



## Factors Related to Early Marriage Among Adolescent Girls in Samarinda

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### ARTICLE INFORMATION

Received: February 17, 2026

Revised: August 19, 2026

Available online: August 2026

### KEYWORDS

Early Marriage; Adolescent Girls; Knowledge; Economic; Culture

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### A B S T R A C T

Adolescent marriage remains a persistent social and health problem in Indonesia. This was related to the suboptimal physical, mental, and spiritual development of adolescent girls. They have to take on the additional roles of wife and mother, creating a double burden. Early marriage exposes them to challenges across various areas, including health, finances, and dual roles. This study aimed to identify factors associated with adolescent marriage among women in the Loa Bahu Public Health Center area, Samarinda. This was a quantitative cross-sectional study involving 40 married women as respondents, selected using a purposive sampling technique with inclusive criteria: girls who married before age 20 and who lived in the Loa Bahu Public Health centre area. Data were collected using questionnaires and analyzed through chi-square tests. Results: The study found that 85% of respondents were married between ages 14 and 19. Knowledge ( $p = 0.008$ ), economic level ( $p = 0.024$ ), and cultural support ( $p = 0.001$ ) were significantly associated with adolescent marriage, while education level was not significant ( $p = 0.153$ ). Interventions to improve knowledge, strengthen economic resilience, and address cultural norms are required to reduce adolescent marriage in Samarinda.

## INTRODUCTION

Adolescent marriage is a marriage occurring before the age of 20 years (WHO, 2019), that continues to be recognized as a harmful practice and a form of gender-based violence that undermines girls' health, education, and life opportunities (UNICEF, 2023). Indonesia ranks among the countries with a high burden of child and adolescent marriage, with more than one million women aged 20–24 having been married before 18 years of age (Girls Not Bridges: The Global Partnership to End Child Marriage, 2021). Despite legal reforms to raise the minimum age of marriage to 19 years for both men and women, a substantial number of underage marriage dispensations continue to be granted through the courts (Nabila, Roswiyani, & Satyadi, 2022).

Child and adolescent marriage is associated with increased risks of adolescent pregnancy, maternal and neonatal morbidity and mortality, mental health problems, and intergenerational cycles of poverty (UNICEF, 2023). In Indonesia, recent evidence shows that early marriage remains prevalent and is driven by a complex interplay of low educational attainment, poverty, limited employment opportunities, conservative sexual norms, and strong local cultural expectations around marriage and family honor (Wahyuni & Rungreangkulkij, 2023; UNICEF, 2023; Plan International, 2026). A systematic review of child marriage determinants in Indonesia concluded that beliefs, culture, poverty, limited access to

education, and weak law enforcement are key drivers of the practice (Nur, Amanda, Hanifa, & Ayudiputri, 2024).

Kalimantan is reported as one of the regions with the highest likelihood of child marriage in Indonesia, where economic stressors and entrenched gender norms strongly influence decisions to marry off daughters at a young age (Amalia, Handayani, & Kusvitasari, 2023). In these settings, early marriage is often perceived as a strategy to reduce household expenses, secure daughters' future, and preserve family reputation. At the same time, global and national agendas, such as Sustainable Development Goal (SDG) target 5.3 to eliminate child marriage, emphasize the importance of integrated policies, education, and community engagement to address this issue.

Samarinda, the capital of East Kalimantan, is undergoing rapid urban and economic development, yet pockets of socio-economic vulnerability and strong traditional values persist in peri-urban communities (BPS Kota Samarinda, 2025). However, local empirical data on determinants of adolescent marriage at the primary health care level remain limited. Understanding contextual factors such as knowledge, education, economic status, and culture among married women in Samarinda is essential for designing targeted preventive interventions.

This study aimed to identify factors associated with adolescent marriage in the working area of the Loa Bahu Public Health Center, Samarinda, by analyzing the association between age at marriage and knowledge, education level, economic level, and cultural support.

## METHOD

This research used a quantitative analytic study with a cross-sectional design conducted in the working area of Loa Bahu Public Health Center, Samarinda, East Kalimantan, Indonesia. The area represents a peri-urban setting with mixed ethnic composition (Banjarnese, Javanese, Kutainese, Bugisnese) and diverse socio-economic backgrounds. The target population was married women residing in the catchment area of the Loa Bahu Public Health Center. The inclusion criteria were: (1) married at  $\leq 24$  years of age, (2) currently aged 20–24 years at the time of data collection, (3) residing in the area for at least one year, and (4) willing to participate and sign informed consent. Exclusion criteria included women with severe cognitive or communication impairments. A total of 40 respondents were selected using purposive sampling based on these criteria.

Data were collected using a structured, interviewer-administered questionnaire developed from previous literature on determinants of child and adolescent marriage in Indonesia and similar contexts. The questionnaire included sections on sociodemographic characteristics (age, education, ethnicity, occupation, age at first marriage, knowledge of early marriage, perceived economic status, and cultural perceptions of marriage age. Face validity and content relevance were reviewed by experts in maternal

and reproductive health. Data were coded and entered into a statistical software package. Descriptive statistics (frequencies and percentages) were used to describe respondents' characteristics. Bivariate analysis using the chi-square test was performed to examine the association between age at marriage (adolescent vs young adult) and each independent variable (knowledge, education level, economic level, and culture). A *p-value* < 0.05 was considered statistically significant.

The study adhered to the ethical principles of autonomy, beneficence, non-maleficence, and justice. Respondents provided informed consent after receiving an explanation of the study objectives, procedures, confidentiality, and voluntary participation. This study obtained ethical approval from the Faculty of Medicine, Mulawarman University, No. 128/KEPK-FK/VI/2024 on June 19, 2024.

## RESULT

The study results showed that respondents' sociodemographic as Table 1 below:

Table 1. Frequency Distribution of Respondents Based on Age at Marriage, Education Level, Ethnic Group, Marriage Status, Pregnant before Marriage, and Occupation

| Variables               | n  | %    |
|-------------------------|----|------|
| Age of Marriage         |    |      |
| 14-19 years old         | 34 | 85   |
| 20-24 years old         | 6  | 15   |
| Education               |    |      |
| Elementary School       | 5  | 12.5 |
| Junior High School      | 7  | 17.5 |
| Senior High School      | 28 | 65   |
| Ethnic Group            |    |      |
| Banjarnesse             | 16 | 40   |
| Javaness                | 12 | 30   |
| Kutainess               | 4  | 10   |
| Bugisness               | 8  | 20   |
| Marriage Status         |    |      |
| Unregistered Married    | 15 | 37.5 |
| Registered Married      | 25 | 62.5 |
| Pregnant before Married |    |      |
| Yes                     | 11 | 25.6 |
| No                      | 29 | 67.4 |
| Occupation              |    |      |
| Housewife               | 40 | 100  |

Most respondents (85%) reported marrying in adolescence (14–19 years), while only 15% married at 20–24 years. The majority had completed senior high school (65%), followed by junior high school (17.5%) and elementary school (12.5%). Banjarnese (40%) and Javanese (30%) were the dominant ethnic groups, with Kutainese and Bugisnese comprising 10% and 20% respectively. The highest marriage status was registered marriage (62.5%), and the lowest was unregistered marriage (37%). 25.6% of girls had been pregnant before marriage. All respondents were housewives at the time of data collection.

Factors associated with age at marriage are shown in Table 2 below:

Table 2. Cross-tabulation of factors associated with age at marriage in Loa Bahu Public Health Center, Samarinda (n = 40)

|                |                     | Age Marriage |                      |        |       | p-value |
|----------------|---------------------|--------------|----------------------|--------|-------|---------|
| Variables      | Adolescent Marriage |              | Young Adult Marriage |        |       |         |
|                | n (34)              | % (85)       | n (6)                | % (15) |       |         |
| Knowledge      |                     |              |                      |        |       |         |
| Good           | 11                  | 64.7         | 6                    | 35.3   | 0.008 |         |
| Poor           | 23                  | 100          | 0                    | 0      |       |         |
| Education      |                     |              |                      |        |       |         |
| Middle-Level   | 22                  | 78.6         | 6                    | 21.4   | 0.153 |         |
| Low-Level      | 12                  | 100          | 0                    | 0      |       |         |
| Economic Level |                     |              |                      |        |       |         |
| High           | 16                  |              | 6                    |        | 0.024 |         |
| Low            | 18                  | 100          | 0                    | 0      |       |         |
| Culture        |                     |              |                      |        |       |         |
| Support        | 18                  | 75           | 6                    | 25     | 0.001 |         |
| Unsupported    | 16                  | 100          | 0                    | 0      |       |         |

There was a statistically significant association between knowledge and age at marriage ( $p = 0.008$ ). Among respondents with poor knowledge, all (100%) experienced adolescent marriage, whereas among those with good knowledge, 64.7% married in adolescence and 35.3% in young adulthood. Economic level also showed a significant relationship with age at marriage ( $p = 0.024$ ); all women in the low economic group married in adolescence, whereas a proportion of women in the high economic group married in young adulthood. Cultural support was strongly associated with adolescent marriage ( $p = 0.001$ ); in culturally unsupportive environments, all respondents married in adolescence, whereas in culturally supportive contexts, a larger proportion still married early, but some married later. Education level did not show a statistically significant association with age at marriage ( $p = 0.153$ ), although, descriptively, adolescent marriage remained high in both the Motherslow and middle education categories.

## DISCUSSION

This study revealed that adolescent marriage remains highly prevalent in the Loa Bahu area of Samarinda, with 85% of respondents reporting marriage between 14 and 19 years. This proportion is substantially higher than the national averages reported for early marriage (UNFPA, 2023), but consistent with evidence that certain regions, including Kalimantan, carry a disproportionately high burden of child and adolescent marriage shaped by economic and socio-cultural vulnerabilities. The predominance of adolescent marriage among housewives further illustrates how early marriage is closely linked with early transition to motherhood and domestic roles, limiting girls' life chances.

### Knowledge and adolescent marriage

The significant association between knowledge and age at marriage suggests that a limited understanding of the health, social, and legal consequences of early marriage contributes to early union formation (Fitri et

al., 2026). Women with poor knowledge in this study were exclusively in the adolescent marriage group, highlighting the protective role of information and awareness. Similar findings have been documented in Indonesian settings, where a lack of awareness about reproductive health, legal marriage age, and risks of adolescent pregnancy increases vulnerability to early marriage (UNICEF, 2026; UNFPA, 2023). Global evidence likewise underscores that inadequate access to sexual and reproductive health information and services leaves adolescents ill-equipped to negotiate delayed marriage and prevent early pregnancy.

Health promotion strategies that provide age-appropriate, culturally sensitive information about early marriage and its consequences, delivered through schools, community health workers, and digital platforms, have been recommended as a key component of preventing child marriage. In the context of Samarinda, integrating comprehensive sexuality and reproductive health education into school curricula and community-based youth programs may enhance adolescents' capacity to make informed decisions.

### **Education level**

Interestingly, education level was not significantly associated with age at marriage in this sample, even though prior studies consistently identify low education as a major determinant of child and adolescent marriage. A possible explanation is the relatively homogeneous educational profile, with most respondents having completed senior high school, which limits the variability needed to detect statistically significant differences. In addition, completion of formal schooling does not always equate to exposure to critical thinking skills or comprehensive reproductive health content, particularly where curricula remain exam-focused and avoid sensitive topics such as sexuality and gender norms. In a prior study, even though adolescent girls have graduated from high school and gone through the process of maturing into marriage, they still get married early (Amalia et al., 2023).

National data demonstrate that adolescent girls with only primary education are many times more likely to experience early marriage than those with tertiary education (Plan International, 2026). However, even among those with secondary education, early marriage persists in settings where economic pressures and cultural expectations remain strong (Wahyuni & Rungreangkulkij, 2023). In this region, this implies that while keeping girls in school is necessary, it is not sufficient; school environments must also equip girls with negotiation and life skills and foster aspirations beyond early marriage.

### **Economic level**

The significant association between economic level and adolescent marriage in this study aligns with the well-established link between poverty and child marriage. Respondents from low-income households all experienced adolescent marriage, reflecting how economic hardship can push families to view early marriage as a coping or survival strategy (Chen, Bonfert, Wadhwa, & Charron, 2025). In many Indonesian communities, marrying off daughters early is perceived to reduce household expenses, transfer financial

responsibility to the husband's family, or secure economic protection for the girl (Zulfa, Hasanah, & Kusaini, 2024).

Global overviews similarly show that child marriage is nearly twice as common in fragile and impoverished settings, where families face limited livelihood opportunities and weak social protection (Maulidar, Aliasuddin, & Seftarita, 2021). In line with prior study results, poverty is one of many reasons for early marriage among girls (Aliyah, Octathriani, Wulandari, & Undaryati, 2024). Economic interventions such as conditional cash transfers, scholarships, skills training, and livelihood programs targeting adolescent girls and their families have been highlighted as promising approaches to reduce early marriage by alleviating financial pressure and expanding girls' alternative life trajectories. To proof these programs, collaboration among the health, social, and labor sectors to strengthen economic resilience may indirectly help delay marriage age.

### **Cultural factors**

Culture emerged as a strong determinant of adolescent marriage in this study, reflecting findings from qualitative and review studies in Indonesia that underscore the role of religious, customary, and gender norms in normalizing early marriage. In several Indonesian communities, including parts of Kalimantan, parents and youth often believe that marrying off girls early preserves family honor, prevents premarital pregnancy, and fulfills religious or cultural expectations (Saskara, 2018). Conservative sexual morality and the stigma of remaining unmarried beyond a socially acceptable age can create strong pressure to accept early marriage proposals (Niam, 2021).

The strong association between cultural support and adolescent marriage in this sample suggests that even when legal frameworks and national policies promote delayed marriage, local norms can undermine these efforts. WHO and international agencies emphasize that laws alone are insufficient without community-level dialogue and norm change interventions. Engaging local religious leaders, customary authorities, and community influencers in Samarinda to reinterpret cultural and religious teachings in favor of girls' education, health, and delayed marriage could be a strategic approach. Social and behavior change communication campaigns that highlight positive role models and alternative markers of family honor (such as daughters' educational achievements) may help transform norms over time.

### **Implications for policy and practice**

The findings from this study support the view that adolescent marriage is a multi-dimensional issue requiring integrated responses. At the health system level, primary care facilities such as Loa Bahu Public Health Center can expand adolescent health services, including counseling on reproductive health, life skills, and relationship negotiation. At the educational level, partnerships between schools, health facilities, and community organizations can foster comprehensive education programs that address early marriage, gender equality, and career aspirations.

At the socio-economic level, targeted social protection and livelihood programs for low-income families can reduce the financial incentives for early marriage. At the cultural level, participatory interventions involving parents, religious and community leaders are essential to challenge beliefs that equate early marriage with protection and honor and to promote alternative pathways for girls' fulfillment.

### Limitations

This study has several limitations. The cross-sectional design precludes causal inference because exposure and outcome were measured simultaneously. The small sample size ( $n = 40$ ) and use of purposive sampling in a single health center limit the generalizability of the findings to other settings in Samarinda or East Kalimantan. Self-reported data may also be subject to recall and social desirability bias, particularly regarding cultural perceptions. Future studies could employ larger, probabilistic samples and mixed-methods approaches to explore the nuanced interactions between knowledge, economic constraints, and cultural norms.

### CONCLUSION

Adolescent marriage is highly prevalent among married women in the Loa Bahu Public Health Center area of Samarinda, with the majority entering marriage between 14 and 19 years of age. Knowledge, economic level, and cultural support were significantly associated with age at marriage, while education level was not statistically significant in this sample. The results highlight that informational deficits, economic vulnerability, and deeply rooted cultural norms together sustain the practice of adolescent marriage.

To prevent adolescent marriage in Samarinda, multi-sectoral interventions are needed, including strengthening adolescent reproductive health education, improving the economic resilience of families, and engaging cultural and religious leaders to reform norms that favor early marriage. Further research with larger, more diverse samples is recommended to refine context-specific strategies and monitor progress toward SDG target 5.3 to end child marriage.

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