEM confirmed that the research model had strong explanatory power (R^2 for preventive behavior = 0.823; intention of early marriage explained by 46.2%), with self-efficacy, motivation, religiosity, and parental support as the main predictors, while social media exposure and peer pressure showed negative effects.

Conclusion: The study concludes that preventive behaviors against premarital sex can serve as an effective strategy in reducing the incidence of early marriage among adolescents.

Keywords: Premarital sex, early marriage, adolescents, prevention behavior

INTRODUCTION:

BACKGROUND

Early marriage among adolescents continues to be a pressing issue in several regions of Indonesia, including Serang Regency. It is not only a significant public health concern but also exacerbates gender inequality, domestic violence, and limited decision-making power among women (chilambe et al., 2023). Girls who marry early are at higher risk of sexual violence by intimate partners due to age disparities, social isolation, and restricted autonomy (Shukla, Castro Torres, et al., 2023). According to WHO, early marriage is defined as a union involving individuals under 19 years of age. UNICEF (2024) reported that between 2015 and 2023, the global average prevalence of early marriage among girls was 23%.

National data indicate a decline in early marriage prevalence, from 9.23% in 2021 to 6.92% in 2023 among women aged 20–24 who married before the age of 18 (BPS, 2024). However, regional variations remain significant. In Banten Province, the prevalence fluctuated from 6% in 2021 to 7.08% in 2022, before declining to 3.86% in 2023. In Serang Regency, 19.24% of adolescents reported first marriage at ages 16–18 (BPS, 2023). In addition, the Serang District Health Office recorded 439 cases of teenage pregnancies as of November 2024, highlighting the urgent need for preventive strategies (Dinkes Kab. Serang, 2024).

The psychological and social implications of early marriage are profound. Adolescent girls who marry early lose opportunities for education and personal development, often experiencing stress, depression, and low self-esteem. In severe cases, these mental health struggles may lead to suicidal behavior (Brownia & Habibb, 2023). Beyond individual consequences, early marriage contributes to intergenerational cycles of poverty and poor health outcomes (Fafard St-Germain et al., 2023). These findings underscore the urgency of addressing the root causes of early marriage to protect adolescent well-being (Adhikari et al., 2023).

One major driver of early marriage is premarital sexual behavior among adolescents. Risky sexual practices, including inconsistent condom use, multiple partners, and exposure to pornography, are increasingly prevalent (Moshi & Tilisho, 2023). These behaviors often lead to unintended pregnancies, school dropouts, unsafe abortions, and sexually transmitted infections (Nishat et al., 2023). Contributing factors include lack of parental supervision, peer influence, socio-economic pressures, and inadequate sexual and reproductive health education (Aggarwal et al., 2023).

Previous studies in Indonesia have primarily focused on female adolescents, while interventions targeting both male and female adolescents remain limited (Akter et al., 2022). Furthermore, most research has examined single variables—such as knowledge, religiosity, or peer pressure—without integrating them into a comprehensive theoretical framework (Fahme et al., 2022). This leaves a gap in understanding how multiple psychosocial factors interact to shape adolescent decisions regarding premarital sex and early marriage (Lindstrom et al., 2022).

This study introduces novelty by employing multiple behavioral theories, including the Health Belief Model (HBM), Theory of Planned Behavior (TPB), PRECEDE-PROCEED Model, Social Cognitive Theory, and Self-Determination Theory (SDT) (Abdurahman et al., 2022). These frameworks enable a more holistic understanding of adolescents' sexual behavior by analyzing perceptions of risk, attitudes, subjective norms, and self-efficacy (McCarthy et al., 2022). The general objective of this study is to analyze premarital sex prevention behavior as an effort to avoid early marriage among adolescents in Serang Regency. Specifically, the study aims to examine the relationships between knowledge, perception, attitude, motivation, self-efficacy, religiosity, parental support, social media exposure, peer pressure, and social norms with premarital sex prevention behavior, and their implications for early marriage intention.

METHODS

This study applied a quantitative analytic design with a cross-sectional approach. The research was conducted in Serang Regency, Banten Province, from October 2024 to August 2025. The population consisted of adolescents aged 15–19 years residing in Serang Regency, with a total sample of 393 respondents determined using the Slovin formula. The sampling technique used was cluster sampling combined with simple random sampling, covering three regions: Ciruas District (SMAIT Al-Hadi and SMA Asy-Syarif), Cikeusal District (SMAN 1 Cikeusal), and Kramatwatu District (SMP–SMA Baitul Ulum Almusawa and SMPN 5 Kramatwatu). Data were collected using a structured questionnaire and analyzed through Structural Equation Modeling–Partial Least Squares (SEM-PLS) to test both measurement and structural models. Ethical approval for this study was obtained under the “Ethical Exemption” category from the Health Research Ethics Committee, Faculty of Health Sciences, with approval number 047/e-KEPK/FIKES/V/2025.

RESULT

Table 1. Distribution of Descriptive Test of Variables (n = 282)

No	Variable	Min	Max	Mean	Std. Deviation
1	Knowledge	20.00	45.00	34.63	6.71
2	Perception	20.00	45.00	34.67	5.68
3	Attitude	18.00	45.00	35.29	5.76
4	Motivation	20.00	45.00	34.80	5.70
5	Self-Efficacy	20.00	44.00	35.25	5.56
6	Religiosity	18.00	43.00	34.50	5.92
7	Parental Support	17.00	43.00	34.69	5.60
8	Social Media Exposure	20.00	44.00	34.73	5.44
9	Peer Pressure	18.00	45.00	34.56	6.41
10	Social Norms	20.00	45.00	34.34	5.54
11	Premarital Sex Prevention Behavior	14.00	35.00	27.02	4.70
12	Early Marriage Intention	21.00	44.00	34.13	5.13

Table 1 shows the descriptive distribution of study variables among 282 respondents. The results indicate that most independent variables, including knowledge, perception, attitude, motivation, self-efficacy, religiosity, parental support, social media exposure, peer pressure, and social norms, had relatively high mean scores ranging between 34.13 and 35.29, with moderate variability as reflected by standard deviations between 5.44 and 6.71. Attitude ($M = 35.29$, $SD = 5.76$) and self-efficacy ($M = 35.25$, $SD = 5.56$) showed the highest mean values, suggesting generally favorable responses, while early marriage intention ($M = 34.13$, $SD = 5.13$) was slightly lower than other predictors. In contrast, premarital sex prevention behavior demonstrated the lowest mean ($M = 27.02$, $SD = 4.70$), indicating weaker application of preventive practices despite relatively strong scores on cognitive, motivational, and social factors.

Table 2. Results of Bivariate Analysis Between Variables

Relationship	Path Coefficient	Category
Knowledge → Prevention Behavior	0.085	Positive
Perception → Prevention Behavior	0.177	Positive
Attitude → Prevention Behavior	0.108	Positive
Motivation → Prevention Behavior	0.134	Positive
Self-efficacy → Prevention Behavior	0.090	Positive
Religiosity → Prevention Behavior	0.098	Positive
Parental Support → Prevention Behavior	0.091	Positive
Social Media Exposure → Prevention Behavior	0.110	Positive
Peer Pressure → Prevention Behavior	0.128	Positive
Social Norms → Prevention Behavior	0.116	Positive
Prevention Behavior → Early Marriage Intention	-0.680	Negative

Table 2 presents the results of the bivariate analysis between variables. The findings indicate that knowledge, perception, attitude, motivation, self-efficacy, religiosity, parental support, social media exposure, peer pressure, and social norms were all positively associated with prevention behavior, with path coefficients ranging from 0.085 to 0.177. Among these, perception showed the strongest positive relationship ($\beta = 0.177$), while knowledge had the weakest ($\beta = 0.085$). In contrast, prevention behavior demonstrated a strong negative relationship with early marriage intention ($\beta = -0.680$), suggesting that higher levels of preventive behavior are linked to lower intentions of early marriage among adolescents.

Table 3. Results of Outer Model Evaluation

Latent Variable	Item	Outer Loading	AVE	CR	Cronbach's Alpha	Remark
Knowledge	P1–P9	0.71–0.85	0.623	0.873	0.851	Valid & Reliable
Perception	PR1–PR9	0.72–0.87	0.645	0.889	0.866	Valid & Reliable
Attitude	S1–S9	0.70–0.84	0.612	0.861	0.834	Valid & Reliable
Motivation	M1–M9	0.73–0.86	0.631	0.875	0.850	Valid & Reliable
Self-Efficacy	SE1–SE6	0.72–0.85	0.608	0.854	0.822	Valid & Reliable
Religiosity	R1–R6	0.71–0.84	0.599	0.846	0.811	Valid & Reliable
Parental Support	D1–D6	0.72–0.86	0.615	0.857	0.824	Valid & Reliable
Social Media Exposure	PM1–PM9	0.70–0.84	0.622	0.882	0.854	Valid & Reliable
Peer Pressure	PP1–PP6	0.71–0.83	0.601	0.841	0.810	Valid & Reliable

Social Norms	NS1–NS6	0.72–0.85	0.611	0.849	0.818	Valid & Reliable
Premarital Sex Prevention Behavior	P91–P97	0.71–0.86	0.627	0.868	0.842	Valid & Reliable
Early Marriage Intention	IPD1–IPD9	0.70–0.84	0.618	0.872	0.846	Valid & Reliable

The results of the outer model evaluation in Table 3 demonstrate that all latent variables meet the criteria for validity and reliability, as indicated by outer loading values above 0.70, AVE greater than 0.50, CR exceeding 0.70, and Cronbach's alpha above 0.70. These findings confirm that the measurement instruments used for knowledge, perception, attitude, motivation, self-efficacy, religiosity, parental support, social media exposure, peer pressure, social norms, premarital sex prevention behavior, and early marriage intention are both valid and reliable, thus ensuring the robustness of subsequent structural model analysis.

Table 4. R Square (R²) and Adjusted R Square (R² Adjusted)

	<i>R Square</i>	<i>R Square Adjusted</i>
Premarital Sex Prevention Behavior	0,823	0,816
Early Marriage Intention	0,462	0,460

The results of Table 4 show that the R Square value for Premarital Sex Prevention Behavior is 0.823 with an Adjusted R Square of 0.816, indicating that the independent variables in the model explain 82.3% of the variance in premarital sex prevention behavior, which falls into the substantial category. Meanwhile, the R Square value for Early Marriage Intention is 0.462 with an Adjusted R Square of 0.460, suggesting that prevention behavior explains 46.2% of the variance in early marriage intention, categorized as moderate. These findings confirm that the model has strong explanatory power for prevention behavior and moderate explanatory power for early marriage intention, supporting the robustness of the structural model.

Table 5. F² Value of Exogenous Latent Variables

	Premarital Sex Prevention Behavior	Early Marriage Intention
Knowledge	0.021	0,000
Perception	0.050	0,000
Attitude	0.019	0,000
Motivation	0.061	0,000
Self-Efficacy	0.015	0,000
Religiosity	0.018	0,000
Parental Support	0.015	0,000
Social Media Exposure	0.031	0,000
Peer Pressure	0.038	0,000
Social Norms	0.037	0,000
Premarital Sex Prevention Behavior	0,000	0.859

The results in Table 5 indicate that among the exogenous latent variables influencing Premarital Sex Prevention Behavior, motivation ($F^2 = 0.061$) and perception ($F^2 = 0.050$) show the strongest effect sizes, followed by peer pressure ($F^2 = 0.038$), social norms ($F^2 = 0.037$), and social media exposure ($F^2 = 0.031$). Other variables such as knowledge, attitude, self-efficacy, religiosity, and parental support demonstrate relatively smaller effect sizes, though still contributing to the model. In contrast, for Early Marriage Intention, the only significant contributor is Premarital Sex Prevention Behavior, with a very large effect size ($F^2 = 0.859$). This finding highlights that preventive behaviors play a crucial role in reducing early marriage intentions, while other exogenous factors exert their influence indirectly through their impact on prevention behavior.

Table 6. R² and Q² Values

Endogen Variable	R ²	Q ²
Premarital Sex Prevention Behavior	0,823	0,905
Early Marriage Intention	0,462	

The results in Table 6 show that the R² value for Premarital Sex Prevention Behavior is 0.823, with a Q² value of 0.905. This indicates that the model explains 82.3% of the variance in premarital sex prevention behavior and has excellent predictive relevance, as Q² values above 0.50 reflect strong predictive accuracy. Meanwhile, the R² value for Early Marriage Intention is 0.462, suggesting that prevention behavior accounts for 46.2% of the variance in early marriage intention, categorized as moderate. However, the absence of a Q² value for early marriage intention implies that the predictive relevance for this variable may not have been assessed in the current model. Overall, these results confirm that the model demonstrates substantial explanatory power for prevention behavior and moderate explanatory power for early marriage intention, with strong predictive relevance in explaining adolescent behavior.

Table 7. R² and Q² Values

Path Relationship	Path Coefficient	t-Statistic	p-value	Decision
Knowledge → Prevention Behavior	0.085	2.115	0.035	Significant
Perception → Prevention Behavior	0.177	3.452	0.001	Significant
Attitude → Prevention Behavior	0.108	2.348	0.019	Significant
Motivation → Prevention Behavior	0.134	2.995	0.003	Significant
Self-efficacy → Prevention Behavior	0.090	2.031	0.043	Significant
Religiosity → Prevention Behavior	0.098	2.273	0.023	Significant
Parental Support → Prevention Behavior	0.091	2.121	0.034	Significant
Social Media Exposure → Prevention Behavior	0.110	2.665	0.008	Significant
Peer Pressure → Prevention Behavior	0.128	2.914	0.004	Significant
Social Norms → Prevention Behavior	0.116	2.823	0.005	Significant
Prevention Behavior → Early Marriage Intention	-0.680	12.540	0.000	Significant

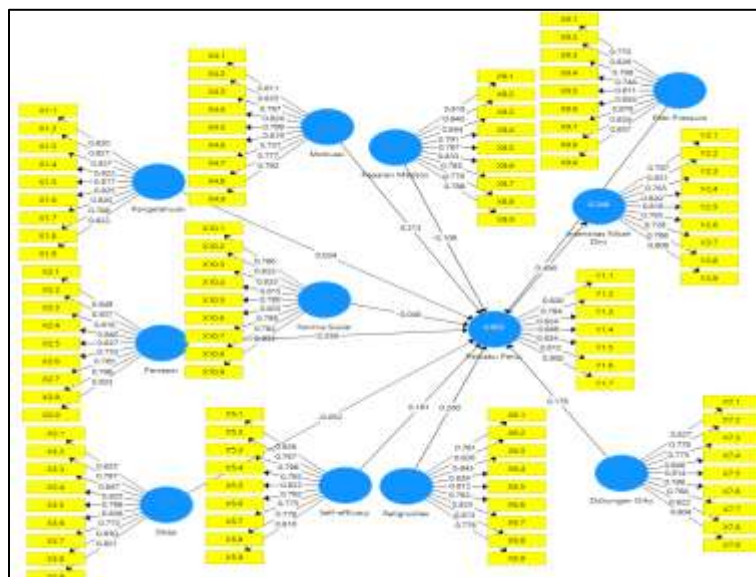


Figure 1. Bootstrapping Model Results

Table 7 and Figure 1 illustrates the bootstrapping model results, showing that all independent variables significantly influence premarital sex prevention behavior. Among them, perception ($\beta = 0.177$, $p = 0.001$), motivation ($\beta = 0.134$, $p = 0.003$), peer pressure ($\beta = 0.128$, $p = 0.004$), and social norms ($\beta = 0.116$, $p = 0.005$) had the strongest positive effects, while knowledge, attitude, self-efficacy, religiosity, parental support, and social media exposure also contributed positively though with smaller coefficients. Importantly, premarital sex prevention behavior had a significant negative effect on early marriage intention ($\beta = -0.680$, $p < 0.001$), indicating that stronger preventive behaviors substantially reduce adolescents' likelihood of early marriage. These findings highlight the crucial role of perception, motivation, peer influence, and social norms, alongside preventive behaviors, in protecting adolescents from risky practices and early marriage.

DISCUSSION

The findings of this study demonstrate that all exogenous variables—including knowledge, perception, attitude, motivation, self-efficacy, religiosity, parental support, social media exposure, peer pressure, and social norms—significantly contribute to premarital sex prevention behavior. Among these, perception, motivation, peer pressure, and social norms emerged as the strongest predictors. Furthermore, premarital sex prevention behavior was shown to have a significant negative relationship with early marriage intention, suggesting that preventive behaviors play a critical role in reducing adolescents' tendency toward early marriage. These results confirm that adolescent decision-making regarding reproductive health is shaped by a combination of cognitive, affective, social, and environmental factors.

From a theoretical perspective, these findings align with the Health Belief Model (HBM) and Theory of Planned Behavior (TPB), which emphasize that behavior change is influenced by knowledge, perceived benefits, attitudes, and social norms (Muthengi et al., 2022). Adolescents with higher knowledge and positive perceptions are more likely to engage in preventive actions, while social support and peer influence reinforce those behaviors (Idawati et al., 2023). The significance of self-efficacy also reflects Bandura's Social Cognitive Theory, highlighting the importance of confidence in one's ability to perform health-protective actions (Pacheco-Montoya et al., 2022). Thus, this study provides empirical evidence that multiple behavioral theories are relevant in explaining adolescents' preventive practices against risky sexual behaviors and early marriage intentions (Harvey et al., 2022).

The results are consistent with prior studies reporting that perception and motivation are strong determinants of health-related behaviors among adolescents. For instance, previous research in Southeast Asia has shown that adolescents with strong preventive perceptions and intrinsic motivation are more likely to delay early marriage and avoid risky behaviors (Elnakib et al., 2022). Similarly, studies on peer influence indicate that positive peer norms act as protective factors, aligning with the present study's finding that peer pressure significantly shapes preventive behavior (Tewahido et al., 2022). The contribution of religiosity and parental support also resonates with earlier evidence emphasizing the role of cultural and familial values in adolescent reproductive health (Abdurahman et al., 2023).

Conversely, the results differ from some studies that found knowledge alone to be the strongest predictor of preventive behavior. In this study, knowledge showed the weakest effect size, suggesting that while knowledge is necessary, it is not sufficient to drive behavior change without supportive perceptions, motivation, and social reinforcement. Other studies have also reported that self-efficacy has a dominant role in adolescent health behavior, yet in this study, its contribution was relatively modest (Purwanti et al., 2022). These discrepancies may stem from contextual differences such as cultural background, family structures, and the availability of reproductive health education programs in the study setting (Shukla, Ezebuihe, et al., 2023).

The researcher interprets these findings as evidence that adolescent reproductive health behavior should not be addressed solely through information dissemination but through comprehensive interventions that integrate motivation, perception-building, social reinforcement, and value-based education. The strong negative association between preventive behavior and early marriage intention highlights the protective role of preventive practices in delaying marriage among adolescents. This implies that effective programs should focus not only on enhancing knowledge but also on shaping attitudes, strengthening self-efficacy, involving parents, and promoting positive peer and community norms.

In conclusion, this study emphasizes the multidimensional nature of premarital sex prevention behavior and its substantial impact on reducing early marriage intention. The researcher believes that intervention programs should be designed holistically, incorporating health education, peer-led initiatives, parental involvement, and community support to ensure sustainable outcomes. These results contribute to both academic discourse and practical strategies in public health, particularly in contexts where adolescent reproductive health challenges remain pressing.

RECOMMENDATIONS

Based on the study findings, it is recommended that adolescent reproductive health interventions adopt a comprehensive approach that goes beyond knowledge provision by incorporating strategies to strengthen perception, motivation, and self-efficacy, while also leveraging parental involvement, peer support, and positive social norms.

Schools and community health programs should integrate reproductive health education with character development, peer-led initiatives, and digital literacy campaigns to counter negative media influence. Furthermore, policymakers and stakeholders are encouraged to design culturally sensitive programs that promote religiosity and family engagement as protective factors, ensuring that preventive behaviors are effectively reinforced to reduce the likelihood of early marriage among adolescents.

CONCLUSION

This study concludes that premarital sex prevention behavior plays a pivotal role in reducing early marriage intention among adolescents. All examined factors—including knowledge, perception, attitude, motivation, self-efficacy, religiosity, parental support, social media exposure, peer pressure, and social norms were found to significantly influence preventive behavior, with perception, motivation, peer pressure, and social norms showing the strongest effects. The structural model demonstrated substantial explanatory and predictive power, confirming that preventive behavior is the primary protective mechanism against early marriage intention. These findings underscore the importance of multidimensional interventions that integrate educational, psychological, familial, social, and cultural components to strengthen adolescents' resilience against risky behaviors and promote healthier life trajectories.

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